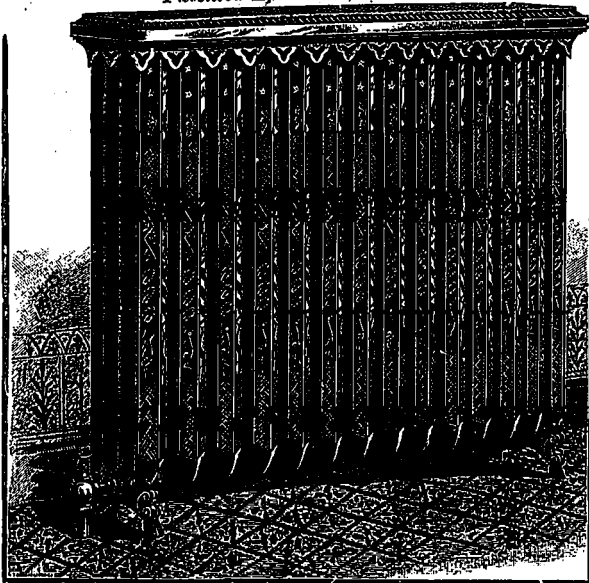


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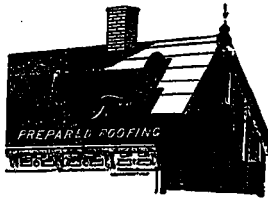
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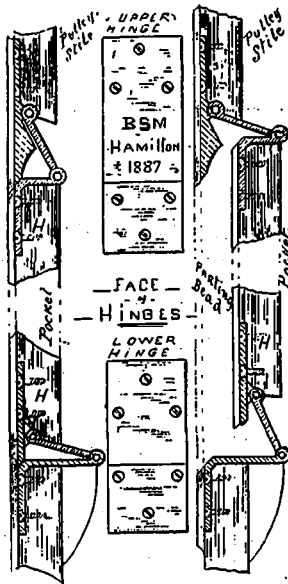
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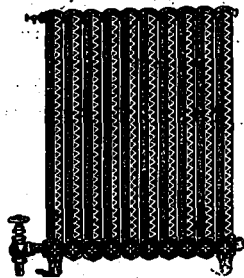
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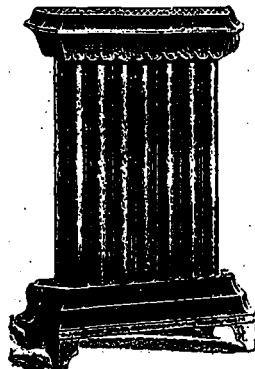
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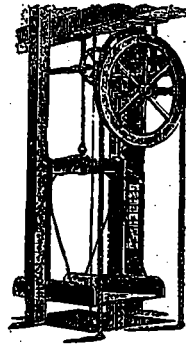
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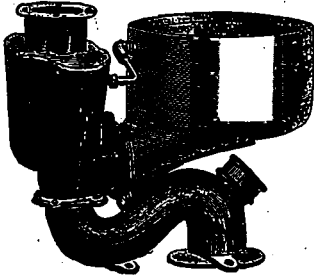
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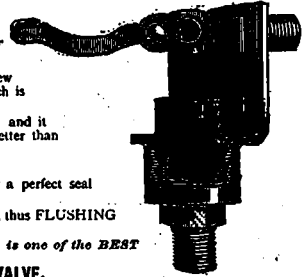
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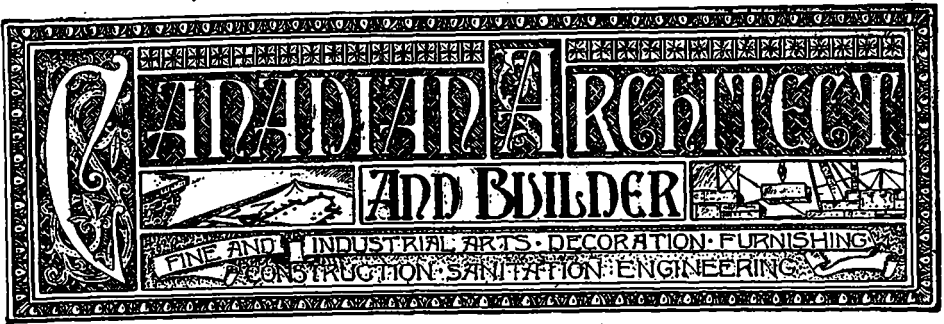
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**EDITOR'S ANNOUNCEMENTS.**

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

The Ontario Association of Architects has appointed the "Canadian Architect and Builder" its official paper.

**A**NOTHER Montreal building collapsed a few days ago, with it is feared fatal results to two persons employed therein. As in the case of the building referred to last month, the walls appear to have been weak, and bulged out beneath the weight of the roof. What is the matter with the Montreal inspection service?

**A** DECISION in the matter of the erection of the new Toronto City Hall and Court House in accordance with the design recently published in this journal, may now be looked for. In order to carry out the present design, \$600,000 in addition to the amount already voted for the purpose is required. The Council has decided to submit a by-law to the citizens for this amount on May 18th.

**T**HE introduction of steam boilers for heating purposes into large buildings has brought with it serious danger to life and property. These steam-heating plants are in very many instances placed in charge of persons whose knowledge of the principles of steam engineering and steam engine management is of the most scanty description. The fact that the services of such persons can be secured at a very much lower figure than would have to be paid to properly qualified engineers, is often sufficient to induce owners and lessees of buildings to assume the terrible risks attendant upon their incompetence. In the city of Hartford, Conn., a few nights ago, a hotel was blown to atoms and the lives of many persons destroyed owing to the fact that the so-called "engineer" had tied down the safety-valve on his boiler so that the noise of escaping steam would not prove a

cause of annoyance to the occupants of the building. The time has come when persons placed in charge of steam boilers should be compelled to prove their qualifications for the duties of so responsible a position.

**I**T is somewhat of a reflection upon those who have in hand the movement in Toronto to secure legislation compelling telegraph, telephone and electric wires to be placed underground, that they did not acquaint themselves with the source from which the necessary legislation for that purpose must be obtained. After allowing the session of the Ontario Legislature to go by, they are told by the Dominion Government that the legislation must come from the Legislature. Owing to the lack of foresight displayed by those connected with the movement, nothing can now be done for another year. Meanwhile, the wires will continue to prove an eye-sore and a source of danger to the public.

**A**LREADY in several cities of the United States strikes in the building trades are in progress. In Canada, as yet, there are no indications of trouble. Enquiry amongst Toronto architects and builders leads us to the conclusion that this season at least is likely to pass unmarred by the almost yearly recurring disputes between employees and employers. In view of the fact that shortage of crops and other causes have had a depressing effect upon the country's prosperity for two or three years past, it is the part of wisdom for workmen to refrain from making demands which could not be complied with, and if persisted in, would tend to retard the hoped-for improvement in the business situation. With the early disappearance of snow and frost, enabling builders to commence operations fully a month earlier than usual, and the prospect that the number and value of new buildings will be fully up to the average of the last few years, we may look forward to a season of prosperity in the building trades.

**W**HEN comment was recently made upon the fact that Mr. R. A. Waite, of Buffalo, the favorite architect of the Ontario Government, was beaten by at least two Canadian firms in the competition for the new Toronto Board of Trade Building, the Toronto *Globe* rushed to the defence and declared that Mr. R. A. Waite was not a competitor for the Board of Trade Building. As the names of the competing architects were not obtainable at the time the *Globe's* statement appeared, a positive disproof could not be given to it. Knowing however, that Mr. R. A. Waite had been invited by the committee to enter the Board of Trade competition, we requested Prof. Ware, who was appointed to judge the plans, to furnish us with a list of the competitors. This he has been kind enough to do. The names are published on another page of this paper, and a perusal of them will show that Mr. Waite *did* compete, with what result is already known. We have taken the trouble thus to disprove the *Globe's* statement in order to show that Canadian architects have in the interests of a foreigner been deprived of work which they were justly entitled to both on account of their superior ability and their residence in Canada.

THE manager of a New York Company with whom we had a conversation recently, complained of the difficulty experienced in inducing architects to enquire into and test the merits of any new article introduced for use in the construction of buildings. He took the view that it was not the least important duty which the architect owed to his client to acquaint himself with the nature and value of every new article placed upon the market. Instead of this, there appeared to be an unwillingness on the part of the majority of architects to take the trouble to learn for themselves the merits of an article which might for the first time be brought to their notice. We could not help thinking that the gentleman's contention was a just one, and we trust that whatever may be the practice of American architects, the members of the profession in Canada will not be slow to show their appreciation or otherwise, based upon their personal knowledge, of new materials of construction which may from time to time be introduced. The architect who desires to assist the march of architectural improvement, should seek to encourage those engaged in the production of appliances designed to add to the beauty, safety and convenience of the buildings of the future.

