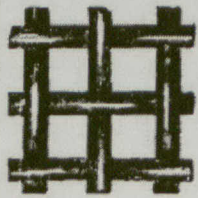


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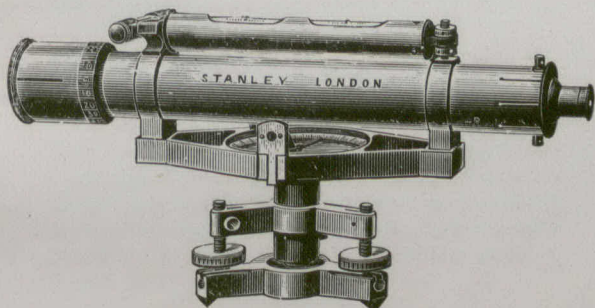
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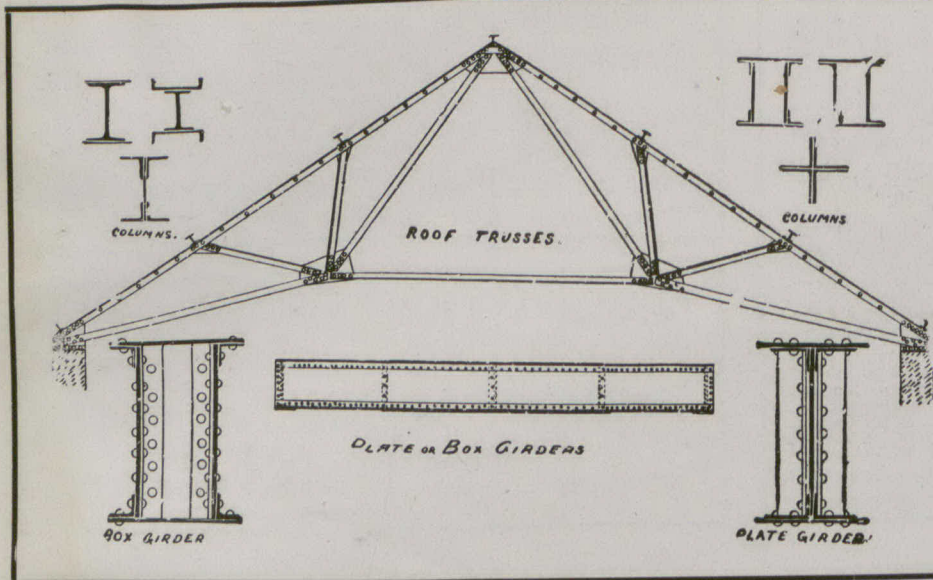
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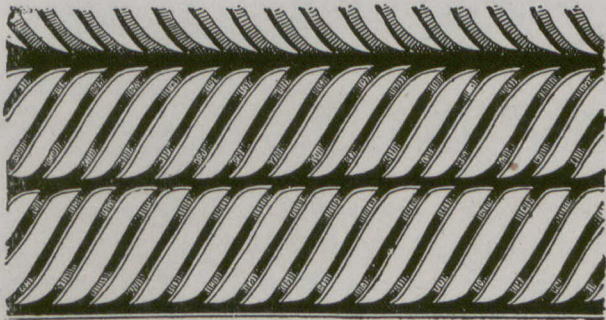
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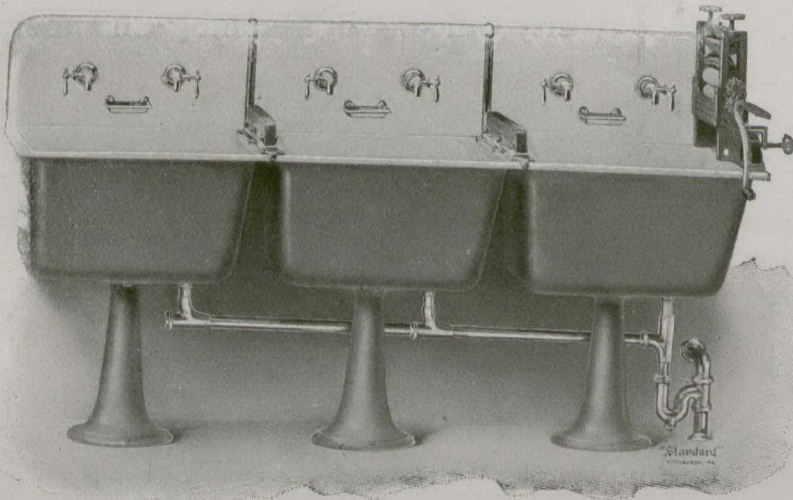
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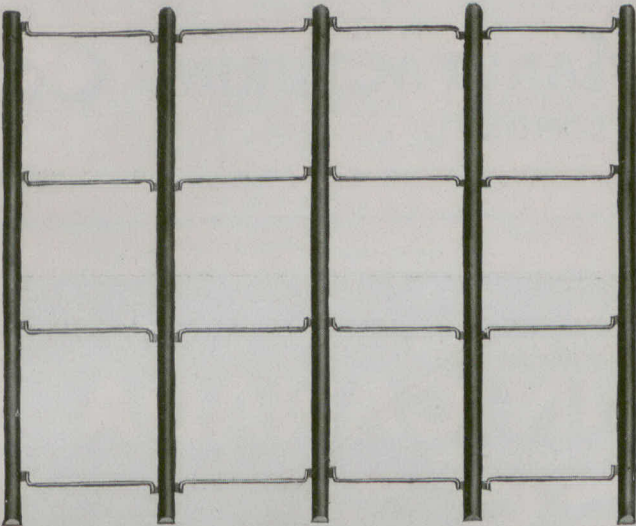
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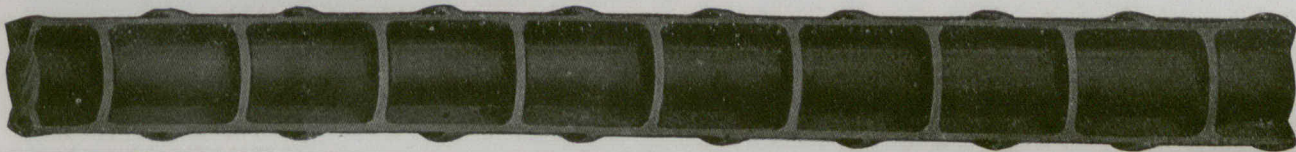


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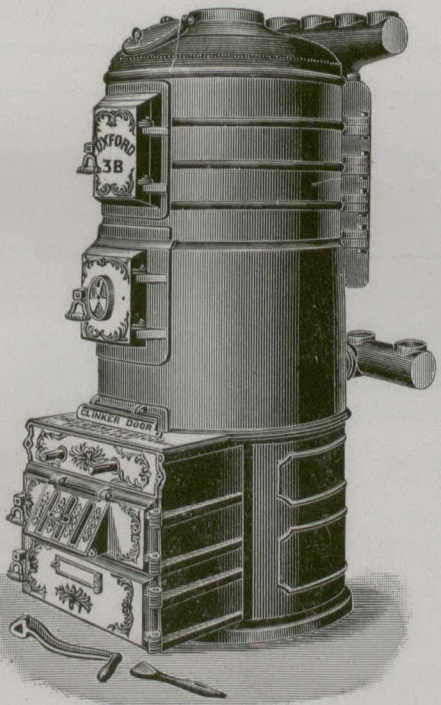
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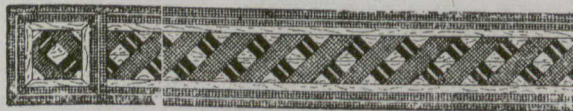
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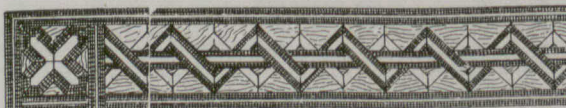
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JANUARY, 1907

Montreal

OPINIONS upon the proposal to make of the architectural profession a closed corporation as outlined in the project of an act of incorporation of the Institute of Architects of Canada have been pretty generally expressed of late. Not for a long time has so much general interest been evinced by the profession in any project as that which is now under discussion. The question of granting a charter to a Dominion organization has stirred up the provincial associations to a realization of what they stand to lose should the Institute of Architects of Canada become a chartered body, with the powers they have requested.

At a recent meeting of the P. Q. A. A., held in Montreal on December 20 last, a frank discussion of the institute question revealed a fear on the part of some that the charter of the provincial organization stood in danger. It was pointed out by Mr. Doran that the establishment of a Dominion licensing body, side by side with the provincial association, constituted an infringement of the P. Q. A. A.'s charter, in that the Dominion body would have power to override its decisions. In Quebec there is also evidenced by the more thoughtful architects a very commendable anxiety to safeguard the high standard of education which is there required by the P. Q. A. A. This is proving one of the strongest factors of opposition the I. A. C. will have to encounter in that province, not because architects oppose education, but because they fear the Institute will not go far enough in the matter.

In Ontario the struggle is going to centre about the self-same topic. The other day a conference was held between the Education Committee of the Board of Governors of Toronto University and representatives of the Toronto Architectural Association and the Ontario Association of Architects. The latter organization had pre-

sented a bill to the committee asking their co-operation in having the provincial government undertake the examination of architects in the Province of Ontario. The whole subject was vaguely presented, but the bill apparently struck the University authorities as inadequate and undesirable. The wisdom of relegating to the provincial government (a body liable to periodical change in personnel and policy) the duty of setting a standard of education for the architectural profession seemed difficult for the Board of Governors to appreciate, and rightly so. Why should they be approached in the matter at all if they are merely to act as accessories to the Government? So great have been the powers acquired by the provincial University since its recent reorganization, and so pronounced the policy of the Ontario Government of entrusting to it all matters pertaining to higher education, that the Ontario Association of Architects would have acted wisely in turning over to the University the entire question of preparing courses of study and examination.

THERE was a rare opportunity at the annual banquet of the Ontario Association of Architects, held in the National Club on the evening of the 15th inst., for the educationist to make mental comparisons between past and present methods of imparting instruction, as illustrated by two speeches delivered there. The speakers were President Falconer of Toronto University and Mr. W. A. Langton. The latter was at no pains to conceal the fact that he considered, with pedagogues of a past generation, that the "club" was a necessity in educational work, whether elementary or advanced. "Behind the Ontario system," said he, "is the policeman with his club, metaphorically speaking, driving the children to school. And the law is what we must invoke if we are going to make unwilling young men train themselves properly to practise architecture. The only question is how. Force must be used in some way or the ordinary man will not present himself to be properly educated."

This premise, if modern educational research is to be relied upon, is a false one. If there is one thing more than another that modern educationists are shouting themselves hoarse about it is that all semblance of force or compulsion in educating the young be entirely abolished or so skilfully concealed in an attractive curriculum of studies that love of self-improvement rather than fear of the consequences entailed by its neglect shall be the incentive. It is lack of that very attractiveness, nay, lack of a curriculum of any kind, that has deterred architectural students in Ontario from striving to improve their professional education. It has been retorted that men won't study unless they have to. That hasn't proved so in the case of engineers at the School of Practical Science. It is not compulsory for engineers to take the University courses. It has simply become customary for young men intending to enter the engineering profession to attend the University for three or four years. The modern educational standard in that profession demands it, that is all. For architectural students there should be also a standard, and the University should set it.

In diametrical opposition to Mr. Langton's view of higher education was that of President Falconer. "In the University," said that gentleman, "we do not intend to turn out a man simply as a tradesman. We do not merely intend to turn out a man who can earn his living, as a doctor, but in turning out a medical man our idea is that he is an educated medical man who understands the meaning of his profession and comes out with a scientific spirit . . . Besides the technical side of a profession there is the human side, and you cannot understand your own profession unless you have a conception of the breadth of humanity and of human life."

President Falconer made no reference in his remarks to compulsory education. They have long passed that stage at Toronto University. In some subjects only of the general course, and in almost none of those in the honor courses, is even the attendance of the student enforced. Strange paradox as it may seem, the greater the freedom accorded a body of students, enrolled in a faculty where the course of study is attractive, the higher becomes the educational ideal of that faculty.

It apparently is not the intention of those representatives of Canadian builders' exchanges who met in convention in Toronto on Labor Day last to allow the project of founding a national organization of builders to die fruitless. Under date of September 17, circular letters, enclosing copies of the official minutes of the Labor Day meeting, were addressed to every executive officer of every exchange in Canada. Accompanying these went requests to elect a delegate for the executive council. The exchanges actually represented at Toronto on September 1 were Winnipeg, London, Hamilton, Toronto and Montreal, and the delegates present, according to the provisional constitution, named one representative executive officer on the council for each exchange present, one vice-president for each of the provinces represented—Manitoba, Ontario and Quebec.