THE architects of Ontario are to be congratulated upon the successful formation of an Architectural Association for this Province. The meeting held in this city with that object on March 21st, both as regards its representative character, the large number in attendance, and the enthusiasm and unanimity which marked the proceedings, was a pleasant surprise to many. It revealed a feeling of deep interest, which augurs well for the future of the newly-formed Association and the architecture of this country. To the Architectural Guild of Toronto is due the credit of bringing about the meeting with its attendant results. We believe a wise choice has been made in the officers selected to manage the affairs of the Association. They will doubtless bring to the discharge of their duties the energy and wisdom which will serve to stimulate and maintain the interest of all the members in the work of the Association. We desire to acknowledge the kindness which prompted the Association to make the CANADIAN ARCHITECT AND BUILDER its official paper. It will give us pleasure to advance in any way possible the worthy objects which the Association has in view. One of the first things we feel called upon to do is to urge every architect who was not present at the recent meeting to send in at once his application for membership in the Association, and join heartily in the movement to place the profession of architecture in Ontario on a more satisfactory basis than it has hitherto occupied.

WE publish this month several more letters from contractors on the subject of the formation of a Builders' and Contractors' Association for the Province of Ontario. All express a desire to see such an Association formed. Doubts have been expressed by more than one of our correspondents as to whether the members of an Association could be got to live up to the standard agreed upon. In the opinion of others sufficient interest would not be taken in the objects of the Association to induce attendance at the meetings. We should be sorry to believe that these fears are well founded. Are not our builders and contractors as much alive to their interests as those of the United States, where delegates to the meetings of the National Association of Builders come from every State in the Union? There are in every walk of life men too apathetic to take part in a movement of this kind and too short-sighted to see that time and money spent in considering and putting in operation means for the improvement of the business in which they are engaged, is not lost, but is certain sooner or later to bring its individual reward. In London, Ont., the feeling in favor of Association is so strong that unless an Ontario Association be formed, affiliation may be sought with the National Association of the United States. While we have the greatest admiration for our American neighbors, we should be sorry to see our master builders entering the Association of the United States instead of organizing themselves into a Canadian Association. Many of the most important objects to be accomplished

can only be attained by a Canadian Association. The favor with which the proposition to form a Provincial Association has been received, would seem to leave little room to doubt that a representative meeting of builders and contractors throughout the Province could be got together at some central point for organization. Perhaps, as suggested by one of our correspondents, no more suitable or convenient place could be selected than Toronto. Builders and contractors of other cities appear to be waiting to hear the views of some of our Toronto builders on this subject. In our next issue we hope to be able to present these, after which we trust some definite steps may be taken toward organization.

WE regret that the "Canada First" sentiment which strongly characterized the proceedings at the banquet of the Toronto Board of Trade a few months ago, appears to have been lost sight of entirely when the question of who should be entrusted with the erection of the new Board of Trade building recently came up for decision. The report of the expert who judged the plans, speaks as follows concerning the work of two of the Canadian competitors:

"But the design bearing the title 'Utility' (one of two thus designated), shows an external treatment so effective and original that it deserves to be urged upon the Committee's attention. It is seldom in my opinion that one comes across a design so noticeably out of the common course, which is at the same time so simple, rational and dignified. It was, moreover, to my mind, just the character suited to a business building, which is as the same time the seat of a public institution."

"The design marked 'Ten Per Cent' has to my mind no advantages of plan over that just spoken of. These plans, though not as good as the others, are good enough. If they (the Committee), agree with me in regard to the great merits of the design marked 'Utility,' in its external treatment, then I recommend that they take such measures as may prove practicable to combine this elevation with the other plans. Fortunately there is nothing in this elevation to prevent its fitting the plans of the design marked 'Ten Per Cent.'"

The design marked "Utility" was submitted by Messrs. Darling & Curry, and the one marked "Ten Per Cent," by Messrs. Gordon & Helliwell, both Toronto firms. Messrs. Darling & Curry's elevations are declared to be in the best of taste and exactly suited to the requirements. Messrs. Gordon & Helliwell's plans are said to be "good enough," and easily adapted to the elevations of the other Canadian firm. Under these circumstances we are led to wonder why the Building Committee did not manifest their patriotism by adopting the expert's suggestion to combine the elevations of the one Canadian firm with the plans of the other. Instead of so doing, however, they gave the entire work to a foreign architect, *with the added privilege of amending both his elevations and plans.* It is impossible to conceive of a committee of American business men under similar circumstances discriminating thus against their own countrymen. Not only has an injustice been done to our native architects, but also to our manufacturers and dealers in building materials, as the foreign architect naturally uses his influence to secure the use of foreign materials. Thus money earned in Canada is sent abroad to enrich the manufacturers of a foreign country, instead of being made a means of assisting those who are endeavoring to build up industrial enterprise in Canada. In the face of such conduct, protestations of loyalty to things Canadian amount to nothing.

A SPECIAL committee of the City Council has been appointed to consider the advisability of establishing classes for the purpose of imparting practical scientific instruction to the industrial classes of the city. Our opinion is that such instruction should not be provided by the City Council, but by the Provincial Government; the Council might, possibly should, give assistance in the form of a grant of money to the schools. That technical schools would be managed successfully or economically by the City Council we very much doubt. It might be done if the Council would be content to provide such funds as in its opinion the city could afford, and then place the management of the school in a board of five or seven capable men appointed because of their knowledge of technical matters. A technical school could be made of very great service and value to all industrial classes. But there is much to fear from men who have hobbies which they wish adopted. One man believes that some one particular subject should be taught, and that in a special manner. Another believes that something else should be taught, or that the last man is infringing on the rights of some

union or other interest. That there is much need of some efficient training of our mechanics in technical matters, all will admit who have had any experience of the mistakes which the average mechanic is capable of making to the injury of himself as a mechanic, and the serious loss of his employer. It is possible that the education which they most require is one which would prepare them to receive technical education. Many of our mechanics have an aversion to theoretical knowledge, even priding themselves on their total ignorance of any thing which is not in their opinion practical. If these detestors of theory were good practical men, one could excuse them, but, as might be expected, they are almost invariably poor workmen. The contempt which such men have for theory is only equalled by that which intelligent men have for them. The first thing therefore is, to teach a man that there is no such thing as being possessed of too much information, either practical or theoretical—that the man who can make himself of the greatest service will succeed better than the man of lesser qualifications. It is not enough that a man can do certain work and receive the ordinary remuneration for the same; he should, if he has the ability, gain a knowledge of all matters directly or indirectly bearing upon his pursuit. That some employers are too ignorant to recognize intelligence and ability, and refuse to pay anything additional, does not prove that all are likewise indifferent. The time will come when some employers will see what is in the man and appreciate him accordingly. The unions have been doing their best to make all men, intelligent and ignorant, stand on the same plane, but it cannot be done for long. The capable man will rise in spite of all the weights which he may be forced to carry.

A man who has a reasonable knowledge of the theory of his trade, must become a better practical man, for he will have more information, and will have greater resources. No one will surely maintain that a man's ability to use his hands skillfully is lessened by having his brain power cultured, and yet one is almost obliged to come to that conclusion by the statements made by some very ignorant friends of labor. We are at times inclined to blame the teaching given in our public schools for much of the contempt which Canadian workmen have for technical knowledge, or in fact for information of any kind. If a reasonable amount of time was taken by the teachers to impress upon their scholars the value of knowledge instead of trying to drive it into them according to lines laid down, and made mechanical by regulation upon regulation, our workmen would surely show a greater desire to become acquainted with that theoretical information which they now hold of little value. The bricklayer or mason would not be a poorer mechanic because he has some knowledge of the loads which the material he handles will carry with safety; nor the carpenter if he has some knowledge of the safe loads which beams, joists, columns, etc., will carry. Every workman in the building trades would be benefitted by a training in the theoretical branches of his trade; and what is true of them must be true of every mechanic in the country.

If building operations in the province are as brisk as the demand for competitions for design, there is a very large amount of work being done and to be done this summer. We have severely criticized the conditions of a number of competitions, and still we hear of others being brought forward with conditions as bad or worse than those criticized. The County Council of Kent ask for competitive designs for a Court House to be erected in Chatham. The building is not to cost more than \$30,000, which is an allowance equal to about 5 cents per cubic foot. When there is so little money to be expended, and so much required, it would be much better to save the expense of holding a competition, and go at once to the nearest architect who has a reputation for doing cheap and bad work. No competent or reliable man will be drawn into a competition of this character when the inducement is \$900 for \$1500 worth of work, more especially as there is but very little hope of merit alone winning the magnificent prize. The amount of room asked for