In a recent communication from the secretary, Mr. J. H. Lauer, we are informed that a lack of enthusiasm has thus far marked the attitude which the various exchanges have adopted toward this project. One can well conceive one or two reasons for this. In the first place lethargy prevails in the building trade in all parts of the country and, strange as it may seem, it is at just such a time when leisure might be found for considering a project of this nature, that the tendency to ignore it becomes most pronounced. But apart from this fact it must be admitted that the project was conceived in too much secrecy and brought forth with the knowledge of comparatively few of the members of our builders' exchanges. A project of such importance deserved a natal day of much greater brilliancy than that actually accorded it. The project is a vast one, and a "Canadian National Association of Builders" should be a powerful factor in the rapidly increasing building activity of this country. It cannot be too strongly urged upon the various exchanges to make a strong and united effort to nourish the infant organization, whose demise would put

a serious check upon future endeavors to make our various builders' exchanges a harmonious whole.

It is proposed in England to establish a "Technical Bureau," for the benefit of architects and builders, where information can be obtained on such matters as building materials, appliances, new methods of construction, etc., and an advisory committee has been appointed to consider the project.

Apart from the examination of individual manufacturers' goods, reports will be kept dealing with materials as a class, in which comparisons (denoting strength, durability, and applicability) will be made with different materials designed to serve the same purpose.

The results of these investigations and testings will constitute the Bureau reports, to be filed at the offices, copies or requisite extracts being supplied on application to subscribers only.

Experts will be retained to advise on constructional and technical subjects and on legal and such other matters as affect architectural practice. Answers to inquiries will be free; but where much correspondence and research are involved a subscriber would have the benefit of certain arrangements to be made with the legal and technical experts.

The main purpose would be to centralize information regarding stone, brick, tiles, slates, lime, cement, etc., in the various localities, throughout the country, and to acquire a standard collection of samples. Subscribers on application to be informed of the accessibility of the various materials in any required locality. In the case of stone, its nature and color, for what particular building uses it is most adaptable, together with its different quarries and the approximate cost on rail or site. The nature, color, and description of the bricks, tiles, slates, etc., obtainable in each locality, with their approximate cost on rail or site. Ordnance and railway maps will be used for defining localities, and will be at the disposal of subscribers for reference. A list of buildings in which the materials in question have been used will be provided. Copies of the building by-laws in force in each town and locality will be kept in the library.

Subscribers will be provided gratis with a reference book, containing directions for using the Bureau to the best advantage. It will be in the form of a diary for architects, with useful information and data prepared specially for the Bureau. It is added that information will be supplied through the post, and special regard will be paid to the convenience of those architects making inquiries by letter. The Bureau, we are informed, has already over 500 subscribers amongst architects all over the country.

The usefulness of such a Bureau requires no demonstration, particularly in view of the fact that so many new materials and building devices are continually seeking a market and require to have their merits attested by an authority less biased than is the general run of manufacturer's or inventor's announcements.

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The Heritage of the Anglican Church is rich indeed. Its history, ritual, even its legends have all come to it down the centuries, so that upon each is set the bloom of a hale yet venerable antiquity. And as much to be prized in its own way stands its tradition of building, a thing not lightly to be parted with, and of which the essence should be as present in the tiniest country church as in the far-resounding aisles of the greatest and hoariest of cathedrals.

The architect of to-day is confronted with many problems, in some cases wholly new ones, for which a solution must be found that shall not clash too greatly with the ethics of his profession in the past, and others there are, almost as ancient as the earliest temples, yet to

of a diocese; the seat of its bishop, and in designing the Cathedral of "All Saints" the architects have endeavored to keep its Episcopal character ever in mind. It makes no claim to consideration on the score of size, for when completed it will still be smaller than many a church in the mother country. Rochester, Beverly, New-castle are all structures of the third or fourth class as to dimensions, and yet each considerably exceeds the Cathedral of "All Saints." But by setting its great tower above the crossing of nave and transepts, by the addition of the eastern transepts, a feature as yet unusual on this side of the Atlantic, but most effective in the typical English cathedrals; and by the careful study that has been given its bare proportions, it is hoped



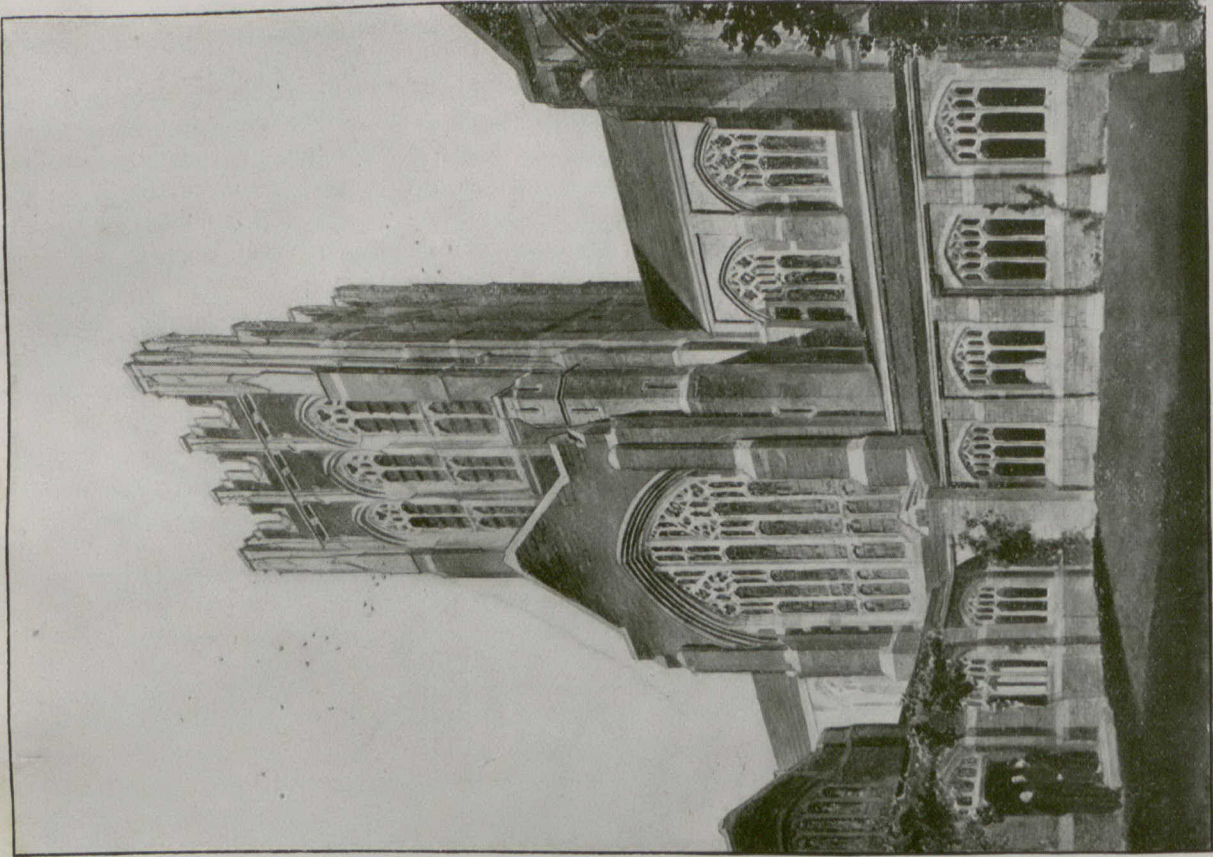
Cathedral of "All Saints," Halifax, N.S.

which a wholly modern aspect is given by some detail of construction. In erecting a church, however, no such difficulty is manifest. The essentials are all known, the requirements for each portion, each department, perfectly familiar. These essentials are within the power of the poorest parish that will but build honestly and once obtained cannot be taken away, no matter how much ill-advised frippery and meaningless decorative adjuncts are allowed to creep in.

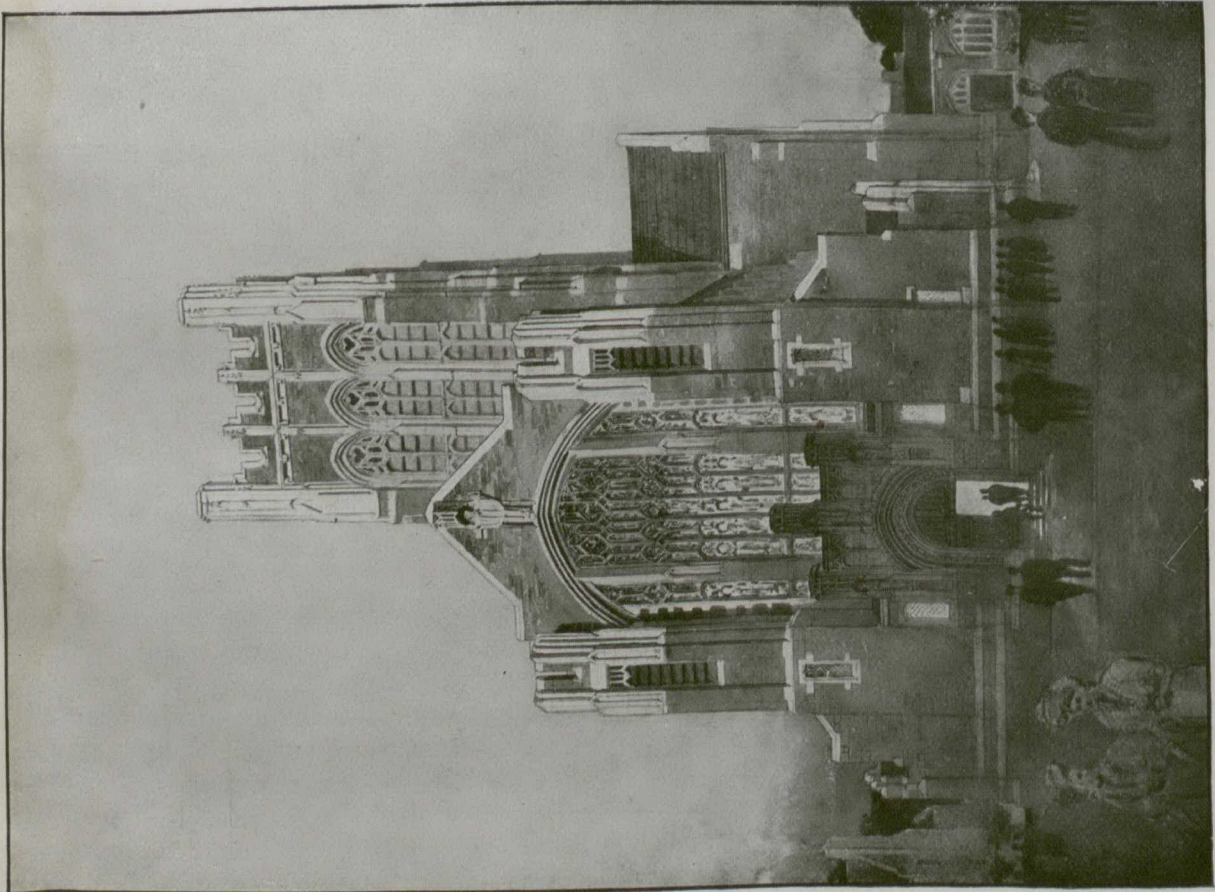
A cathedral is something more, however, than a large church, its choir and sanctuary are very differently arranged, and though no church building should lack dignity, a cathedral should possess an added quality, one that should touch the beholder immediately. It is not only a church, it is also the centre of the spiritual life

that when completed, its sturdy spireless tower, rising above the masses of dark foliage that encircle it, above the picturesque roofs of the old town, the fact that it is not only a church but a cathedral as well will be at once denoted.

Perhaps the greatest disadvantage we of the western world are compelled to undergo in our buildings, in the vast majority of cases at any rate, is the sordid meanness or cheap tawdriness of the surroundings. This condition is so marked in certain portions of America as to quite dishearten the conscientious architect at the very inception of his task. Many noble buildings there are, such as would become beautiful situations abroad, that here seem contemptible, at odds with their environment. But in the present case even this lamentably



Cathedral Close Looking North.