on the first floor is 3,321 sq. feet, on the second floor, 3,761 sq. feet, and on the third floor, 6,250 sq. feet. As the lower floors must equal in area those above, we will be obliged to figure the approximate size of the building by top floor. For walls, halls, staircases, lavatories, etc., it will require nearly an equal amount of area, say 5,500 sq. feet, thus making the total area of the building 12,000 sq. feet. The height for cubing the same will not be less than 50 feet, thus giving a total cubic space of 600,000 feet, which, divided by the sum of \$30,000, gives the truly magnificent amount of 5 cents per cubic foot for the erection of the building. We do not know what such a building should cost, but we are of the opinion that it cannot be erected, even in the plainest manner, for less than 10 cents per foot, or a total amount of \$60,000. If the building can be erected for the above amount in even an imperfect manner, the County Council of Kent need not fear that they will be accused of extravagance. The building will cover an area equal to 240 feet long by 50 feet in width, with a height of not less than 50 feet. That such a building can be had for \$30,000, no one with a single grain of sense will maintain, and consequently those men who profess to be architects who enter the competition, will deserve any treatment which they may receive at the hands of a Committee so ignorant of the cost of building as this Committee appears to be. The usual commission of 5 per cent. is no more than a fair and reasonable remuneration for the work which an architect will be required to give if he properly fulfils his duties. At 3 per cent. he will not receive back what the work will cost him to execute, if he does not shirk the work which devolves upon him as an architect. Of course, some architects have a method of reinforcing a low commission by allowing the contractors to understand that they can make up the deficiency to their advantage. This method allows of the architect making good the deficiency in his commission, at whose expense we will allow his client to figure out. We will say, however, that the contractors are none the poorer through such payments. All architects who accept commissions below a fair rate are not dishonest, but there are far too many men who claim to be architects who are not honest, and who make much more out of their work, although it may be done at 10% than those men who charge the highest rates. The condition that all the predated drawings are to become the property of the Committee, is highly objectionable, and would alone prevent architects of any position entering the competition, even though all the other conditions met their views. The ordinary building committee is apparently not able to distinguish between a set of drawings necessary to explain a competitive design, that it may be awarded its proper position, and a full set of working drawings giving every possible information which a contractor may require to enable him to take off his quantities and give them proper values. A set of competitive drawings cannot be prepared which will meet with the entire approval of a committee, and where they have to be altered to any extent, it is better to prepare new drawings. The calling for all manner of unnecessary drawings and full specifications is unreasonable, more especially as not one in ten of the members on the building committees ever understand them. They certainly have no knowledge of the amount of work which the preparation of them entails. Architects should also refuse to send in designs to be judged by incompetent committees. Professional advice should always be insisted upon, as there is thus some guarantee that one of the best plans will be accepted, and not one of the worst. It is astonishing how men of little culture and no artistic training, consider themselves competent to judge of designs for a building, when at the same time they would scorn to have any work which they might do in their particular calling judged by any one not of that calling. We have also seen a notice of a competition to be held for a town hall in Collingwood. The notice is very brief and very indefinite, the committee evidently not knowing anything about a competition. No sum is mentioned for the erection of the proposed building. In this they are wiser than the building committee of the County Council of Kent. What we have said above applies more or less to this most vague competition for a town hall in Collingwood.

## ONTARIO ASSOCIATION OF ARCHITECTS.

A MEETING of the representative architects of Ontario, was held on Thursday afternoon, March 21st, at the Queen's Hotel. The following architects were present and signed the following agreement:

"We, the undersigned architects practising in the Province of Ontario, do hereby agree to become members of the 'Ontario Association of Architects.'"

T. J. Rutley, Jas. L. Wilson, Chatham; W. L. Symons, Grant Helliwell, Chas. F. Wagner, E. J. Lennox, John Gemmill, Wm. R. Gregg, R. W. Gambier-Bousfield, Mark Hall, G. W. King, Geo. W. Gouinlock, A. Frank Wickson, Frederick Charles Law, William Storm, Frank Darling, W. R. Strickland, Geo. M. Miller, R. M. Charlton, A. E. Paull, Geo. R. Harper, E. A. Whitehead, W. J. Smith, Wm. Raeside, Mancel Willmot, W. J. Stibbs, Chas. A. Walton, J. W. Mallory, Henry Langley, Edmund Burke, S. H. Townsend, A. E. Boulbce, Herbert G. Paull, W. A. Langton, J. Ades Fowler, S. G. Curry, Robert Ogilvie, H. J. Webster, Norman Dick, H. B. Gordon, R. C. Windeyer, M. B. Aylsworth, J. Connolly, D. B. Dick, and Arthur R. Denison, Toronto; F. J. Rastrick, Wm. Arthur Edwards, Chas. W. Mulligan, and James B. Balfour, Hamilton; John W. H. Watts, D. Ewart, K. Arnoldi, and Fred J. Alexander, Ottawa; John E. Belcher, Peterboro'; A. A. Post, Whitby; Henry G. Duck, Ridgeway; Thos. J. Kennedy, Barrie; S. G. Dolson, St. Catharines; Cornelius J. Soule, Guelph; Wm. Bunney, Bowmanville; Geo. F. Durand, and H. C. McBride, London; Jos. W. Power, Kingston.

It was moved and seconded that Mr. Geo. F. Durand take the chair.—Carried.

On taking his seat as presiding officer of the meeting, Mr. Durand said: It is quite unnecessary for me to make any remarks in opening this meeting, as you are all well aware what it was called for. I am pleased to see such a large and representative gathering, which is particularly satisfactory as showing that each and all have at heart, the interests of the profession throughout the Province. The first thing I think we have to do is to organize, and then we will have to adopt a constitution for our organization.

Mr. Burke moved, seconded by Mr. Balfour, "That the architects present do organize under the name of 'The Ontario Association of Architects.'" Carried.

Moved by Mr. W. J. Smith, and seconded by Mr. Charlton, "That we do now hand in our names as members of this Association." This motion was put and carried. In accordance therewith, the names as previously given were taken by the Secretary and Mr. Balfour.

The draft of constitution was then considered.

SECTION I.—*Name*.—"The name of this organization shall be the Ontario Association of Architects." Adopted without amendment.

SECTION II.—*Objects*.—"The objects of the Association are: To unite in fellowship the architects of the Province of Ontario, to combine their efforts so as to promote the artistic, scientific and practical efficiency of the profession, and to cultivate and encourage the study of kindred arts, and to endeavor to obtain legislation by which a standard of professional knowledge and experience will hereafter be required of all persons practicing the profession."

This section was adopted as it stood, after some discussion by Mr. W. J. Smith, of Toronto, Mr. Alexander, of Ottawa, and Mr. Curry, of Toronto, as to whether it would not be better to make of the last clause a resolution separate from the constitution.

SECTION III.—*Membership*.—"The Association shall consist of Fellows and Honorary Members."

This clause was taken as objectionable. Mr. Rastrick, of Hamilton, said he considered in starting an organization of this kind, it ought to be made to include as many of the young men in the profession as possible, and he looked upon it as the greatest mistake that could be made to form any cast iron rules in reference to the admission of members. He therefore moved that the words "Fellows and Honorary Members" be struck out, and the following words substituted therefor: "Members, Junior Members, and Honorary Members." No seconder was found for this amendment, and it was therefore not put to the meeting.

In order to avoid any misunderstanding as to there being a number of grades which might arise out of the use of the word "Fellow," Mr. Watts moved, seconded by Mr. Gordon, "That the word 'Member' be substituted for 'Fellow' throughout the constitution and by-laws of the Association." Carried.

SECTION IV.—*Qualifications*.—"Any architect engaged in the honorable practice of the profession in the Province of Ontario may become a Fellow of this Association. Honorary Members of this Association may be elected upon the recommendation of the Board of Directors, but all Fellows of the Association shall become Honorary Members when, after three years honorable standing as Fellows they resign the practice of architecture. Honorary Members shall not be entitled to vote, nor be eligible to office, nor shall they be assessed for dues or initiation."

Mr. Gordon moved, seconded by Mr. Alexander, that the above clause be amended to read as follows: "Any architect engaged in the honorable practice of the profession in the Province of Ontario, may become a Member of this Association. All Members of the Association may become Honorary Members when, after three years honorable standing as Members, they resign the practice of architecture. Honorary members shall not be entitled to vote, nor be eligible to office, nor shall they be assessed for dues or initiation." Carried without discussion.

SECTION V.—*Officers*.—"The officers of this Association shall be a President, three Vice-Presidents, a Secretary, a Treasurer and five Directors.

All the officers shall form a Board of Directors for the care of the property and management of the general welfare of the Association, and shall report at each regular meeting." Carried.

"SECTION VI.—*President and Vice-President*.—"It shall be the duty of the President to preside at all meetings of the Association. In his absence the chair shall be taken by the first Vice-President; in the absence of the first Vice-President by the second Vice-President; and, in the absence of the second Vice-President, by the third Vice-President."

Mr. Bousfield took objection to this clause, on the ground that the by-laws, rather than the constitution, should define the duty of officers.

The chairman put the motion to carry the clause as above without amendment. Carried.

"SECTION VII.—*Secretary*.—"It shall be the duty of the secretary to take the minutes of the meeting and conduct the correspondence of the Association, subject to the Board of Directors." Carried.

"SECTION VIII.—*Treasurer*.—"It shall be the duty of the Treasurer to collect all funds, and disburse the same on the order of the Secretary when countersigned by the chairman of the Board of Directors." Carried.

Moved by Mr. Arnoldi, seconded by Mr. Storm, that instead of Section IX as printed, a Section numbered 9, be inserted as follows,

"SECTION IX.—*Auditors*.—"Two auditors shall be appointed at each annual meeting to audit the books of the Association, and report at the next annual meeting." Carried.

"SECTION X.—*Amendments*.—"The Constitution may be amended by a two-thirds vote of the Fellows present at any regular meeting."

Moved in amendment by Mr. Rastrick, seconded by Mr. Watts, that Section X, be amended to read as follows: "That the Constitution may be amended by a two-thirds vote of the Members present at any annual meeting. That one month's notice in writing must be given to the Secretary of such proposed amendment, the Secretary to transmit a copy of such notice to each member, at least 14 days previous to the annual meeting. Any member from unavoidable circumstances unable to attend, or if absent from the meeting, may delegate any other member to vote for him at any meeting of the Association, but such authorization must be in writing within one month of the date of the meeting." Carried.

"SECTION XI.—*Status of Architect*.—"The status of an architect is hereby defined as follows: An architect is a professional person whose sole ostensible occupation consists in supplying data preliminary to the material construction and completion of buildings, in exercising administrative control over the operations of contractors supplying material and labor incident to the construction and completion of buildings, and in officiating as arbitrator of contracts, stipulating terms of obligations and fulfillment between proprietor and contractor."

In amendment to the above it was moved by Mr. Alexander, seconded by Mr. Burke, that Clause XI, read as follows: "The status of an architect is hereby defined as follows: An architect is a professional person whose occupation consists in supplying drawings, specifications and other data preliminary to the material construction and completion of buildings, in exercising administrative control over the operations of contractors supplying material and labor incident to the construction and completion of buildings, and in officiating as arbitrator of contracts, stipulating terms of obligations and fulfillment between proprietor and contractor." Carried.

Mr. Burke moved, seconded by Mr. Townsend, that the following Clause be next inserted:

"SECTION XII.—*Compensation*.—"No Member shall accept direct or indirect, compensation for services rendered in the practice of this profession other than the fees received from his clients."

This was received with great applause and carried unanimously.

"SECTION XIII.—*Failure to Pay Dues*.—"Should any member fail for one year to pay his dues, the Board of Directors may at its discretion, drop his name from the roll."

SECTION XIV.—*Misconduct*.—"Should charges of misconduct be preferred against any member, they must be made in writing, and be signed by the person making such charges; whereupon the Board of Directors, at its next meeting, must take the matter up, and the said Board may, at its discretion, drop the name from the roll, and the decision of the Board shall be final and absolute. The member against whom the charges are made shall, however, have the right to be heard in his own defence."

Mr. Bousfield was of the opinion that the offences for which any member might be expelled, should be inserted in the clause. The chairman said in reply that it was the intention of the organization to have a committee on Ethics, and on the respectable practice of the profession, and he thought other offences against the common good would fall within the discretionary powers of the Board of Directors.

This clause concluded the consideration of the constitution *seriatim*, and Mr. Gregg moved, seconded by Mr. Bousfield, "That we do now adopt the Constitution as just considered." Carried.

Before the consideration of the by-laws, these nominations were made to the chair, to form a nominating committee: to recommend officers for the current year: Messrs. Darling and Strickland, Toronto; Balfour and Mulligan, Hamilton; Alexander, Ottawa; McBride, London; Power, Kingston; and Belcher, Peterboro'. These gentlemen then withdrew so as to have their nominations before the meeting before first adjournment.

The meeting then proceeded to consider the by-laws.

ARTICLE I.—"The annual meeting of this Association shall be held upon the third Wednesday in November, and at such a place as shall be designated by a majority vote of members at the previous meeting."

Moved in amendment by Mr. Arnoldi, seconded by Mr. Wilson, that the word November be eliminated, and February substituted therefor. In making this motion, Mr. Arnoldi said he thought that November was probably the busiest season of the year. He knew it was in Ottawa and presumed it was elsewhere. This was a matter worthy of consideration by



members who were in any way tied to their business, and it might have the effect of reducing the number present. Amendment lost.

Moved by Mr. Storm, seconded by Mr. Balfour, that Article I of the by-laws be amended by adding: "The annual meeting of the Association shall be held upon the third Wednesday in November, or such other time as the Board of Directors may fix, and at such a place as shall be designated by a majority vote of members at the previous annual meeting." Carried.

"ARTICLE II.—The meetings of this Association shall be conducted in accordance with 'Todd's Parliamentary Practice.'" Carried.

"ARTICLE III.—All officers shall be elected annually by a majority ballot vote at an annual meeting of this Association." Carried.

"ARTICLE IV.—All papers, books and other records shall at all times be open to the inspection of the members of this Association." Carried without any discussion.

"ARTICLE V.—All members of this Association shall pay an annual fee of \$5."

In amendment Mr. Balfour moved, seconded by Mr. Alexander, that all members of the Association shall pay an annual fee of five dollars, which must be paid not later than May 1st, in each or every year or part thereof, and that members in arrears shall not be entitled to vote at the annual meeting. Carried.

Some one asked here when this fee should be paid, and the chairman in reply stated that it was understood all members present would pay their \$5 fee before leaving, whether their neighbor did or not. (laughter.) They would be a provision later on regarding new members.

"ARTICLE VI.—All applicants for membership in this Association shall be referred to the Board of Directors, who shall investigate their standing, and, if found qualified, recommend them for election." Carried.

"ARTICLE VII.—All applicants for membership recommended by the Board of Directors are to be voted upon by letter ballot, and thirty days are to be allowed members in which to return their ballots. Five ballots cast against any such applicant will be sufficient for his rejection."

It was moved by Mr. Townsend, that instead of five ballots rejecting a man, it should be 25 per cent. of those present.

Moved in amendment by Mr. Storm, to insert that on the return of the ballot papers the Board of Directors appoint scrutineers for counting the ballots. The article was carried thus, combined with Mr. Townsend's amendment.

Mr. Curry moved, seconded by Mr. Gregg, that Article 7 be re-considered. Carried.

Mr. Curry then moved that instead of 25 per cent. being necessary to keep a man out, 10 per cent. should be sufficient, and in support of this argued that they didn't want as members any persons who after the recommendation of the Board of Directors, could not carry 90 per cent. of the votes of the Association.

Mr. Arnoldi replied, opposing the amendment on the grounds that it was too bad to reject a man by 70 votes out of a hundred.

Mr. Lennox supported Mr. Curry, and the motion was carried with this addition: "and that on the return of the ballot papers the Board of Directors shall appoint scrutineers for the counting of the papers, whose names shall be submitted to the Association together with the ballot papers."

"ARTICLE VIII.—Twenty members shall form a quorum for the transaction of business."

In amendment Mr. Gregg moved, seconded by Mr. Storm, "That twenty members shall constitute a quorum of the the Association for business, and that five officers form a quorum for the Board of Directors' meeting." Carried.

"ARTICLE IX.—Moved by Mr. Arnoldi, seconded by Mr. Edwards, that a special meeting of the Association may be called at any time that the Board of Directors may consider necessary for the furtherance of the business of the Association, and a general meeting of the Association shall be held at any time upon requisition signed by 25 members in good standing, to the Board of Directors, giving fifteen days notice to the members of such meeting, and stating the business to be considered." Carried.

ARTICLE X.—Moved by Mr. Arnoldi, seconded by Mr. Walton, that "the fiscal year of the Association shall end on the 31st day of October in each year, to which date the books of the Association shall be made up and audited by the Auditors appointed at the annual meeting."

"ARTICLE XI.—The By-Laws of this Association shall be amended at any meeting by a vote of two-thirds of the members present." Carried.

During the discussion of this clause, in reply to an enquiry, the chairman stated it was the intention that the power of voting by "proxy" should apply only to changes of the Constitution.

"ARTICLE XII.—The ordinary travelling and hotel expenses of officers and committees attending business meetings shall be defrayed out of funds in the treasury of the Association subject to the approval of the Board of Directors." Carried.

Moved by Mr. Gouinlock, seconded by Mr. Storm, that the CANADIAN ARCHITECT AND BUILDER be appointed the official organ of the Ontario Association of Architects." Unanimously carried.

"ARTICLE XIII.—Moved by Mr. Curry, seconded by Mr. Soule, that a member shall after election pay his fees within two weeks. Carried.

"ARTICLE XIV.—Moved by Mr. Curry, seconded by Mr. Soule, that the Board of Directors meet at the call of any three members of the Board. The by-laws were then adopted in full, having been previously passed, clause by clause.

Mr. Darling, on behalf of the nomination Committee, presented the report of the Committee, recommending the election of the following officers: President, W. G. Storm; first Vice President, Mr. Arnoldi, Ottawa; second Vice President, Mr. Durand, London; 3rd Vice-President, James Balfour, Hamilton; Secretary, S. H. Townsend, Toronto; Treasurer, Mr.

D. B. Dick; Directors, Messrs. Belcher, Burke, Power, Mulligan and Cnry.

The chairman asked if these names were acceptable, and on motion of Mr. Gregg, the report was adopted.

Mr. Gregg said that without any reflection whatever on Mr. Townsend, it was desirable that Mr. Langton should be secretary. Hereupon Mr. Langton declined to act, stating that he would esteem it a pleasure to be of assistance, but feared his knowledge of business was deficient.