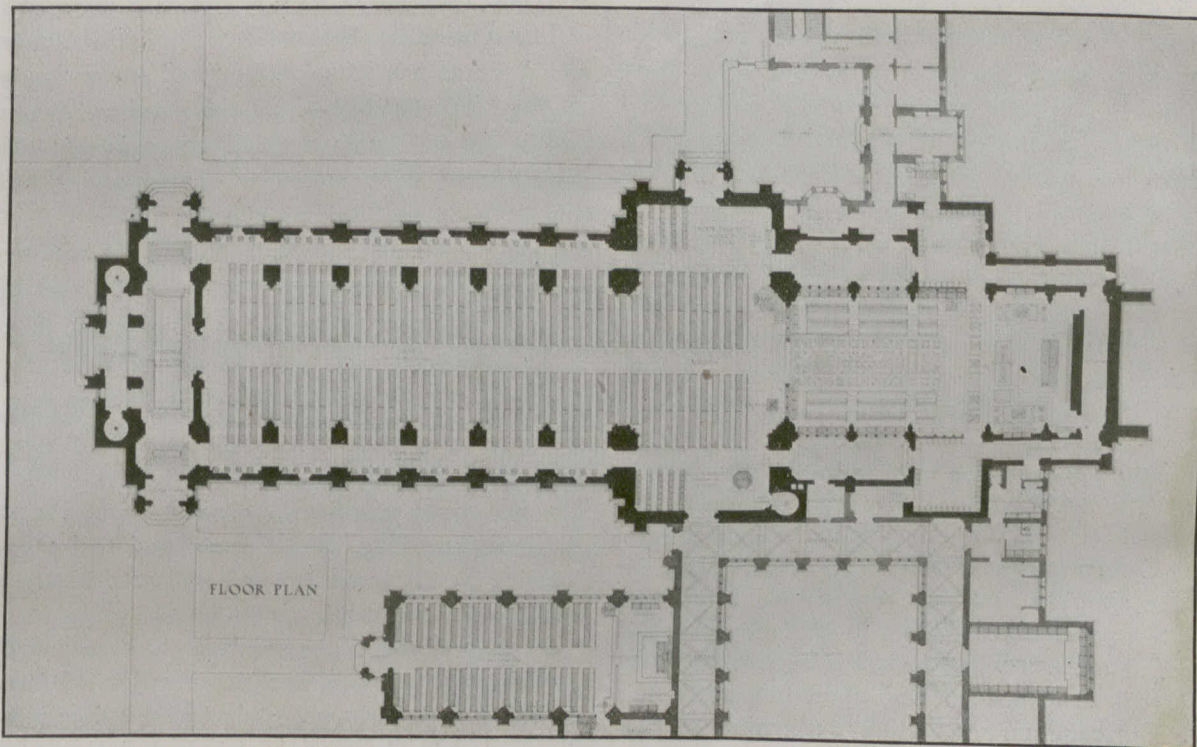
Cathedral Facing Tower Road.

usual state of affairs need not be faced. The city is an old one, splendidly set upon a splendid harbor, its grey buildings climbing a rugged slope that terminates in the citadel. Everywhere amid the activity of the present, an honorable past makes itself felt. The dusty grey and age-begrimed walls of the citadel, the arsenal and many another building of the period stand for something more than the happenings of to-day, and the passenger in its extensive and busy streets is at intervals brought face to face with the lion, leopard and harp of the mighty mother overseas.

Amid such surroundings any attempt at such glittering splendors as are gathered in, say, the Basilica of Saint Mark at Venice or such sombre glories of carving and metal as are everywhere present in the cathedral of the debonair city of Seville, would be wholly out of place. Even the unruffled sunlit calm of the English cathedrals may hardly be attempted, much less attained.

done, for these should rest upon solid earth and only in a land where the forces of frost are but puny can this be done, while the same force it is that forbids the employment of any fanciful becrocketed spirelets and pinnacles, every stone of which must, even under the softer climatic conditions that obtain in Europe, be pinned to its fellows with dowels of copper.

Finally modern conditions and modern methods set a ban upon the hearty and exuberant play of fancy, that of old found its freest expression in the churches. This, alas! is now true of every land and place. The grinning gargoyle of to-day is not the product of the brain and chisel of some faithful and well trained craftsman thinking and expressing his thoughts in healthy individual fashion, but of the architect's misdirected endeavors to imitate at least the letter if not the spirit of the past, even his rather feeble original impetus growing fainter and fainter and more and more lifeless as it



The city is a northern one, the land one of long winters and deep snows, and over all blows the keen air of the salt sea, that singles out each unprotected bit of masonry, every weak cranny of construction, for attack. Only the hardest and most enduring of materials can undergo such a searching test as the old builders of the town well knew, and much that gives charm to similar buildings of the old world must be frankly dispensed with; the parapets for one, that in every period of the Gothic style as built abroad, heavy and castellated in early work, pieced and lace-like in later times, are almost an integral feature, for these would form pockets for great piles of drifted snow that melting in the spring would surely creep up and into the slate and woodwork of the roof. And the heavy floors of irregular flags that so charm the traveller abroad, must perforce be aban-

passes through a long series of other minds and hands, those of the draughtsmen, contractor, sub-contractor, modeller, etc., each intent that no expense shall be needless, until at last the workman raises mallet to chisel, even he, perhaps, forbidden by the laws of his guild to make a thing that shall surpass those of his fellows.

The olden time has been called the age of faith, and whether this term seems to cast a needless implication upon to-day or not, it is certain that men were once wont to give more ungrudgingly to aid the church in its good works than they do now. The cost of the medieval cathedrals was lightly met by the people of the past, but the funds that would be incurred in erecting even such a lifeless and soulless replica as we are only capable of to-day would be far beyond the capacity of any diocese, even perhaps of any country, to gather together. There-

fore it is better to aim only at the possible and to spend hundreds upon that for which five hundred years ago the equivalent of thousands would have been available.

To this end the architects have aimed at designing a structure of which the cost shall be within a very definite sum, discarding everything not absolutely essential that might militate against this end and employing everywhere the very simplest materials. The finished building will seat comfortably about eleven hundred persons, not including the stalls for choristers and clergy, and upon high festivals this number can, and doubtless will be, considerably increased.

The materials shown and called for in the specifications are, for the exterior walls' surfaces, the extremely beautiful variety of seam-faced trap rock known locally as iron stone, whose long flat forms and rugged surfaces in the walls of both the citadel and arsenal, are familiar to every resident of Halifax. The materials of a building should savor of the locality whenever possible, and ironstone has the added merit of extreme economy.

For the structural trimmings both outside and inside it is proposed to employ a form of concrete, the basis of which shall be the same trap rock broken and ground into small pieces. A number of exhaustive tests of this material have been made, and in each it has proved itself worthy. For example, its absorption is but one-third that of natural limestone, a most valuable quality when one considers the biting salt winds to which it must be subjected. In a material of this sort, too, many perfectly legitimate effects are possible, such as the elaborate and delicate moulding of shafts, arches and window tracery, the cost of which would be prohibitive if chiselled by hand from natural stone.

The two points of a church most vulnerable to fire are the organ, with its interior of thin and extremely dry deal, and the floor. As for the organ no means for reducing the danger has so far been discovered, but for the floor the simplest and most economical method of keeping it to a minimum is found in concrete, in which for the sake of extra tensile strength a network of laced light steel rods is embedded and upon this surface in both choir and sanctuary a certain patterning of tiles, etc., has been shown.

The ceiling of nave, transepts and chancel is frankly of wood, to be stained dark, though so designed that in the future if circumstances seem to justify such a proceeding vaulting of one sort or another may be substituted. In the lower portions, such as aisles and ambulatories, arched vaults or else slabs of masonry have been shown, that the building may be rendered as nearly fireproof as may be.

The roof is of slate and it is greatly to be hoped that these may be "graduated" instead of the thin, equal-dimensioned type commonly in use. Such graduation is almost invariably in old work abroad and has lately, ~~at the~~ instigation of the architects of the building now being described, been most successfully introduced into the United States.

Wherever material is necessary, as for flashing, capping, etc., copper, though costly, is the one thing that

can be counted upon to withstand the saltiness of the atmosphere.

For the rest, only the simplest materials and those readiest to hand, have been specified, the one care of the designers having been that such should be always honest and appropriate first, and beautiful second.

The dimensions of the finished building are roughly as follows: Interior length of nave from narthex wall to chancel arch 135 feet, width of nave from face to face of piers 29 feet. Length of chancel 80 feet, width 26 feet. Width at crossing 72 feet. Height of nave from floor to under side of apex of roof trusses 64 feet. Height of chancel 54 feet. Exterior height from appropriate grade to ridge line of nave roof 68 feet. Height of central tower 132 feet. Width of central tower 40 feet. Exterior width of nave and aisles 58 feet. Extreme width of building, taken at transepts, 86 feet. Extreme length 255 feet.

In addition to the various sacristies, offices, etc., a small chapel has been incorporated for early celebration of the Holy Eucharist, Lenten services, etc., while beneath the sanctuary a small crypt is provided. This would serve as a mortuary chapel and possibly as a burial place for high dignitaries.

In the structure only such offices have been provided as are strictly necessary, and even some of these, such as the working sacristy, wherein the altar guild prepares and arranges flowers, etc., have for the sake of greater economy been placed in the basement, though this arrangement, it is to be hoped, may prove to be but a merely temporary expedient, and that in time, such important adjunct rooms as this, the chapter room, the various indispensable guilds, school rooms and so forth, may find housing in the irregular and scattered group surrounding the cloister garth.

Finally, since it is scarcely to be expected that funds sufficient to provide for the erection of the complete building shall be immediately forthcoming, it is proposed to construct only a portion of the building now, and this will consist of the chancel, crossing, transepts, and three bays of the nave. In this first construction everything that will admit of such a treatment will be left rough, nor will the great tower be carried much above the apex of the roof. Of course the front wall will be but temporary, but by having the tracery of the great end window made now, it may be set in this and removed to its rightful position when the nave is carried to completion. Such a structure, though confessedly incomplete, need not lack dignity, and its dark mass, looming above the city, should, and it may well be hoped will, stand as a constant incentive to those who worship within its walls, to work with a hearty will to the end that it may finally lift its every part proudly towards the sky, the visible embodiment of all the noble aspirations of which the human heart is capable.

P. Q. A. A. DISCUSS ARCHITECTS' REGISTRATION.

A special general meeting of the P. Q. A. A. was held on Friday, December 20th, at the Association rooms to consider the course to be taken in regard to the new Canadian Institute of Architects and their project to obtain a charter. Mr. David R. Brown, vice-president, occupied the chair and about twenty members were present including Messrs. Dunlop, Chausse and Veuve of the new institute.

Mr. A. Chausse gave a brief outline of the formation and organization of the new institute and indicated that when some of the clauses of the proposed charter of incorporation should come to be considered by the Dominion Government it would probably be found that the promoters would be referred to the Provincial Government on the ground that the matters dealt with were such as concerned the province primarily. For such delay as this entailed they might have to be prepared, but he was hopeful that the local associations would be able to prevail upon their several legislatures to give their authority to the project.

Mr. Chausse had letters from representatives of most of the local bodies expressing approval of the scheme. Mr. Doran pointed out that the proposed charter, while declaring that it did not propose to infringe the rights of such bodies as already possessed charters, nevertheless, did constitute an infringement of the P. Q. A. A.'s charter, in that it provided for the establishment of a Dominion licensing body side by side with the provincial body.

The Dominion body would have power to override the decisions of the P. Q. A. A. The provincial body might take pains to do its own licensing, but their decisions would be liable to nullification by the three men who would form a quorum of the Canadian Institute Examining Committee. In his opinion the question of licensing was purely a provincial question, and the idea of making it a Dominion one he thought was impracticable.

The medical profession had made an attempt similar to this when Dr. Roddick's bill was brought before the Government. All efforts to pass the bill had failed, and he thought the same reasons would militate against the proposed new charter. He was in favor of the idea of a Dominion Institute, but it should be on federal lines, not a governing body; such an institute should develop through the established societies appointing representatives to meet together and discuss the questions calling for their attention and gradually applying for more general and exclusive powers. The manner in which the Canadian Institute of Architects was working was that of making an entirely fresh start by individual members of the profession who had prepared a general charter on their own account which the Government had probably no power to pass. The work should be done, he thought, by associations and not by individual members.

Mr. Dunlop said he had accepted the post of president of the new Institute to do what was in his power to

advance the status of the profession and the interests of architectural education. No one had the interests of the Quebec association more at heart than he himself, and he wanted to see these interests protected in the act of incorporation of the Institute.

Mr. Venne stated that he accepted the idea of the Institute as a means of promoting the education and unifying the interests of the profession. He thought that the project of incorporation as at present proposed went beyond what the Dominion could grant in the interests of the other provinces in the matter of securing registration.

Mr. A. C. Hutchison said that as one who had taken part in the work of incorporating the Quebec association, he was zealous to see that the energy which had been expended in obtaining the Quebec charter should not be made vain by admitting any infringements upon it. After supporting what Mr. Doran had said, he asked Mr. Chausse whether under the proposed charter a member of the P. Q. A. A., not being a member of the Institute, would be able to practice outside the Province of Quebec. Mr. Chausse replied in the negative. Mr. J. S. Archibald said that as a loyal member of the P. Q. A. A. he was surprised that members of the association should as individuals promote a new Institute. They should act, he said, through the association which was organized to represent them, which was there to advance all their interests, which claimed and required their support and did not get too much of it. As a member of the legal committee of the P. Q. A. A. he would like to point out that at present, on complying with certain formalities, a member of the Quebec Association is free to practise anywhere in the Dominion. If the proposed Act were passed they would be limited to the Province of Quebec unless they became members of the Canadian Institute. If a Dominion licensing body were established they need to be prepared to undertake the expense of enforcing its decisions. During the past year alone the maintenance of their charter rights had cost the P. Q. A. A. \$500. The enforcement of registration over the entire Dominion was therefore something not to be lightly undertaken. He disliked very much to oppose a Dominion Institute, but the rights of the P. Q. A. A. should not be yielded. Mr. W. S. Maxwell pointed out that in the event of the establishment of a Dominion Institute a certain lowering of the standard now established in the Province of Quebec would have to be faced. We have in Quebec a hard standard for all entering the profession. Men in other parts who have not access to the same facilities for study cannot reasonably be expected to pass such a standard, and therefore he thought that it would have to be lowered.