Mr. Lennox also favored Mr. Langton as secretary, reciting his labors in the interests of the meeting as an indication of his willingness, and stating that he thought Mr. Langton amply qualified for the position.

Mr. Langton put an end to the discussion by declining to act.

In taking the chair, Mr. Storm said: Gentlemen, this is an unexpected pleasure to me, for I had but little idea when I came here to assist in the formation of our Association, you would honor me by making me one of your officers. I sincerely, heartily and gratefully thank you for the honor you have bestowed upon me. (Applause.)

A vote of thanks to Mr. Durand for his services as chairman of the meeting, was moved by Mr. Lennox and seconded by Mr. Gemmill.

Mr. Durand replied, thanking the members for their courtesy and saying he did the best he could as chairman and was as pleased as any present that his efforts had been successful. Said he: "I think if there is one thing that has helped me more than another, it is the fact that I have no knowledge whatever of that book known as 'Todd's Parliamentary Rules,' and which we have now adopted for our future guidance." (Applause and laughter.)

Mr. Bousfield moved, seconded by Mr. Paull, that the hearty thanks of the meeting be tendered to Mr. Langton for his services to-day and in connection with the calling of the meeting. Carried unanimously.

Mr. Langton replied: I have to thank you gentlemen for your kindness, I would be willing to do a great deal more in the future than I have done this afternoon to advance the profession. (Applause.)

Mr. Edwards: There is just one thing yet to do. I think we should express the thanks we feel to the gentlemen who have been instrumental in bringing about this meeting. I would therefore move, and I am sure I express the sentiment of all those present, that we do now place on record our hearty appreciation of the efforts of the gentlemen who arranged this meeting.

Mr. Durand: I have pleasure in seconding this, and would couple with the motion the names of Messrs. Curry and Townsend, who may perhaps give us some history of how their efforts were made. (Applause.)

Mr. Curry in responding said: I don't want to waste the valuable time of the meeting in making a bad speech. (Laughter.) So far as any personal effort of mine is concerned, I am very glad, and will always be glad to be of any possible service to my fellow laborers in a profession of which we all are proud, and which I trust we will all seek to maintain. I am very well satisfied with the way the meeting has turned out. There has been shown here an interest which if continued to be manifested, will ensure the success of this organization. I don't think there is one here who will go away with the idea that our Association is not going to be a success (eries of no, no). Speaking for myself I will certainly do all I can to make it a success. A good deal depends on good officers, and more especially on a good secretary, such as I believe you have in Mr. Townsend. (Applause.)

Mr. Townsend: I am not going to attempt to make a speech. With the interests of the Association and of my profession at heart, I will do all I can to make our labors a success. We have certainly had a very successful meeting here to-day. Again I thank you for your kind expressions.

Mr. Darling: I am obliged for what you have said. Any work that I may have done in assisting in our organization has given me the greatest of pleasure, and I hope now we will see our Association a continued success. (Applause.)

Moved by Mr. Balfour, seconded by Mr. Darling, that all practising architects in Ontario who join the Association and pay their fee within one month shall be admitted on the same terms as those present. Carried.

The form of application was approved of with the change "drawing or photograph" instead of "photograph."

Moved by Mr. Lennox, seconded by Mr. Gregg, that the appointment of Standing Committees such as are necessary for conducting the business of the Association be for this year left in the hands of the Board of Directors. Carried.

On motion of Mr. Lennox, seconded by Mr. Gregg, it was decided to hold the next annual meeting in Toronto.

#### THE BANQUET.

In the evening the Architectural Guild of Toronto entertained the members of the newly-formed Association at a banquet at the Queen's Hotel. The menu was of the choicest character, and in the discussion of its merits closer acquaintanceships were formed and feelings of hearty cordiality engendered. Mr. D. B. Dick presided, the vice-chair being occupied by Mr. W. G. Storm. These gentlemen performed the duties of their respective positions in an exceedingly graceful manner. In opening the toast list, the chairman said the present was the first occasion upon which any considerable number of the architects of Ontario had met together. He might go farther and say it was the first time that all the architects of Toronto had met together. True an attempt was made some twelve years ago to form

an Architectural Association, but for reasons which he need not enumerate, the undertaking proved a failure. There was no doubt that hitherto the profession had been too Ishmaelish in its character. If the architects would in future stand by each other they would receive the treatment accorded to members of other professions. He would not deprecate honest criticism among architects, which was a different thing from the underrating spirit too often met with. There was no necessity for the indulgence of such a spirit, as owing to the growth of the country, there was plenty of room for all. Referring to the question of incorporation, the speaker said a standard of education, and the means of getting such a standard, was first necessary. In his efforts to establish in the city of Toronto a chair of architecture, the Minister of Education had the sympathy of all architects. Mr. Curry, secretary of the Guild, read letters of apology at their inability to be present, from the Hon. the Minister of Education, His Worship the Mayor of Toronto, Messrs. Alan Macdougall, Toronto; Fuller, Government architect, Ottawa; Stewart, Hamilton; Adams, Kingston; Day, Guelph; Post, Grist, Ottawa; and Jones, London.

The chairman proposed the toast, "Our Professional Guests," coupled with the names of Messrs. Arnold, Balfour and Durand.

Mr. Balfour said the architects had themselves to blame for the lack of proper recognition by the public. He thanked the Architectural Guild for having brought the present meeting together. The fight for their rights on the part of the architects must be done now or later on, and in his opinion it had better be done now.

Mr. Durand was surprised and highly gratified at the successful commencement which had been made. The result must be to raise the status of the profession throughout the Province. He could ask no higher honor than the Association had conferred upon him in electing him as one of its vice-presidents. Every member should work for incorporation; and twelve months hence he hoped the Association would be in a position to ask for incorporation.

Mr. Alexander, in the absence of Mr. Arnold, referred to the success which had thus far attended the formation of the Ottawa Institute of Architects, and the benefits which would result to the profession and the public if incorporation were obtained. He hoped to see the movement succeed.

In calling upon Prof. Galbraith to respond for the cause of technical education, the chairman referred to the value of such instruction to the student of architecture, who, in the practice of the profession, had so much to do with mechanics. The architect was supposed to teach half a dozen different trades, and hitherto had been obliged to pick up as best he could the practical knowledge pertaining to them.

Prof. Galbraith remarked that architects and engineers stood in much the same relation to technical education. The students of the present day in these professions who hope to succeed must have technical education. Technical schools could not make of a student a perfect professional. They should enable him to read and understand scientific books. The practical part of his education should be learned in the office and by actual practice. In the case of architectural students there was also to be considered the question of artistic education, which was quite as important as the other. He did not feel competent to express an opinion as to how a knowledge of art should be taught in schools, though a certain amount of art training could and should be got in school. The ultimate measure of a student's success must depend upon his adaptability for the profession he seeks to enter. The formation of this Ontario Association of Architects marked a new era in the architectural history of this country. It should be the duty of the Association to endeavor to secure a standard of qualification for the practice of the profession.

The vice-chairman, W. G. Storm, spoke of the joy which the work so successfully accomplished that day had given him. He believed the Ontario Association of Architects contained as good metal as any similar organization on this continent.

Mr. F. J. Rastrick said the profession in Canada had hitherto been lacking in the feeling of brotherhood which should obtain amongst members of such a noble profession. He congratulated the architects present upon the good day's work that had been accomplished.

Mr. Burke pointed out that the success of the association would depend upon every member maintaining a proper standard of ethics. This standard of ethics was briefly comprehended in the golden rule "Do unto others as you would they should do unto you."

Mr. Gordon referred to the effect of the architect's work upon the education of the public, and urged the study of the ancient architectural history and the best models of Greek and Gothic architecture, in order that their work might have an ennobling effect.

The toast to "The Architectural Guild of Toronto," was received with great enthusiasm and was responded to by Mr. S. G. Curry.

At intervals during the evening the proceedings were entertained by songs, from Messrs. Mulligan and Denison.

The annexation of Parkdale to the city of Toronto will compel the city to appoint a third inspector of plumbing. It is a well-known fact to those acquainted with the subject that even three inspectors will not be sufficient to insure the proper performance of the work. We would suggest the appointment of two new inspectors.

## KENT AND CHATHAM PUBLIC BUILDINGS.

ONE of the first official acts of the Board of Directors of the Ontario Association of Architects, was to instruct the Secretary to recommend members of the Association to abstain from entering the proposed competition for the Kent and Chatham Public Buildings. Objection is taken to the conditions of the competition on the following grounds: (1). There is no guarantee that a competent professional adviser will be employed to report upon the merits of the respective designs; (2). The commission proposed to be paid for carrying out the work is below the recognized professional tariff; (3). The drawings for which premiums are awarded are to become the property of the committee; (4). Much more detail is required in the preparation of the drawings than is at all necessary to properly illustrate the proposed building.

## LIST OF COMPETITORS IN TORONTO BOARD OF TRADE BUILDING COMPETITION.

THROUGH the kindness of Prof. Ware, New York, we are enabled to publish the names of the competing architects in the recent Toronto Board of Trade Building competition. Prof. Ware informs us that the list is complete with the exception of two names, one of which was accidentally mislaid or lost, and the other was never sent in. With these exceptions, the names are as follows:

Messrs \*Darling & Curry, \*Langley & Burke, Edwards & Webster, R. W. Gambier-Bousfield, Knox & Elliot, Toronto, Canada; Jas. R. Rhind, Montreal, Canada; Messrs. George B. Post, Alfred H. Thorp, E. G. W. Dietrich, New York City; \*R. A. Waite, Buffalo, N. Y.; Messrs. James & James, (to whom the work was awarded), E. F. Tassett, Kansas City, Mo.; L. G. Hall, Columbus, Ohio; Mr. J. E. O. Pridmore, Chas. F. Longfellow, Chicago, Ill.; C. C. Vost, Minneapolis, Minn.

\* Those marked thus were invited to compete by the Committee.

## CHURCH BUILDERS.

BY SIR DANIEL WILSON, LL.D.

IN building a legislative hall, a court of justice, a university convocation hall, or any other structure designed for special use, it is demanded of the constructor that it shall be so adapted to its requirements, that all shall, as far as possible, see, hear and in all other needful respects find no obstruction to the work carried on therein. Is there any reason why the same rule should not apply to church building?

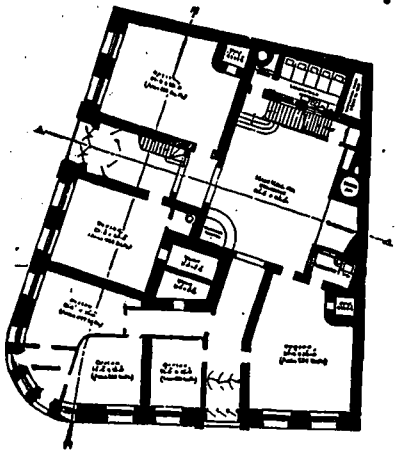
The exquisite beauty of the cathedrals of older centuries charms every thoughtful observer; and the picturesque little parish church of the village or hamlet is a delightful feature in the landscape, whenever the tourist wanders through the mother land. But the old architects never lost sight of practical utility.

The long-drawn aisles, transepts, and chantry chapels, were not erected as mere ornaments to the cathedrals and collegiate churches of Roman Catholic countries; and were accordingly erected with a thorough aim at utility. This the great English architect, Sir Christopher Wren, thoroughly appreciated when he undertook the design for the new St. Paul's Cathedral. He set before his mind the essential requirements of Protestant worship, and accordingly designed a cathedral adapted to accommodate a large body of worshippers who should be able to see, hear, and unite in the worship in accordance with the manifest purpose of the Book of Common Prayer. The original design of the great architect for a model Protestant Cathedral was cast aside, just because the Stuart king had no sympathy with Protestant worship.

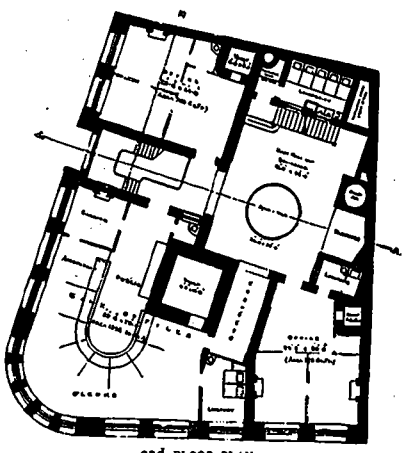
Without any such reason, our own church builders have so habitually followed the models derived from mediæval times, that the majority of our churches are still built in the form of a long parallelogram with rows of pillars dividing them into centre and side aisles. To this is frequently added a long, narrow chancel, with the result that, wherever the pulpit may be placed, fully a third of the congregation can neither see nor hear satisfactorily; and when portions of the service are read at the communion table, within the deep recess of the choir, or the regular announcements are made, they are inaudible to the larger por-



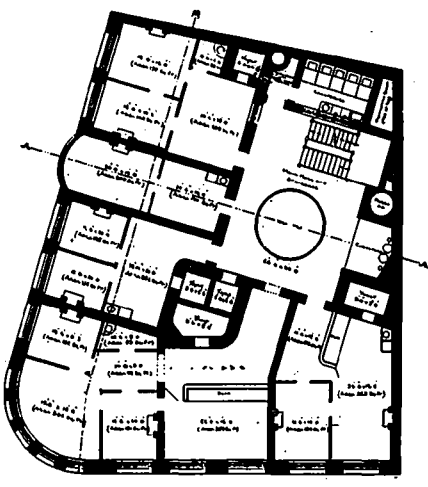
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MESSRS. DARLING & CO



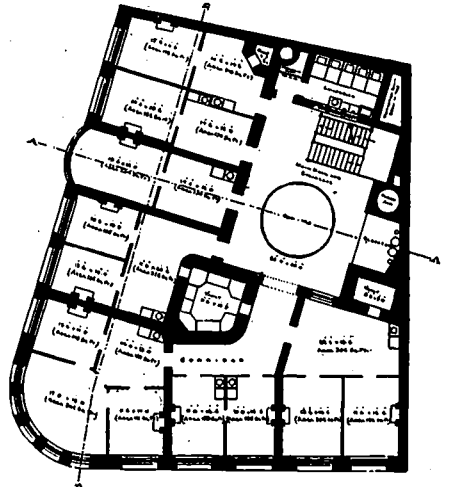
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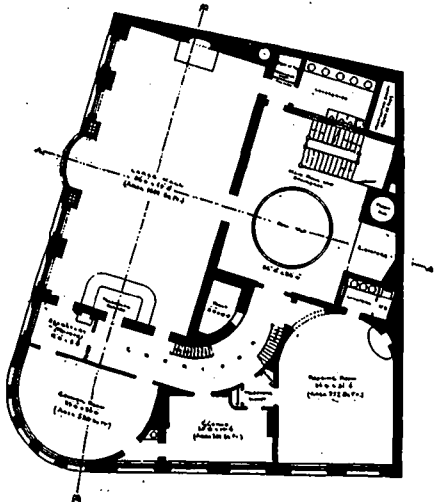
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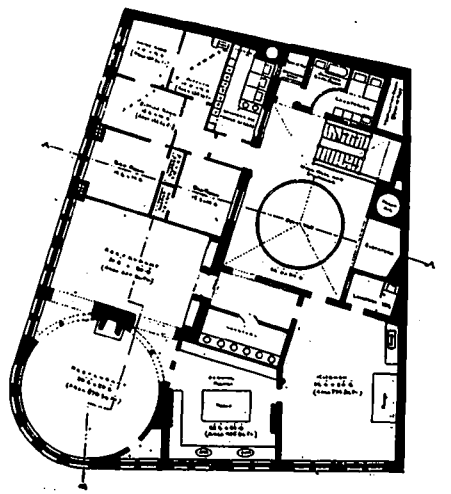
3rd FLOOR PLAN.



4th FLOOR PLAN.



5th FLOOR PLAN.



6th FLOOR PLAN.

tion of the congregation. While such continues to be the general practice of the Church of England in Canada, large, commodious, and frequently beautiful places of worship are being erected for other denominations, where the wants of the whole body of worshippers have been made the primary aim of the architect. All are so seated that they can see, hear, and join intelligently in the worship. The value of this as an attractive element can scarcely be overrated. Let any one sit behind a pillar, or in a transept or side aisle, such as may be found in a good many of our Canadian churches; and after straining his neck, and quickening his ear, in the vain effort to see or hear, then pass to one of the commodious places of worship of many modern Presbyterian or Methodist congregations, and the contrast can scarcely fail to impress him.

There is no reason that the modern church shall be less beautiful architecturally, or less distinctively expressive in form and structure as "the house of God," because of its being constructed in harmony with the manifest aim of the Book of Common Prayer as a service in which the whole congregation, ministers and people, are to join intelligently, "with one heart and voice"; a service of grateful praise, and prayer, and thanks-

giving, such as we believe to be "a reasonable service" acceptable to God.—*Evangelical Churchman.*