Mr. R. Lacroix indicated that clause 5, section C, while including present members of the P. Q. A. A., was so worded as to exclude future members. Mr. Chausse claimed that section E provided for their inclusion.

Mr. Chausse explained that the project of the Act of Incorporation had been placed before Parliament, but was still open for amendments. The members of the new Institute were to meet later and would be pleased

to hear proposals for such amendments.

Mr. A. C. Hutchison moved a resolution to oppose the Canadian Institute in any endeavor to obtain legislation which would encroach on the rights of the P. Q. A. A. Mr. Doran seconded. Mr. Maxwell intimated that if the resolution were lost he would propose a modification. Mr. Hutchison's motion being voted on and lost, Mr. Maxwell's amendment was adopted by 8 votes to 10. It read as follows: "Resolved, that we consider that the charter of the Canadian Institute of Architects, while expressing a splendid conception, is not so worded as to sufficiently protect our rights, and that the council be instructed to take legal advice and see that our rights are safeguarded in every detail."

COMMUNICATION.

To the Editor of

THE CANADIAN ARCHITECT AND BUILDER.

Dear Sir,—In your December number, in a report of the annual meeting of the Architectural Club, you print a resolution of the Club on the question of the registration of architects in which it is said that the club "is opposed to the form or forms of registration put forth by the Institute of Architects of Canada and the Ontario Association of Architects, which would mean giving the control of the profession over into the hands of certain privileged bodies of the profession."

The Institute of Architects of Canada was started in Montreal, and is, I believe, aiming at a constitution of the same kind as that of the Province of Quebec Association of Architects, to which the architects of Montreal are accustomed. If they are in error, I do not wish to defend them; I write only to remove a misapprehension as to the attitude of the Ontario Association towards this question.

It is true that, when this Association first started, its constitution was modeled, on the suggestion, I believe, of the then Minister of Education, on that of the Law Society. Members of the Association were to have an exclusive title, the right to which was to be obtained by passing examinations conducted by the Association.

The purpose of this Act was to oblige young men to train themselves properly for the profession. It failed in this respect, inasmuch as the title of members of the Association was made not "Architect" but "Registered Architect."

When it was clear that the Act as it stood would have no effect upon the educational question, the Association (with whom also the title "Registered Architect" was not popular), represented the state of affairs to the Government and requested that the title be made "Architect."

A bill for this purpose was accordingly put into the hands of a member on the Government side to test the feeling of the House. The feeling of a majority of the House appeared to be in favor of the results aimed at by the bill; but it became clear in committee that there was opposition in the country; not of a statesmanlike character, but an opposition which the committee would not go against.

In its practical bearing upon our question the opposition amounted to a suspicion that if the Association had the power to conduct the examinations by which young men were admitted to practise architecture, it would use that power to refuse them admittance and keep them out of practice. Accordingly, when we brought the question up again in the House, we expressed our readiness to hand over the duty of examination to agents appointed by the Government.

In this form the opposition to the bill, as class legislation, was withdrawn. It did not, however, pass, because of opposition from two architects on the ground that an annual fee should not be made a condition of practice.

This was in 1897, and since that date examination by government agency may be defined as the attitude of the Association to the question of an educational test for persons intending to practise architecture.

At the convention held in January, 1907, it was proposed to bring the matter up again, and the question of how to conduct examinations apart from the Association is now, at the request of the Association, being considered by the Ontario Government.

This position, unless I am very much mistaken, is the very position in favor of which the Toronto Architectural Club "wishes to put itself on record," in proposing the above motion. This is a "form of registration of architects, based on education and under direct Government control which the resolution calls "a proper form."

We may therefore, I suppose, count on the support of the Toronto Architectural Club if a measure to that effect is introduced this session.

Yours truly,

W. A. LANGTON,

43 Victoria St., Toronto, Jan. 11.

NEW ARCHITECTURAL FIRMS.

A new architectural firm have opened offices in the Calthorpe Building, 619 Hastings street, Vancouver, B. C., under the firm name of Wright & MacDonald. These gentlemen come to the terminal city after long architectural experience in the old country. Mr. Robert J. MacDonald comes from Inverness, Scotland, where he served his apprenticeship in the offices of Ross & McBeth and afterwards with Hippolyte Blanc, of Edinburgh. Later he was identified with architectural firms in London, notably those of Frederick Arthur, and Ernest Taylor. Coming to Canada about sixteen months ago, he became connected with the government architectural office at Edmonton, removing from there to Vancouver last August. Mr. MacDonald is a nephew of the late sir Hector MacDonald.

Mr. Edmund Wright is a Royal Academy gold medalist, and an A.R.I.B.A., having served his apprenticeship in Leeds. Later, coming to Canada, he too entered the Government architectural offices at Edmonton.

Architect Herbert B. Rugh has taken into partnership Andrew J. Riddell, C.E., architect, late of Glasgow. The name of the new firm is Rugh & Riddell, with offices at 926-927 Union Bank Building, Winnipeg.

A PROBLEM IN DEGREES OF PITCH.

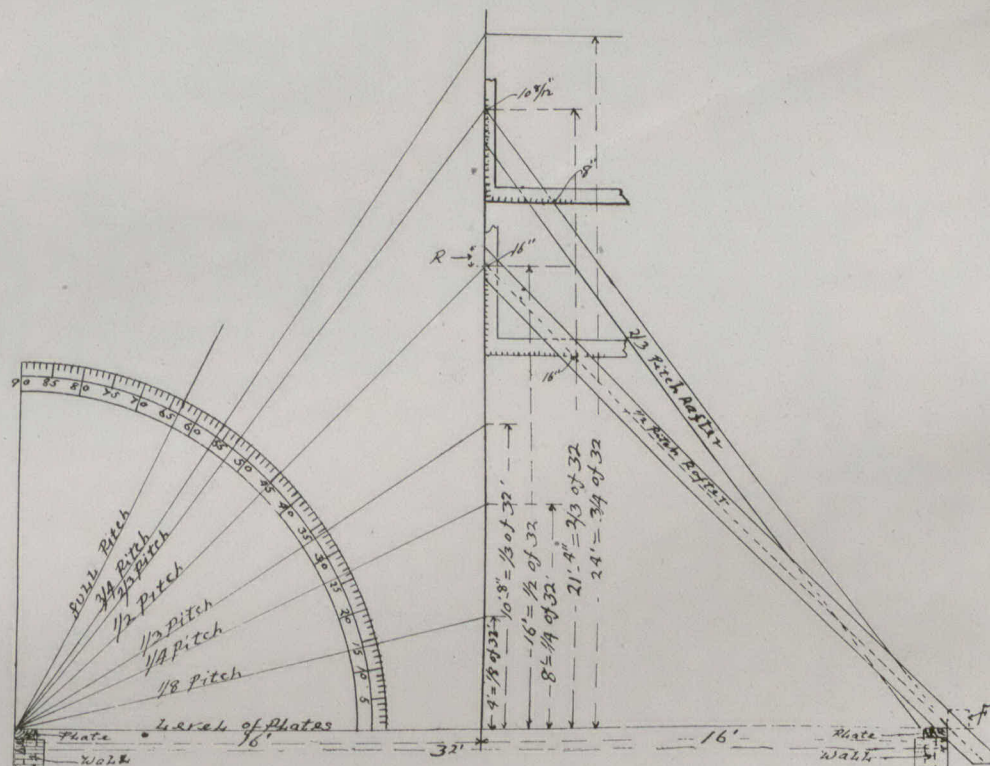
By W. C. A. STEVENSON.

The pitch of a roof in degrees is based on the angle the incline of the roof forms with a line drawn across the plates on the level, and is also based on the proportion of the rise to the width of the building.

I will try to make this plain if you will follow me on the diagram. We see that the outside of the walls here shown are 32 feet, making the half width 16 feet, which establishes the centre of the roof ridge. A one-quarter pitch roof would rise above the plate line just 8 feet or the quarter of 32 feet, a one-half pitch, half the width, or 16 feet; a one-third pitch, 10 feet 8 inches, or one-third of 32 feet, etc.

I have shown the half, and two-third pitch rafters laid out in position, with the square applied. It will be seen that the half pitch is cut to allow for it projecting over the plates, the dotted lines showing the pitch line to which the square will be applied so as to find the proper length, 16 inches by 16 inches on the square, and the distance across the square from these figures giving 1-12 the length of the rafter, as this is 1 inch to the foot.

The figures used for the 2-3 pitch are 8 inches by 10 8-12 inches, or 16 inches and 21 feet 4 inches divided by two. On measuring across the square from these figures you get 1-24 of the length as it represents 1-2 inch



As for the number of degrees this is based on the circle which contains 360 degrees. Each degree is again subdivided into 60 minutes, which again is divided into 60 seconds. We will not go into the minutes and seconds, as our diagram is too small.

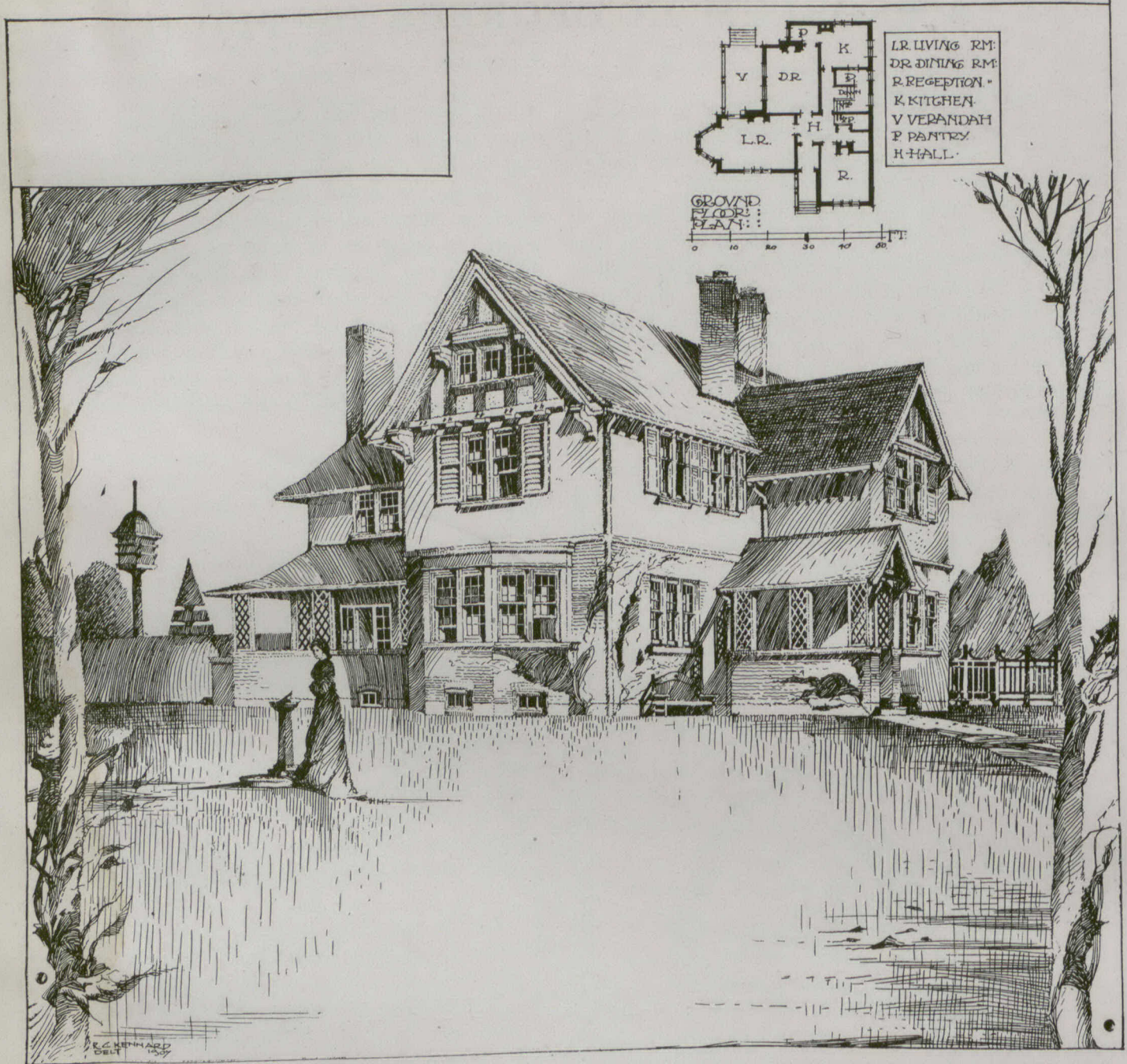
We have here laid out the quarter circle divided into 90 degrees, the 5, 10, 15 and 20, etc., being marked. We have also shown 1-8, 1-4, 1-3, 1-2, 2-3, 3-4 and full pitches, showing where each cuts the circle and the number of degrees each forms with the plate line.