**OUR ILLUSTRATIONS.**

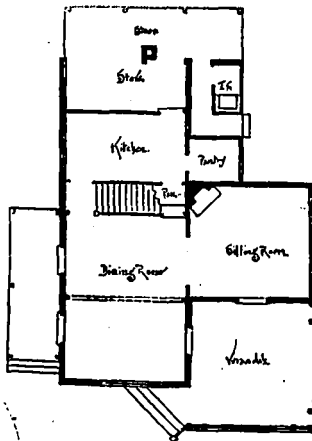
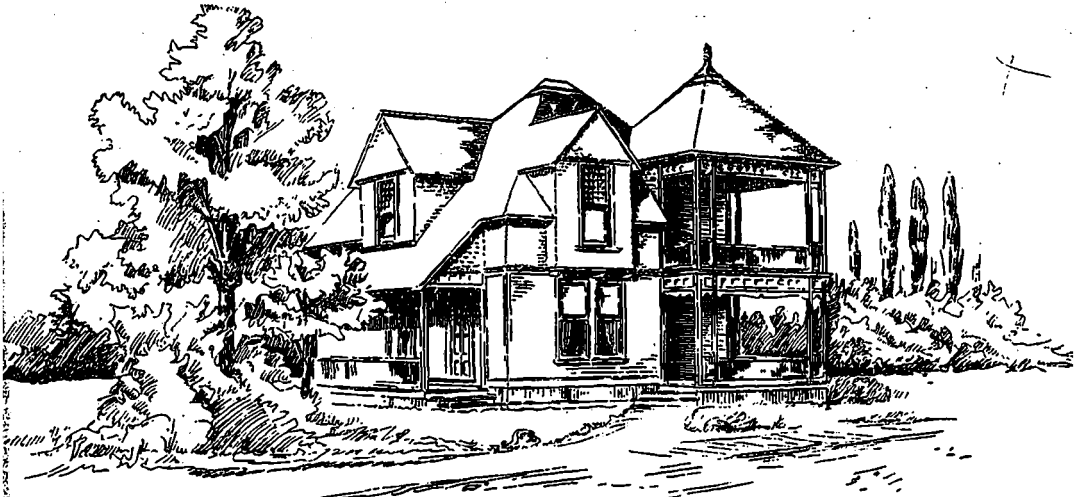
COTTAGE AT NIAGARA-ON-THE-LAKE FOR MR. PEMBERTON PAGE.—MESSRS. EDWARDS & WEBSTER, ARCHITECTS, TORONTO.

COMPETITION DESIGN FOR NEW TORONTO BOARD OF TRADE BUILDING SUBMITTED BY MESSRS. DARLING & CURRY, ARCHITECTS, TORONTO.

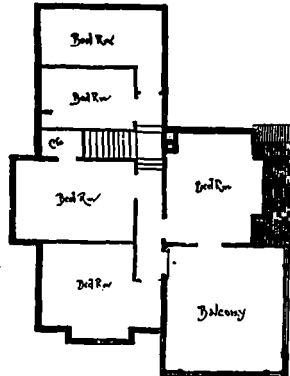
TORONTO, March 31st, 1889.

Editor CANADIAN ARCHITECT AND BUILDER.

DEAR SIR,—The author of the design for a cottage illustrated in your last number must be in error when stating that the cost of a house built according to that design would be \$3,800. I do not believe that it could be built in a substantial and thorough manner in keeping with the design for less than \$6,000 or \$7,000. There has been far too much competition among architects for the good of the profession, as to who could build the cheapest. The result has been bad, for when people who are building or who have just built, are informed that a house of the latest high art character has been erected for some paltry sum utterly inadequate to build a good and substan-



Ground Floor



First Floor

COTTAGE AT NIAGARA-ON-THE-LAKE FOR MR. PEMBERTON PAGE.—MESSRS. EDWARDS & WEBSTER, ARCHITECTS, TORONTO.

tial building, they immediately consider that they have been imposed upon by their architect if their house has cost more than the sum given as the cost of the house of outside show and inside flimsiness. An accurate statement of the cost of erecting a house according to an illustrated design would be valuable information; but a statement which any member of the profession is aware is false, and which will only be believed by those not posted, is misleading and injurious to the best interest of architecture. I would suggest that you do not give the cost of erecting buildings according to the designs illustrated, except when it will be especially valuable, and only then when you have reason to believe the statement absolutely correct. Responsible and competent men should not be driven into competition in cheapness by the careless, if not intentionally inaccurate statements of architects or supposed architects. Moreover, it is not desirable that architects should use your columns as a means of advertising their ability of doing inferior work, for cheap work in the majority of cases is bad work, and nothing else can be made of it.

Yours truly,

"ESTIMATE."

**QUERIES AND ANSWERS.**

(Reply to Query No. 4.)—Fusil oil will remove varnish from wood-work so as to allow of the wood being stained another color, except in cases where oil has been mixed with the varnish. In such cases a weak solution of lye will effect the removal of the varnish, after which the wood can be put in condition to receive a stain of another color by being rubbed with vinegar.

P. T. R.

In your last number I noticed in answer to a question in the February issue, rules for ascertaining the safe distributed load which a beam will carry. The rules given are in my opinion inaccurate, and I have therefore thought proper to give rules which are accepted by competent authorities. It is important that a formula should be simple but more so that it be accurate. To determine the safe distributed load which a beam will carry, the following formula may be used.

$$\frac{2 \times b \times d^2 \times c}{l} = w.$$

To obtain the breadth of a beam, the other quantities being given, use the following formula:

$$\frac{w \times l}{2 \times d^2 \times c} = b.$$

To obtain the proper depth of a beam where the other quantities are known, use this formula

$$\sqrt{\frac{w \times l}{2 \times b \times c}} = d.$$

w = safe load in pounds.

b = breadth of beam in inches.

d = depth of beam in inches.

l = length of span in feet.

c = value of material in beam.

American ash	111.
" red beech	100.
" yellow birch	90.
" white cedar	55.
" elm	77.
New England fir	83.
Hemlock	66.
American white oak	105.
" white pine	80.
" yellow pine	135.
" spruce pine	90.
Michigan pine	85.

Example:—What is the safe distributed load which a beam 6 inches wide 10 inches deep and spanning a distance of 12 feet will carry?

$$\frac{2 \times b \times d^2 \times c}{l} = \frac{2 \times 6 \times 10^2 \times 80}{12} = 8000 \text{ lbs. safe distributed load.}$$

What should be the breadth of a beam to carry a distributed load of 8000 lbs. with a span of 12 feet and depth of 10 inches?

$$\frac{w \times l}{2 \times d^2 \times c} = \frac{8000 \times 12}{2 \times 10^2 \times 80} = 6 \text{ inches the breadth of beam.}$$

What depth of beam is required to carry a distributed load of 8000 lbs., when the beam has a span of 12 feet and breadth of 6 inches?

$$\sqrt{\frac{w \times l}{2 \times b \times c}} = \sqrt{\frac{8000 \times 12}{2 \times 6 \times 80}} = 10 \text{ inches depth of beam.}$$

By working out the above examples we have shown that the rules prove each other, and must be accurate. The only point

of doubt is the value we should give the constant C. and we have no better method than to go to the best authorities in such matters. It is true that we will find the authorities differ very materially, but with a little patience and study we may determine which of them is nearest being accurate. A student should consult the very latest works, by the best authorities on all subjects, and not be satisfied to work according to formula, which has been found unreliable years ago. JULY.

Mr. James R. Rhind, Montreal, has been appointed assistant architect to H. Saxon Snell Esq: F. R. I. B. A., M. C. S. I., F. M. S., &c, London, England, on the Poyal Victoria Hospital, the munificent gift of Sir Donald A. Smith, and Sir George Stephen, Bart., to the city. Mr. Snell is a specialist on hospital construction and arrangement, and has built many of the largest and most important hospitals in the Old Country,

**A PROVINCIAL ASSOCIATION OF BUILDERS AND CONTRACTORS.**

GUELPH, March 22nd, 1889.

Editor CANADIAN ARCHITECT AND BUILDER.

DEAR SIR,—I am perfectly satisfied that it is time some steps were taken for the better and fairer protection of builders against the many disadvantages under which they labor, and I am willing to assist in any way in the formation of a Provincial Association of Builders and Contractors.

Yours truly,

JOHN H. REDWOOD.

LONDON, ONT., April 10th 1889.

EDITOR CANADIAN ARCHITECT AND BUILDER.

SIR,—Regarding the formation of a Provincial Builders' Association, the subject has been before the Builders' Exchange of this city, and the opinion is that the proposal might be a good one. We think if the builders of Toronto (that being the largest city in Ontario) were to make some move in the matter of calling a meeting for organization, our Exchange would very likely send a representation.

Yours respectfully,

H. C. SIMPSON,

Secretary of Builders Exchange.

814 Dundas Street.

PRESOTT, March 13, 1889.

Editor CANADIAN ARCHITECT AND BUILDER.

DEAR SIR,—In reference to the proposed Association of Contractors and Builders, allow me to say, that doing at present only a small business, I am not so much affected by trade grievances as others in a larger field. I shall, however, be pleased to lend my mite of assistance towards the furtherance of so praiseworthy an object as the formation of such an Association, and shall be glad to hear further concerning the matter.

Yours truly,

H. HORWOOD.

COLLINGWOOD, March 14, 1889.

Editor CANADIAN ARCHITECT AND BUILDER.

DEAR SIR,—In reply to your letter of the 9th, I think that such an Association would be of great benefit. I know that here in our own town we have had in the past a great many difficulties to contend with, and if such an Association could be formed I think it would result in doing a great deal of good, more particularly in large centres than in small towns. I would be quite willing to give any assistance to the forming of such an Association, as I feel sure that it would be at least the means of ventilating and tending to the removal of differences that may arise from time to time.

Respectfully yours,

ROBERT BURDETT.

HAMILTON, April 9, 1889.

Editor CANADIAN ARCHITECT AND BUILDER.