The one-half pitch roof is most commonly used. It forms a 45 degree rise, which cuts the quarter circle in half. The common error is made that as the one-half pitch cuts the circle in half, the one-quarter would cut it in quarter or 22 1-2 degrees, and the one-third or 30 degrees, while the two-third would be 60 degrees. This is not the case, as a moment's study of the diagram will prove. Each pitch is dimensioned to the proper proportion with the width of building as will be seen.

to the foot. It will be seen that this rafter does not project over the plate, so that the square will be applied to the top edge of rafter. The letters F and R show the portion that stands above the pitch line.

MAXWELL BROS. AGAIN WINNERS.

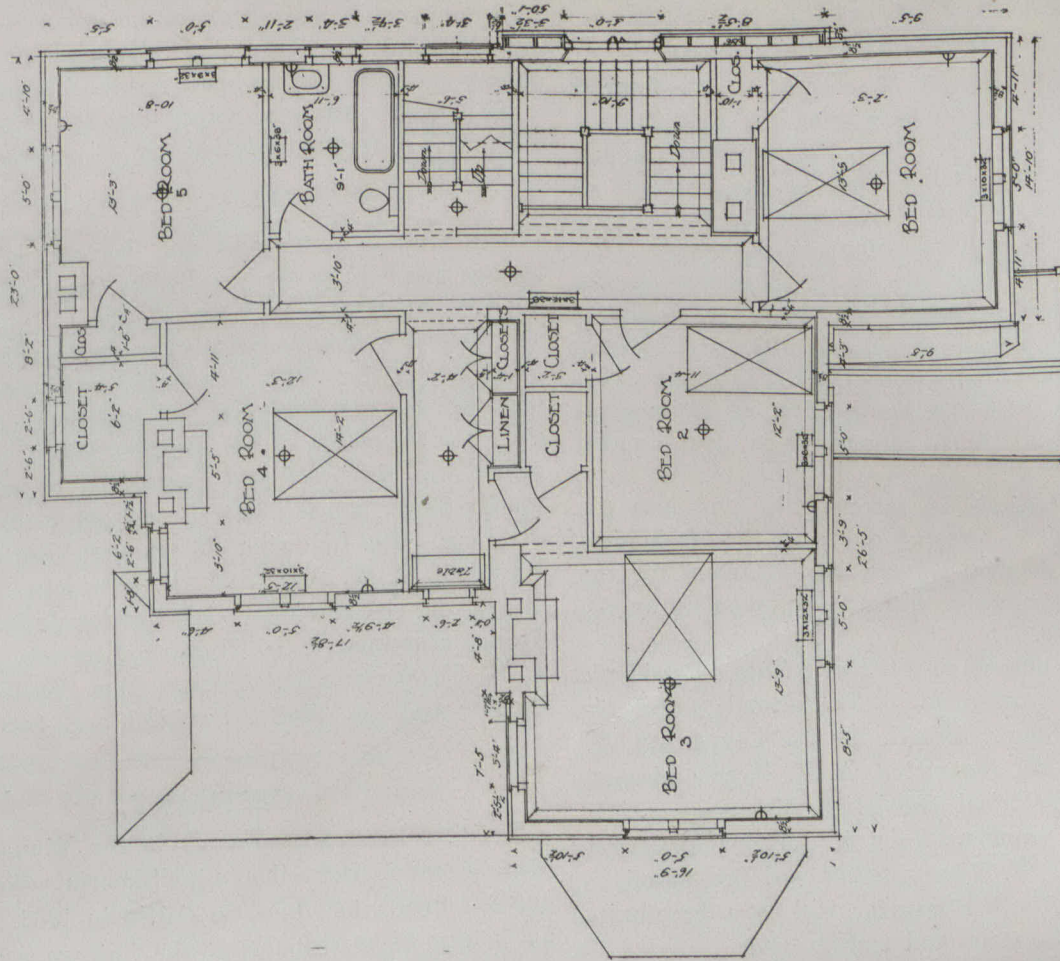
Messrs. Edward & W. S. Maxwell, of Montreal, who were successful in securing first place in the competition for the Departmental and Justice Buildings at Ottawa, have been again successful in their plans for the Regina Government Buildings, a limited competition in which they had to compete with six rival firms: Messrs. Storey & Von Egmond, Regina; Mitchell & Paine, London, E.C.; Cass Gilbert, New York; Darling & Pearson, Toronto; F. N. Rattenbury, Victoria, B.C., and Marchand & Haskell, Montreal. The assessors were: Messrs. Gooch of New York, and Miles Day of Philadelphia, and Professor Percy Nobbs of McGill University, Montreal.



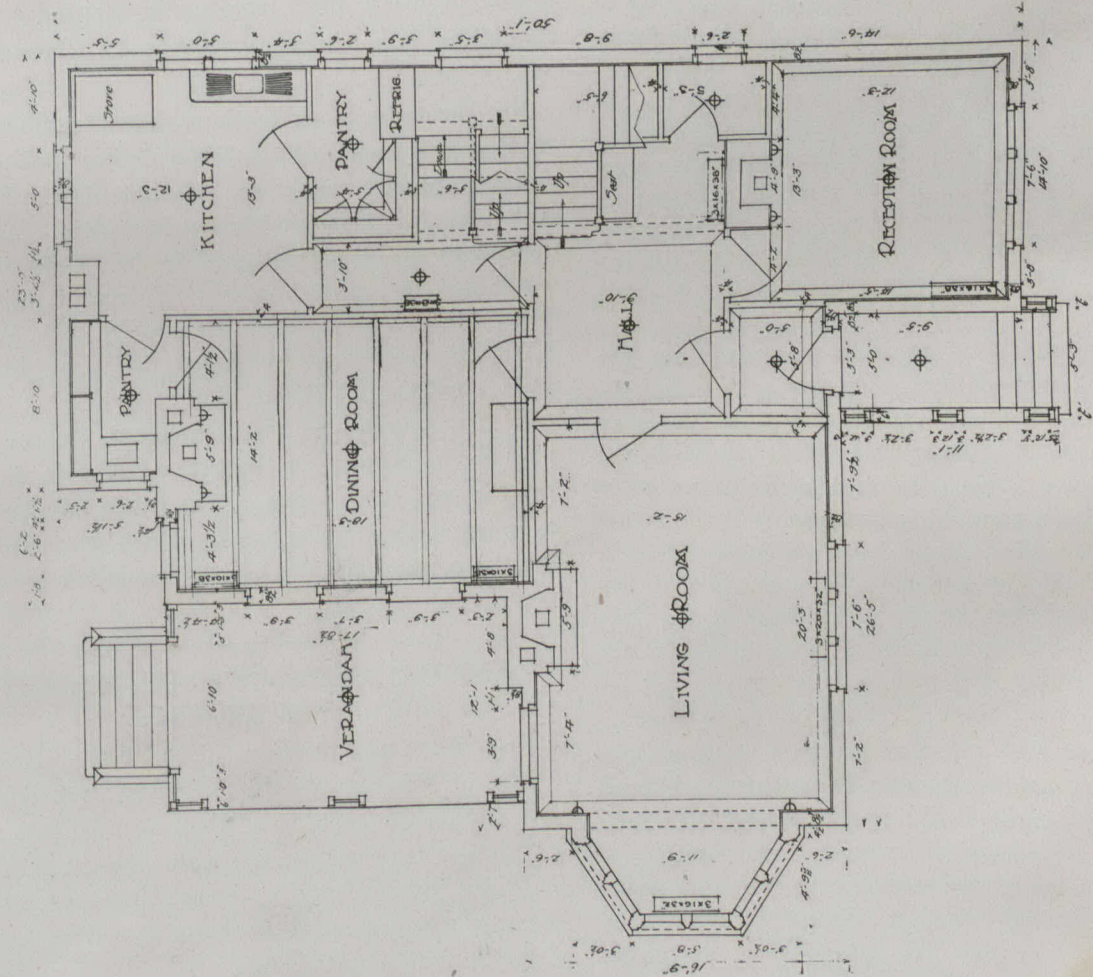
SOUTH-EAST ELEVATION

NORTH-EAST ELEVATION

Design by Sproatt & Rolph, Architects, Toronto. Cost, \$8,000 to \$10,000.



FIRST FLOOR PLAN.



GROUND FLOOR PLAN.

Design by Sproat & Rolph, Architects, Toronto. Cost, \$8,000 to \$10,000.

BUILDERS' EXCHANGES HOLD ANNUAL MEETINGS.

Unusual interest attached to the annual meeting of the Montreal Builders' Exchange, held in that city on the 13th inst. Mr. J. H. Lauer, the secretary, in his annual report, gave a full account of the proceedings of the year, laying especial stress upon the increase of membership, which made the Montreal Exchange "the strongest in Canada, and one of the strongest on the continent." It was presaged that during the coming year the membership would increase to 400. Mr. Lauer's financial report was equally encouraging, showing a balance to the credit of the Exchange of \$1,500 after meeting all obligations. Both reports were unanimously adopted.

Owing to the increase in membership, and also the increasing rent of the present rooms in the Mechanic's Institute, it was decided to seek new quarters for the ensuing year. This matter will also be taken up by the incoming executive.

The election of officers resulted as follows: President, Thomas Ford; vice-president, J. H. Arcand; secretary-treasurer, J. H. Lauer; Board, for the Carpenters, T. Charpentier; general contractor, A. F. Byers; plasterers, Jos. Fabien; electrical association, Simoneau; painters, W. T. Castle; plumbers, John A. Gordon; structural iron and steel, D. W. Ross; roofing and fire proofing, W. A. Ramsay. Another member will later be admitted, to represent the stone and marble trade.

An effort will also be made during the coming year to turn the Builder's Exchange into a sort of labor bureau, with facilities for securing and distributing skilled mechanics, and also means for keeping their records for the benefit of members. It was decided that upon the application of any three members of the Exchange the secretary should be authorized to advertise in the city papers for skilled mechanics, the men to apply to the secretary at the Exchange offices, and be distributed by him according to the applications received from the contractors.

In addition to this a proposition was made for the introduction of a sort of Berthillon car system for the identification of mechanics. These cards to be furnished to members of the Exchange and filled out with the names of their men, while there is a series of numbers corresponding with a key giving remarks as to the men's habits and abilities, the reasons for their dismissal, etc., each member of the Exchange to have a copy of the necessary code, and the records to be kept at the Exchange office as a reference library. This idea was approved by the meeting and will be taken up by the incoming executive, with other revisions of the by-laws.

Secretary Lauer also reported progress with regard to the efforts that are being made to organize a federation of the twenty-eight Building Exchanges throughout Canada with the object of securing a universal contract form. A number of the members present complained that with the present system adopted by architects of preparing contracts they had to engage a lawyer to

find out what it was all about, or take the risk of finding that they had contracted for a good deal more than they knew, with the probable result of losing money.

This matter was also referred to the incoming executive, with a recommendation for a conference with the architects.

The annual meeting of the Toronto Builders' Exchange was held in the board room on Monday, January 20, with an unusually large attendance and more than the customary manifestation of interest in the work. The balance sheet for 1907, as certified by the auditors, was most satisfactory, being the best that has been presented since the formation of the organization. The directors' report was also read and discussed. It indicated that the Exchange is making steady advancement along modern lines. The following officers were elected for 1908: President, C. W. Batt; first vice-president, Arthur Dinis; second vice-president, Geo. Gander; treasurer, James Crang; secretary, J. L. Phillips; directors, Wm. Clark, J. B. Thomson, John Aldrige, Wm. Smallwood, Geo. Duthie; auditors, Walter Davidson and Jas. J. Browne.

OBITUARY.

Recently there passed away in the Minneapolis Hospital Memo S. Detweiler, a well-known architect and a native of Ontario. Born in Berlin in 1869, he received his architectural training at the Chicago Art Institute. After the usual office training he secured a practice in Columbus, Ohio, later moving to La Crosse, Wis., and Austin, Minn.

Mr. Detweiler's productions showed a fine conception of what is attractive in public building, and much of his more prominent work was of that class. He was the author of the Carnegie library at Austin. Among other prominent buildings designed by Mr. Detweiler may be mentioned the court houses at Fairmont, Minn., Elbow Lake, Minn., Vinton, Iowa, Deadwood, S.D., and Britton, S.D. His last work was upon the plans for the state capitol building at Pierre, S.D.

In Minneapolis he was associated for several years, with F. W. Kinney in the firm of Kinney & Detweiler. For the past three years he was with C. E. Bell, the firm style being Bell & Detweiler, which was dissolved only last July when failing health compelled Mr. Detweiler to retire.

ANNUAL BANQUET OF EDMONTON BUILDERS.

The officers and members of the Master Builders' Exchange of Edmonton held their first annual banquet in that city on the evening of December 26 last. Upwards of 100 members and guests were present. President J. H. Miller presided and an interesting toast list, enlivened an evening, which, it is thought, will be only the first of many similar gatherings."

ARCHITECTURAL EDUCATION

By W. S. MAXWELL.

Before launching into this subject it is well to consider just what the term architect should imply. The Committee on Education of the American Institute of Architects produced this definition, which covers the ground comprehensively:

"An architect we defined as one ranking in the class of men of culture, learning and refinement, differentiated from the others of his class solely by his function as a creator of pure beauty, as an exponent through material forms of the best secular, intellectual and religious civilization of his time, and as an organizer and director of manifold and varied industries and activities."

What are the favorable conditions and methods which will develop the student until he can reasonably be considered an architect? Many colleges in all parts of the world are at work solving this problem, some apparently achieving greater success than others. The most active influence at work to-day is that which emanates from the parent of modern schools, the Ecole des Beaux Arts of Paris; consequently I wish to dwell somewhat in detail on the principles and results of this training.

ECOLE DES BEAUX ARTS.

The Ecole des Beaux Arts is a government school, conducted on the most noble of principles. There are no fees for tuition, and its doors are open to any one, the only condition of entrance being that one shall pass an examination, the vacancies being filled by those who do so most creditably. Students usually prepare for entrance by studying in a preparatory atelier. The subjects for admission include a small problem in architectural design, consequently students with no aptitude for the profession rarely get into the school. There are no fees paid for tuition, and a student may enter when he is sixteen and continue to be a member until he is thirty years of age. Unless a student does successfully one program in design in a year he ceases to be a member of the school. These excellent regulations make it possible for a man to support himself by working in an office, his position as a student in the Ecole being maintained by devoting a few months of the year to the problems in design. A course is given which covers the mathematical and constructional phases of education and which, above all things, aims to thoroughly educate the student in the artistic side of architecture. Planning and design are the subjects to which most importance is attached. The process followed develops the creative and imaginative powers and produces men who are able to logically study problems of great magnitude as well as those of a simple nature.

The school may be said to be separated into minor schools, for the design and planning is carried out in ateliers, which, with one exception, are outside of the school group of buildings. These ateliers are under the supervision and direction of a "Patron," who visits them

at least twice a week and gives to each student criticism on the problem upon which he is working, and the warmest ties of affection bind these men to the teacher and patron. In all cases the patrons are architects of the highest standing, several being members of the Institute of France. The fact that they are practising architects is of great importance, as they bring to their work not only the book learning and theory of a professor, but minds which have matured by practical experience with the very class of work which they are teaching. It would be as reasonable for a man to study painting under an artist who never painted, as to study architecture under a man who never had a building erected from his designs and under his supervision. The programs in design are given out at intervals to the students who report at the school. They are placed "en loge," as they call it, that is to say, they are separated from one another and are obliged to make a rough study within a limited time. This rough study, drawn in elevation, plan and section, is of the simplest indication and represents what the student considers as the most suitable solution of the problem. The study is traced and the original given to the guardian in charge. In the atelier the student develops his conception and is obliged in a broad sense not to depart therefrom. When the finished drawings are exhibited the original sketch is attached, and if he has seriously altered his conception his drawings are not eligible for an award. What would be the results if this principle was not followed? The students would proceed to examine examples of similar problems and the result would be the production of an archaeological solution. The weak student would to a great extent be influenced by those who are strong, and copying would be the result. The esquisse principle justifies itself on the following grounds: First of all the student uses his own powers and exercises his imagination, skill and judgment, producing a conception of more or less excellence. Secondly, he has a basis upon which to work, he is forced to become a thinker and is at once concerned with the principles of design, and in the development of his idea within the broad limitations of his own imposition, is occupied with a problem that develops those powers which must become proficient before he can be considered an architect. In the atelier he receives the criticism and direction of the patron as well as the friendship and advice of older students. During the first year he must do "Nouveau Service," which means that in addition to his studies he must stretch paper, grind ink, run messages, and so forth. This is a very workable system—even a genius should know how to stretch paper.

In considering the advantages of atelier life, there must be taken into account the comradeship which exists and the inspiration received from observing the work of the older men. The new student is not only concerned with his own problems, but takes the keenest interest in those of the older men. When the time approaches for delivering drawings at the school, he makes himself use-

* Paper Read at the Annual Convention of the Ontario Association of Architects, Jan. 15 and 16, 1908.

ful and often works at inking in plans. In certain schools in America, every stroke of the pen must be the work of the author; in the Ecole students may render assistance to one another, the result being that they spend all the time they can spare in developing to the fullest extent their conception, and if they are behind hand the men in the second class help those of the first to complete their drawings; this being possible, as the problems of the first class are not handed in at the same time as those of the second class. Although the draughtsmanship at the Ecole is of a very high standard, it is never considered as being of equal importance with the conception and development of the design. The exhibitions, in a large hall at the Ecole, exert a powerful influence; they get a man out of a rut, stimulate his imagination and broaden his point of view. The effect of many solutions of a problem all intelligently worked out cannot be other than broadly educative. The statement is sometimes made that the Ecole training has a tendency to kill the individuality of a man. I fail to see why it should; if a student's work is eccentric and not logical he certainly requires the discipline which a rational system of education will impose. If, on the other hand, he possesses an individual and open mind, the effort of the patron is always towards fostering and developing his personality.

The course in design is divided into two classes. A man in the second class is concerned with less important problems than are given to the men in the first class. Mentions are given for excellence in planning and design as well as for the other subjects, and, when a man has obtained a certain number of these, he graduates into the upper class. The diploma of the school is awarded to a man who submits a thesis after all mentions required have been gained. The thesis is a problem of the student's own selection and must be developed not only in the artistic sense but practical details of construction mathematically figured out must be furnished and an oral examination passed thereon. The diploma drawings may be produced at any time during the life of the applicant.

No description of the benefits of the Ecole is complete which leaves out the inspiring effect of living in Paris. I doubt if in any other city such a high level of artistic culture is apparent, and, where there can be found such a remarkable series of buildings, illustrating architectural masterpieces, extending from mediaeval times to our own. The course at the school should be frequently interrupted and excursions made to the surrounding provinces, where fresh impressions will be received from the monuments of a glorious past.

I remember well some advice which Professor Despradelles of the Massachusetts Institute of Technology gave a class of students in the Boston Architectural Club. He was talking to us about the study of old work, and the gist of his remarks was, that the important thing to do was to put one's self in a receptive frame of mind and to feel the beauties of a building; the reasons why it was constructed in such a way, the intention of

the designer, and the real inner meaning of the structure—not to rely on the sketch book and camera, but impress these realities on the brain, and not feel hurried. These are not his actual words, but my remembrance of his remarks. Just how much importance there should be attached to the careful measuring of buildings is a debatable point. While believing in the usefulness of this kind of work on exceptional occasions, I am not in favor of it as a common practice. In any case it is best to first of all become thoroughly imbued with the meaning of a structure before getting out the tape line or the camera. If work is to be measured, I think that the drawings should be washed and the shadows cast, even if in the simplest manner. By these means we are able to express the third dimension and to appreciate the massing and color qualities. I think draughtsmen should frequently design with a six B pencil and a few pots of color, as a corrective to the T square and hard pencil polish usually sought after. How often we are confronted with buildings in which the use of color and material is out of value and disagreeably spotty.

INFLUENCE OF L'ECOLE ON DOMESTIC ARCHITECTURE.

Before finishing my direct references to the Ecole des Beaux Arts, I wish to mention the influence of the teachings on domestic architecture and on small problems in design. French domestic work, leaving out the residential flats and important houses, is not up to the standard which we demand, and the French admit that the English and American work is superior; for this we cannot blame the theory of the system, but may reasonably say that our superiority is due to the place which the home occupies in the life of the Anglo-Saxon. Our pleasures and our social life in reality revolve around the home. The great number of houses put up in late years has evolved a standard of excellence which we strive to maintain. Frenchmen who have lived in this country are enthusiastic over our small houses and their many conveniences. That the graduate of the Ecole can do good domestic work is proven in American practice. As to the ability of the school man to design small work, an examination of the streets and parks of Paris will decide the question in the affirmative.

In considering other systems which are a factor in architectural education I would mention the following, which are active in America:

- 1st. The Colleges.
- 2nd. The Beaux Arts Society.
- 3rd. The Architectural Clubs.
- 4th. The Schools of Correspondence.

AMERICAN ARCHITECTURAL COURSES.

Most of the college courses have been developed on lines which had their roots in the French Ecole, but they are being modified almost yearly as wisdom dictates. At Columbia College they have gone in for the atelier system, one being in the school building, and two in New York City under Mr. McKim and Mr. Hastings. Professor Hamlin is authority for the statement that "the results have vindicated the departure." One tendency noticeable is that the requirements for entrance have

been raised, the contention being that in the past the time devoted to design has been just about sufficient to produce a good draughtsman. While teaching design is recognized as the most important function of an architectural school, there is always recognition given to the fact that a graduate should be furnished with an equipment of general culture, which will enable him to appreciate the dignity and significance of his art. It is somewhat regrettable that the work produced in American schools to all appearances might have been turned out in the French Ecole, a fact largely due to the influence of books which illustrate the prize drawings of the Ecole des Beaux Arts. I can only look upon this as a temporary matter. It is in the nature of things that as schools become stronger there will remain but the old sound principles to guide the students, and the work produced will be an expression of the traditions and social conditions prevalent in the centres of teaching. In any case, this is the professed ideal which the American schools are trying to realize.

In Harvard College the students in advanced design spend eight hours "en loge," and then their conceptions are criticized before the class. The problems given are based upon conditions as they actually exist in America, and while ideally treated are founded on this practical basis. Lectures on the problems are given, also the requirements and theory of the building based upon existing structures are gone into in detail.

The Institute of Technology has conducted on the site special courses on American buildings. On one occasion the Old Colonial work received consideration, and on another an extended visit was made to the World's Fair at Chicago, where the students produced measured drawings, sketches, photographs and working plans. This going straight to the fountain head is of great value as a supplement to the regular course. Summer courses of travel and study have been conducted in Europe under the competent guidance of an instructor or professor. These features seem to me to be of the greatest importance, furnishing as they do the link between theory and practice. For a detailed study of what the American schools are teaching, I would refer you to the illustrated articles published lately in the "Architectural Record" of New York.

The greatest movement to assist draughtsmen who can not afford to attend college is that instituted by the Society of "Beaux Arts Architects" of America. This society aims to help the man who is not in a position to go through college. In all parts of the United States, and I believe some parts of Canada, there are ateliers conducted by practising architects. Programs are sent out from headquarters to the different patrons and then given to the men who are studying in their ateliers. The esquisse principle is followed, and the men study the problems during their spare time, and receive criticisms from their patrons. In some cases they work part of the day in an office and part in the atelier. The drawings are sent to New York and are exhibited and judged by a jury of architects, mentions and medals being

awarded. This society is doing a remarkable work, and in many of the regular schools several of their programs are followed each year. The quality of work produced is very fine and the belief is held that by this system there will possibly be evolved an architecture which will suitably represent the ideals and conditions of this country. The prize designs are published in the magazine named "Architecture," and the competitors who are unable to attend the exhibitions can at least examine those solutions which were deemed most worthy. Any practising architect of standing may by application start an atelier.

ARCHITECTURAL CLUBS.

We are all more or less familiar with the architectural clubs which exist in every large city. They are in reality the home of the draughtsmen, especially for those men who have come from other cities. Strong ties of friendship are formed and enthusiasms born which cling to one in after years. I had the good fortune to belong to the Boston Architectural Club for three years, and can look back upon this period as the one when I first seriously realized the greatness and nobility of architecture. On the weekly club evenings one could always listen to a lecture or paper worth hearing, and round off the evening with indigestibles, pipes and good-fellowship. Well-attended classes in design under Professor Despradelles, of the Institute of Technology, were held twice a week, also classes in modeling, drawing from life and water color painting, which kept us occupied on most of our evenings.

I think that architects should take an active interest in these clubs. We have all at one time or another participated in the advantages they afford, and should realize that we can occasionally contribute something which will lend interest and possibly new life to an institution which deserves all the encouragement we can furnish.

We are constantly made aware that schools of correspondence exist which profess to double the salary of a man in about three weeks. Architectural courses are conducted and receive considerable patronage. I know that they are accomplishing much good work in teaching the technical side of the profession. In our office many of the men have been greatly helped by this system. I have little to say about their claims to teach design, as I do not believe this can be carried out satisfactorily by mail. Teaching in design is dependent not only upon the ability of the teacher but upon that personal and sympathetic relationship which should exist between him and the student.

ARCHITECTURAL TEACHING IN GREAT BRITAIN.

My knowledge of the workings of the systems in vogue in England is based entirely on conversations I have had with English architects and draughtsmen, and on literature on the subject. The dominant tradition is still that of serving an apprenticeship, but the thin edge of the wedge is already at work, not that there appears to be any tendency to abolish apprenticeship, but there is a growing feeling that it requires supplementing by or-

ganized education supplied from outside the office. The weakness of the apprenticeship system is that some practitioners conscientiously train their pupils, while many do not. In some cases brilliant men are produced and in others students with capacity for development have every ambition blunted.

In Glasgow, that home of the "Modern in Art," they have secured the services of a French architect to conduct a course in architectural design in the School of Art. The effect of the system on the ambitious and modern Scotchman will be interesting to follow. In all probability the infusion of reasonable discipline which the Ecole system will supply will result in individual work, which can bear the tests of criticism. In London several of the leading men are conducting ateliers on lines which are a modification of those followed in Paris.

The Royal Institute of British Architects has planned to establish teaching centres in various districts in Great Britain, under the advisory control of an educational committee. In America the American Institute is considering the advisability of directing in an official way a course of architectural education, and has in mind the founding of a post-graduate school of architecture in Washington.

One of the interesting features of a system which will represent all parts of the United States should be the differing character of the work produced in the extreme West, when compared with that turned out in New York. This plan may prove a step forward in the development of an architecture which suitably expresses the life and ideals of our friends to the south.

So much for systems and movements on foot in countries other than our own. I have said very little about traveling abroad, but believe that we should make a point to every few years seek inspiration among the monuments of a past which held to standards of beauty and truth more devotedly than we do nowadays.

CANADIAN ARCHITECTURAL EDUCATION.

In considering the subject of architectural education in Canada, one finds that of late years there has been a distinct advance made. In McGill University, under the able direction of Professor Nobbs, a comprehensive course is given, which, while making use of some of the principles in vogue in France, aims distinctly to foster in the students an appreciation of the fact that our architecture should have its roots in the English school, and yet frankly be expressive of Canadian life and climatic limitations.

In the Ecole Polytechnique, Professor Doumic has taken charge of the course in architecture. Here we may expect an interesting development, as Mr. Doumic is a graduate of the Ecole des Beaux Arts. There certainly is an opportunity in the Province of Quebec for architectural expression, which will recall the old ties with France. At the Ecole Polytechnique a night class in architecture fulfills a long felt want. The draughtsman unable to take a college course has in Montreal another chance to better himself by belonging to the Sketch

Club of the Province of Quebec Association of Architects, which has a course in design, as well as other educational features. In Toronto, I believe, your Association conducts classes in the mathematical and practical phases of education. In other large cities there may be educational advantages, but the fact remains that there is need in Canada of a course in design which will reach the draughtsmen in the smaller centres of the country.

SUGGESTIONS FOR IMPROVED ARCHITECTURAL EDUCATION IN CANADA.

It seems to me that the newly formed Institute of Architects of Canada has in this problem one of its great opportunities. As a possible solution, a course in design could be conducted on the same general working lines, which the Beaux Arts Society has adopted in the United States. Of necessity, one course should be elementary. There are in most centres of population architects who could form ateliers. The best drawings of each competition should be sent to the different towns and exhibited with written criticisms attached. Scholarships should be inaugurated and diplomas given to students obtaining a certain number of mentions. Such a course is needed in Canada, and it should be our aim to develop our architecture along lines which recognize our country and its traditions and associations. We may well, in our designing, seek to assimilate that which is good and suitable in Great Britain, and at the same time leave ourselves open to the many excellent influences which emanate from France and other countries. In the Province of Quebec, the best old work suggests a satisfactory solution of the climatic problems and a starting point which should supply us with inspiration. In regard to the other phases of education, it is questionable if these should be attended to by correspondence. May we not hope that technical schools will be provided to educate not only draughtsmen but the workmen of the country.

GOOD WORK OF P. Q. A. A.

Before concluding, you may be interested to hear of the work done in the Sketch Club of the Province of Quebec Association of Architects. During the fall and winter months the club holds competitions in design, which are divided into two classes. The conduct of these competitions is in the hands of three practising architects, who draw up six programs for each class, one month being allotted to each competition. In Class B, the problems are comparatively simple and often include the use of an order or of arcades, etc. In Class A, the programs are more elaborate, the one which is being worked on this month being a small art museum in a park. In Class A an esquisse is made during the evening on which the programs are given out. This is the third year of these competitions, and the very noticeable improvement in the quality of the work leads us to believe that our labors have not been fruitless. During one season some students made it a point to study carefully books on architecture and give a review of the contents to the members. This is a delightful feature, which makes for a higher level of culture. Talks by contrac-

tors, illustrated on the blackboard and by samples, were instructive and of practical value. Visits to buildings in course of erection have been made on Saturday afternoons, while other features of interest and benefit have been trips to the old towns of the province, sketching trips, classes in water color, etc.

ART MUSEUMS MUCH NEEDED IN CANADA.

The need of art museums, such as those of South Kensington and the Metropolitan in New York, is badly felt. We have no collections of merit which illustrate the artistic crafts of the past. Small collections of architectural casts decorate the draughting rooms and staircase halls of some colleges; it is more than this that we need. The Government of Canada should become interested in this matter and contribute liberally to the founding of museums in Toronto, Winnipeg and Montreal. The educative effects on the public, not to mention the architect and craftsman, would well repay any outlay. A nation is judged, not only by the tons of steel rails produced, but by the level of cultivation which the buildings and art of the country express. Do we judge the Greeks solely by their literature? Let our legislators give the matter serious thought and the wisdom of assisting this cause will be apparent.

The place France gained as a nation which furnished the world with artistic manufactures, was the result of encouragement and assistance from the Government.

So much for the systems of an educational nature. Many others exist that may in the future modify our present opinions. Let us cultivate broad-mindedness and progress will be the immediate result. The fact that the Government of Canada has held a competition for an important group of buildings indicates that we are accomplishing something in educating those who have but an indirect interest in the profession. Let us continue advocating this principle of competitions for public buildings. If representative architecture is to be produced, political patronage must be abolished, and every encouragement given to the profession at large.

In conclusion I would say that there will always exist artistic souls who cannot bear the limitations of school training. They will continue as in the past to lead us from the conventional and the commonplace and enrich us with the creations of their genius. They may even show us that we have wandered from the eternal truths and, like Brunelleschi, lead us into paths hitherto untrodden.

THE COMMON RAFTER AND THE SQUARE.

In the "Woodworker's Review" the following questions are answered by A. H. Woods:

First.—How to obtain, by the square, the lengths for a valley rafter for a dormer. One valley, what we call the blind valley and the other what we call the short valley?

Second.—If the common rafter in the centre of an octagon bay is cut on a three-eighths pitch, what will give the side cut of the jack rafter against the side of the building, also what will give the cut against the hip?

"The first question will be more clearly understood by using a diagram, as shown at Fig. 1. First lay off two parallel lines, letting one represent the plate and the other the centre line under the ridge. Thus the run of the common rafter governs the width apart these lines should be. Now lay off the run of the long valley, as from A to B, which should (provided the dormer roof is of the same pitch as that of the main part) rest at an angle of 45 degrees from the plate. BC represents the rise of the main roof, and CA will represent the long valley. The part of which, from CF represents what is

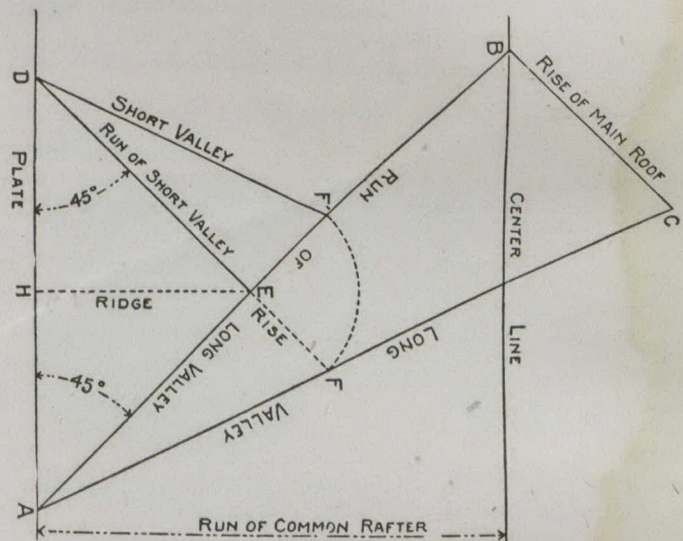


FIG. 1.

called the "blind valley," because it is concealed in the main roof. Now, let DA represent the width of the dormer and lay off DE, which will represent the short valley. Continue this line, as from E to F, which will represent the rise of the valley at this point. Transfer this measurement to F' and DF' will represent the short valley. The seat and plumb cuts can be had from this diagram.

"As to the second question. The proportions to take

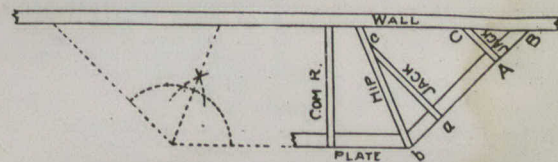


FIG. 2.

on the square for the side cut of the octagon jack to fit against the side of the house. See Fig. 2. Take AB on the tongue and the length of the rafter for a run equal to AC on the blade and the latter will give the cut. The same rule holds good in the case of the side cut of the jack to fit against the hip, not only for the octagon but any other angle. In this, the reader will observe that we have used the same letters, but of the lower case, to represent the same parts. Otherwise, the procedure is the same. Working to a one foot scale for the latter example, it is 5 on the tongue and 15 on the blade. The latter giving the cut."

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HEIGHT OF SKYSCRAPERS.

In the opinion of Ernest Flagg, architect of the new Singer Building at New York, the tower of which is the highest building in the world for occupation, the probable limit of height for these buildings in New York City will be 1,000 feet, with a tower 100 feet square, or nearly 400 feet higher than the Singer Building, differing with the president of the New York fire underwriters, who recently warned the public that there was danger of a great conflagration in the upper stories of the tall buildings beyond the reach of existing fire-fighting apparatus. Mr. Flagg says that the only limit is financial practicability. He insists that buildings of the type

of the Singer are the safest, as regards a roof-top conflagration, because of the space about the tower, which occupies only one-sixth of the lot space. Were all the skyscrapers constructed with the same proportion of space around the upper stories, he argues, the danger of a destructive fire in that upper region would be reduced to a minimum. Another point of limitation to which Mr. Flagg calls attention is the elevator service. He says one-haul elevators can be constructed to cover 1,000 feet, but beyond that probably cannot be made effective. Those in the Singer Building are of a new type, known as traction elevators, with the weight at the bottom and the motor at the top. They will make the forty storey trip in a little less than one minute.

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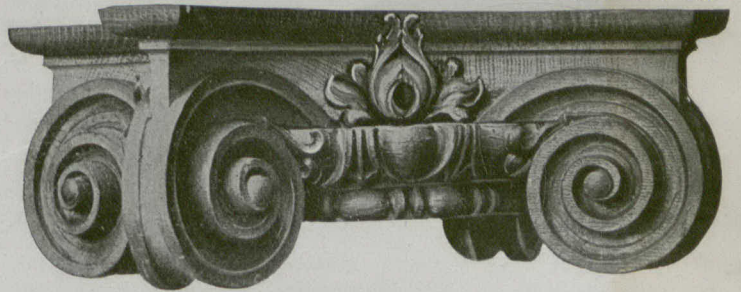


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TWENTIETH ANNUAL CONVENTION ONTARIO ASSOCIATION OF ARCHITECTS.

Architectural education came in for more than ordinary discussion at the twentieth annual convention of the Ontario Association of Architects, which was held in this city on the 15th and 16th inst. In a very exhaustive paper by Mr. W. S. Maxwell, of Montreal, which appears in another place in this issue, and again in addresses by President Falconer of Toronto University and Mr. W. A. Langton, at the annual dinner in the National Club on the evening of the 15th, the subject was dealt with.

President Falconer's remarks were listened to with much attention, as illustrating his probable attitude toward the question of higher instruction in the fine arts. In part he said:

"The architect should be a man who goes abroad and sees the architecture of other lands, like Greece, for instance, and understands what it is that makes the beauty of those buildings; how it is that the Parthenon must always affect even an uneducated man, unconsciously perhaps. It overawes him by the sense of its grandeur. The architect gets at the laws of proportion that constitute beauty and then like any other educated man his function is not to produce those things in an imitative way, but he should understand what those principles of beauty are and be able to educate our people by adapting them to the situation in which we live.

"Beauty is the very opposite of display. Such an understanding will prevent us from that vulgarity that we are in danger of. Vulgarity is based on ignorance, as though mere show, gaudiness and flashiness were beauty. You know this as well as I do—better probably. Real beauty is a simple thing—the simple thing that is done with knowledge, that goes down to the principles of which our artistic nature is constructed. There I think is the function of the university, too. I think the architect and university should come very close together. The university is not merely a technical school, it is quite a different thing. In the university we do not intend to turn out a man simply as a tradesman. We do not merely intend to turn out a man who can earn his living as a doctor, but in turning out a medical man our idea is that he is an educated medical man who understands the meaning of his profession and comes out with a scientific spirit.

"Architecture is a profession, therefore, that I think we can give a place to in the university. As I have often said, and it has been impressed upon me over and over again, the university may touch a profession in this way; beside the technical side of it there is the human side, and you cannot understand your own profession unless you have a conception of the breadth of humanity and of human life. If you are made more efficient as an architect you are giving expression to those things that touch human nature in its breadth and depth, through literature, through history, through economics, and in a variety of ways the meaning of human life is brought to bear upon the student, and so an architect, who is educated in the university spirit, should go out a broader-minded man."

"In the same connection Mr. W. A. Langton remarked: "What we want is to get architects all over the country familiar enough with architecture to practise decently, to make buildings sufficiently conform to good taste. I have been in a French town in which there was no distinguished building at all; a little town, and all the buildings of a moderate quality; a town very much like our own county towns, but it had a character of good taste from beginning to end, because there they had the tradition of class architecture, which is practised by masons in the county as well as by architects in the city.

"There is a bill now before the university in which they are asked to conduct all examinations. We have nothing whatever to do with the admission of architects to the profession. If such government agencies take the examination of students into their hands, if the word architect is the reward of the successful examination of the student and also the title of members of this Association, then I suppose the Association will become of the nature of a corporation, such as a law society at Osgoode Hall, in respect

of all members of the profession being within its membership. We are disposed to let that stand at the present moment, although we have our eye upon another method of procedure which is in vogue in the United States, by which the state licenses architects without reference to any association at all. If that proves to be the way which the government thinks education can be pressed upon the young men of this country we are quite willing to accept that and let the government license architects. Then we shall be simply a voluntary body. We would have no standing in connection with the government whatever, and anyone licensed as an architect would not necessarily belong to our body. We would become a club, like the Architectural Club."

THE TORONTO WATER FRONT.

Mr. A. H. Chapman, of Toronto, in a paper on the Toronto water front, dealt interestingly with a problem that is clamoring for a solution. Said Mr. Chapman:

"Assuming all main tracks westward to be elevated and the lines necessary for the handling of freight and for the various sidings to be not carried west of Scott street or east of York street, we have the whole area between Scott street and York street free from all railroad crossings at grade level. There are three broad divisions to our plan: the docks, stretching about four hundred feet into the bay; a large plaza about five hundred feet wide through which the thoroughfare runs, and the viaduct or wall with the points of entrance at the foot of each street, a distance of about 2,000 feet.

"The thoroughfare running east and west across the plaza would run within, say, one hundred feet of the ends of the slips and entrances to the docks. In this space vehicles and the waiting public could stand ready to meet friends from the boats. This 100 feet would give ample space in front of each dock without conflicting with traffic on the main thoroughfare. The street car service for the docks would run along the southern side of the boulevard.

"For the people going from the boats to the trains or vice versa an entrance could be arranged in the viaduct wall similar to that at the foot of each street, whereby people could pass under the tracks and up to the station.

"As a park, the spaces or squares at the ends of the slips, together with about 200 feet north of the plaza and against the viaduct, would give ample space for park development as well as sufficient breadth and dignity to the whole situation. When we have the viaduct the development of the rest of the waterfront scheme would be a comparatively inexpensive proposition. And, gentlemen, the time has passed when we can be falsely economical in these matters. We can no longer tolerate a mediaeval castle in wood and paint for the entrance to such navigation lines as the Niagara and the Richelieu & Ontario Companies furnish. Such tawdriness is beneath the dignity of a large city that takes itself seriously.

UNION STATION.

"I assume that the arrangement for the station in case of the adopting of the viaduct will be a central concourse running north and south level with the track for the terminal lines, and this concourse depressed at the southern end for the approach of the through lines, this concourse then to open right on to the water front. If, however, this were unsatisfactory to the railroads, a separate subway could be carried from the water front to the waiting room in the station. In either case I think we would have an ideal connection between the water entrance to our city and that of the rail.

"Viewing the composition from the south one would just see the ends of the docks and buildings jutting out into the water, and between the docks would catch glimpses through the trees of a large plaza backed by the green sward with the massive viaduct wall in the background."

The election of officers resulted as follows: President, A. B. Gordon, Toronto; first vice-president, J. W. A. Watts, Ottawa; second vice-president, Geo. W. Gouinlock, Toronto; treasurer, A. H. Gregg, Toronto; council, E. L. Horwood, Ottawa; H. E. Moore, Murray A. White, Henry Sproatt and J. Francis Brown, all of Toronto.

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In addition to the low cost and long service there are special reasons why these roofs are used for covering certain buildings—cotton mills, for instance, where the inside atmosphere has to be kept moist to keep the thread from becoming brittle, are unable to use metal roofs on account of the rapid corrosion and are almost invariably covered with roofs laid along the lines of the Barrett Specification.

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MONTREAL NOTES.

During the last month of 1907, the building trade in the city showed no great inclination towards improvement. Outside the city construction rapidly dropped off, but work is still progressing on some of the large buildings, the unusually open weather allowing this. In buildings where the roof is on, or other shelter provided, work is going on satisfactorily, although no architect or builder has been heard to remark that he has too much to do.

Mr. Decarie of the statistics department at the City Hall finds that 1907 showed a slight decrease in monies spent on buildings, but 1906 was certainly a "boom" year in the city's history. Some people have been good enough to circulate the information that the recent financial stress has not had effect on the city. A visit to some architects' offices, or the number of draughtsmen out of work, would be interesting for them to know also.

One of the largest contracts of the month was the one for the new Ann street school for the Protestant Board. The new school is to be erected on the site of the old one which was burnt last summer, and will accommodate 450 pupils, about the same number as formerly. The building is to be a thoroughly practical one with no attempt at elaboration or unnecessary ornamentation. It will consist of basement, ground and upper floor. Playrooms are provided in the former, the largest one of which will serve as a gymnasium and when necessary as an assembly hall. The building is to be heated on scientific prin-

ciples, a feature being an apparatus for humidifying the atmosphere which is so often disregarded. Inside fire-escapes are another feature of the school which is fire-resisting throughout in construction. Pressed brick with limestone trimmings, are the exterior materials and the cost will be about \$65,000. Messrs. Ed. & W.S. Maxwell are the architects.

The Bank of Commerce on St. James street is making considerable progress and, from the size of the granite blocks being used, and the general detail so far as it has gone, promise is given of a large and well proportioned structure.

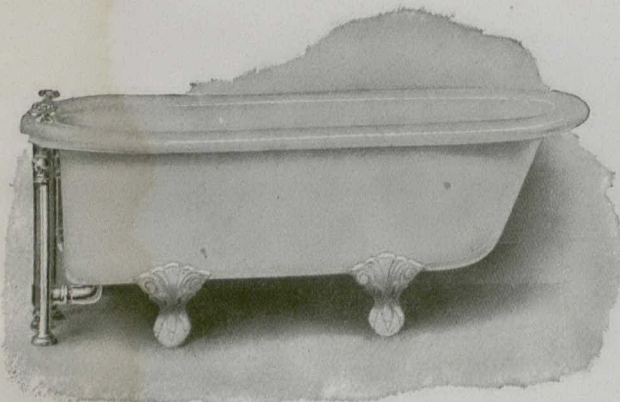
The number of amusement places in the city is increasing quickly, but it is unfortunate that the results are generally bad. Most of them are of shocking design and covered with electric signs, whose beauty cannot be said to equal their number.

The largest house of amusement, the Princess theatre, is nearing completion. Of course this building is not in the class already mentioned, but, judging from present appearances, promises to be an addition of some value. The building will seat 2300 people and it is expected that it will be opened in a few months. Messrs. Finley & Spence are the architects.

The examinations for admission to the Quebec Association of Architects and for registration have been fixed for the last five days of January at the rooms, No. 5 Beaver Hall Square and at the City Hall, Quebec, at nine o'clock in the forenoon of each day. One month's

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MONTREAL REAL ESTATE.

One of the most attractive investment channels in Montreal during the past few years has been real estate. Everywhere agents are reporting on its increase. The suburban development has in particular been rapid and remarkable. Grounds and farms, which only recently were considered quite in the country, are all laid out in lots, and orchards are continually disappearing. Municipalities are being elaborately laid out, and extensive parks being provided for. That the city will eventually cover most of the Island is proving no dream. Last year the sales in the city amounted to \$20,446,446, representing 3,061 sales, while in Westmount business was done to the amount of over \$2,000,000. The latest figures show an advance of \$5,000,000 as compared with last year, and an increase of \$12,000,000 dollars as compared with the year 1902. During the year the registered sales in the municipalities around the city, exclusive of Westmount, totaled \$4,858,875. The easy terms obtainable are largely responsible for the advance, while the lack of good accommodation and the rise in rents is continually driving people to seek homes of their own. Details of the year's figures are:—Town of St. Louis, \$1,653,186; Maisonneuve, \$831,636; Notre Dame de Grace, \$456,904; Cotes

des Neiges, \$429,830; Outremont, \$307,875; Delormier, \$281,314; Cote St. Paul, \$235,583; Longue Point, \$228,488; Westmount Plateau, \$153,056; Verdun, \$152,246; Petite Cote, \$74,650; Montreal West, \$40,009, and Maplewood, \$14,098—a total of \$4,858,875.

QUICK METHOD OF VALUING BUILDINGS.

There are frequently occasions when a knowledge of some rough system of arriving at the cost of building is desirable, says the "Record and Guide." The method now most often employed by all practical real estate men, architects and builders is to multiply the cubical contents of a structure by a mean price per cubic foot based upon the known average cost of buildings similarly constructed. This system is frequently characterized as imperfect, and at best merely an indefinite suggestion of value. However this may be, the element of personal judgment without doubt enters into the question, and in arriving at a reasonably correct valuation one must possess a good knowledge of the cost of construction obtained from experience in such matters. It must be distinctly remembered that there is no fixed rule to follow in this regard, as conditions and the prices of materials vary greatly from time to time. The system may be followed with much success by any intelligent layman, when the rudiments are well understood, but in the hands of an expert it is infinitely more reliable than many of the hit or miss methods in daily use.

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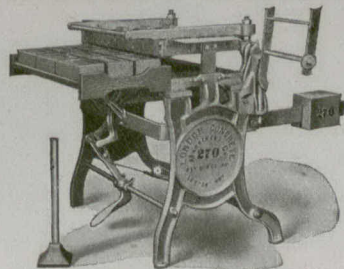
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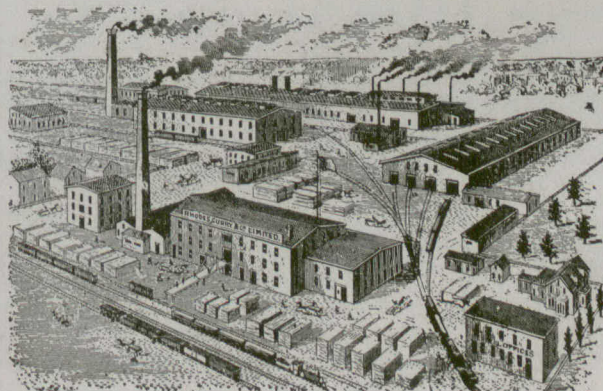
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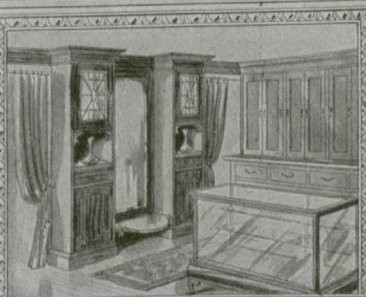
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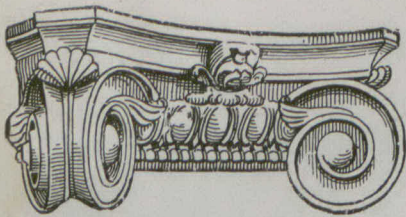
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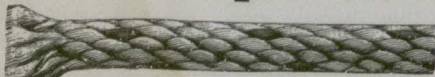
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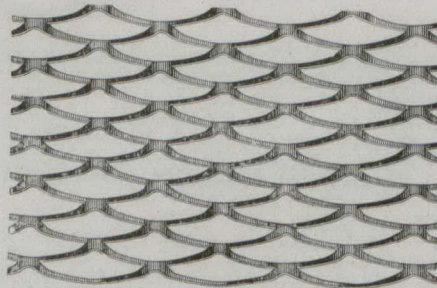
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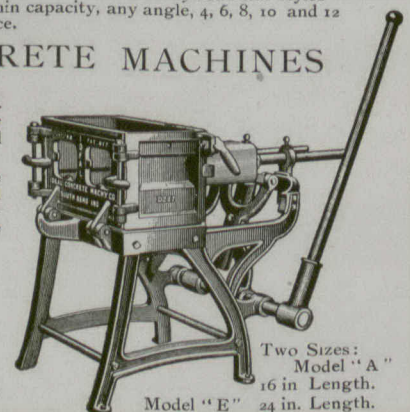
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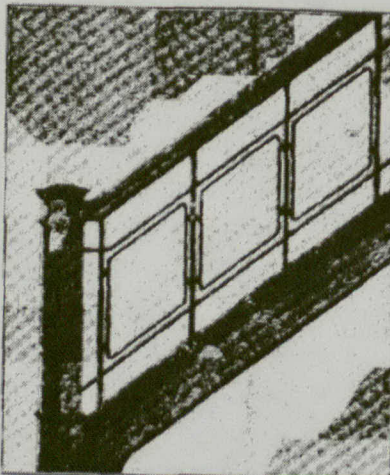


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