DEAR SIR,—In perusing your March issue, I was very pleased to see unmistakable signs of a Provincial Association of Builders and Contractors being formed. As an Englishman, I have always held that a man should be free and independent, and carry on his business as he best sees fit; or in other words, to use an old expression, "Let every tub stand on its own bottom." But, in our onward march through life we have discovered that some "tubs" have no "bottoms," and to my mind herein lies the difficulty such an Association would have to contend with. My experience with Associations of Builders and Contractors is (though I am sorry to say it) that just so long as it suits their convenience they are honorable, but no longer. Now, sir, this should not be. When we consider the forces with which we have to contend, we should stand shoulder to shoulder whether it suits our convenience or not—always providing that the cause is a righteous one—and I presume such an Association is not contemplated for any other purpose.

I feel that the subject is a very exhaustive one, and requires a more able pen than mine to show forth its advantages. Of one thing I am certain,

the time has arrived when something in this direction ought to be done. It is a lamentable fact that as things exist we can scarcely do an honest, legitimate business, and pay too cents in the dollar. In making this statement, I am saying what I know to be true, and doubtless numbers of your readers can bear me out in what I say. This deplorable condition of affairs is caused by the class that my friend and your correspondent, Mr. Piggott, in your last issue, referred to—who suddenly conceive the idea that they will go "bossing," and who have no one cent of capital to put in the business in which they intend to embark, and who consequently have nothing to lose should they fail, as so many of them do to the discomfiture of their creditors. The latter, however, are entitled to very little sympathy. This state of things is far from being fair to the honest contractor, who is thus handicapped. How is it possible for him to do a legitimate business?

How can this state of things be amended? may be asked. There are many ways and means which could be employed. I think right here is where the proposed Builders' and Contractors' Association could work effectually to remedy the present state of things. My first suggestion is: No man should be allowed to become a member until he has first proved himself to be skilled in his particular business, and to have a good reputation in the community. Secondly, the dealers and merchants could materially assist us, and in doing so would benefit themselves as well, by not giving credit to men without first having ascertained whether they are worthy of it. I claim if this was done it would be of vast benefit both to contractors, merchants and also to proprietors. The latter would not then, as now, be put to inconvenience by liens being placed on their buildings. In the third place, the architects could and should assist us in every way in their power.

Pardon me if I appear to digress a little from the subject just now. I noticed in your March issue an article from my friend F. G. Rastrick, architect, in which he winds up by saying "We are determined with the aid of our brother architects in the province to raise the status of the profession to its proper level." I was right glad to see that the architects had come to that determination, because if they carry it out, I am very sure the status of contractors and builders will also be raised to its proper level, and all the shoddy work now being done on buildings will be abolished, and as a consequence, the shoddy contractors also, which would be a tasting benefit to all parties concerned. Pardon me if I have trespassed too much on your valuable paper, but I could not resist the temptation which you put in my way of ventilating my feelings. Trusting to hear from many others on what I consider to be a subject of vital importance, I am,

Yours truly,

ALFRED HANNAFORD.

### SUGGESTIONS FOR BUILDERS.

BY OWEN B. MAGINNIS.

IN raising framed walls, it is best when possible, to raise the framing in sections instead of putting up single studs, the usual practice. For instance, in raising an end wall, the corner post, girts and braces (if they are framed in), should be put together and draw-pinned and the whole bent raised at once. In ordinary work a man at each post will be enough to raise it, with a rope and a man pulling attached to the centre of the girt. Temporary board braces can be nailed on to secure the posts plumb when they are upright. After the opposite bent is raised, the cross ties are raised up and slipped into their mortises and pinned. Crooked and bent studs should always be set in position with their hollow side out, as the boarding will draw them forward and make a straight surface on the face of the wall, whereas, if the round sides be kept out it will be liable to render the wall bulky and uneven. All window and door studs should be double and care should be taken to keep them back far enough, or rather to make the window opening wide enough to ensure at least  $2\frac{1}{2}$  inches between the back of the pulley stile in the frame and the stud, also to have the face of the stud either straight or at least hollow, this being done to leave room enough to allow the sash weights to run. Door studs should always be straight. Pitched bridging in partitions is infinitely preferable to straight, as the settlement of the partition will tighten the former when the latter will get looser and crack the wall as it settles down. Each piece ought to fit well against each stud, and be marked at each opening. If the walls are high, four inch partitions should have a double row of bridging, as the joints are very springy on their flat, and the bridging stiffens them a great deal.

Another important precaution is to mark the exact positions of the studs on the floor with a piece of chalk, or black lead; the object in doing this is that it will save a carpenter a lot of time sounding the wall to find them, and prevent the soft plaster from being marked when pulling down base or nailing on chair rail, etc. Brick wall spruce furring ought in all cases to be more thorough than it usually is, that is to say well nailed into the brick joints and spaced for the lath. It is too bad to put extra expense on the contracting plasterer by shaking the furring and plaster all to pieces when the carpenter is putting on his base or chair rail, causing more patching, especially where hard wood trim is specified, which jars more in nailing. When it can be managed, I would recommend builders to do all the furring for base before the plaster is put on;  $\frac{1}{4}$  scrap strips will do it admirably, and it will make the wood work fit nicely against the plaster, but I would not favor the practice of setting window and door jams before the white coat is applied, as not only are they liable to be spattered over with plaster, but the edges and arrises are in danger of being broken off, spoiling the ap-

pearance of the work. The plan, however, has its merit, as it makes the plaster come fair with the edges, and ensures the trim fitting close against, but it ought not to be followed even in common work.

While writing on this subject let me advise builders to see that their jumbs are got out wide enough at the shop or mill, to span the plaster when they are set in the building. There is a great deal of time lost when these are narrow, because the plaster has to be dug off to make the casings come fair on the face. If there be a double floor it is best to put the base down first and to fit the finishing floor up against its face, by this means providing against the liability of the base to shrink and show the joint at the floor.

In balloon framing it is not usual to use braces of any description, but even though this be the rule, a house is scarcely well framed without a brace of some kind. Some builders in the State of New York insert a brace at each angle, the upper end of which fits under the girt and against the corner-post, and the lower end sits on the sill about a feet or more from the corner-post. This gives a very effective brace and costs little, as only one wall stud has to be cut to it. It is generally made of a wall strip.

### MONTREAL.

(Correspondence of the CANADIAN ARCHITECT AND BUILDER.)

BUILDING prospects are considered very good. Much work which was placed in the hands of the architects a year ago, when a drop in prices of building materials was anticipated, and withdrawn when prices refused to drop, will be carried out this season. The largest structure to be erected will be the new hospital. A large number of residences will be built.

Plans are being prepared for alterations to block on Beaver Hill to cost \$3,000, for two new houses on Dorchester St., west, to cost \$6,000 each; and stores on St. Catharines St. west, to cost about \$5,000. Mr. P. Williams is the architect.

The Department of Public Works, Ottawa, has been asked to adopt the scheme for the construction of a canal from above Victoria bridge to a point opposite Boucherville Island as the best means of preventing floods.

Mr. Roswell Fisher will erect a five story apartment house at the corner of Sherbrooke and Crescent Sts. The structure will be built of stone and red brick, and is designed to be fire proof. Each floor will contain four homes, each home consisting of kitchen, maid's pantry, bath and W. C. and from four to seven family rooms.

The Council is to be petitioned to sanction the widening of St. Lawrence street to be continued north of Sherbrooke. The average increase in width would be 15 feet. The value of land to be expropriated would be \$30,000 and the value of buildings about \$300,000. It is proposed that the cost of the work, about \$50,000 should be assessed equally upon the property-owners and the city.

### WINNIPEG.

(Correspondence of the CANADIAN ARCHITECT AND BUILDER.)

Our city fathers seem afraid to come to a decision re "The Market Competition," and they have made a regular mess of it. They first of all advertised for competitive designs on such ridiculous conditions, that none of the architects would submit plans. The Council then amended their resolution to suit the architects, and on the 6th of March six different designs were received by them. Now they do not know what to do with them. The committee recommended one of the designs, and then changed their minds and wished all the designs to be returned and new ones made, as they had decided to pull down the old building. Now it is all referred to an expert (?). This expert is one of our city contractors. That the council are doing their best to insult the profession, is what most people would think upon reading any of the resolutions in regard to the competition.

The Provincial Government have invited six architects in the Province to submit designs in ink, to an  $\frac{1}{8}$  inch scale and bill of quantities, for a reformatory, to cost \$20,000; a home for incurables, to cost \$75,000; and a deaf and dumb asylum, to cost \$15,000; all to be of solid brick with stone foundations and basement. These designs are to go in on the 10th, 17th, and 24th inst. It is to be hoped the Government will decide on their architect as soon as possible, or contractors and men will be looking elsewhere for work, as there are not any other jobs of consequence actually decided upon.

Mr. Fisher will erect a private residence of stone to cost \$5,000. The Methodists of Moosomin intend to build a church this season. Mr. Henderson of Carberry, is building a small house. The trustees of the Children's home will build a new home. Mr. Van Allan is building a private house.

### A BUILDING BUREAU.

ONE of our correspondents writes as follows: "I am glad to see that the Toronto City Council is considering a building by-law—an ordinance which is urgently needed in this city—and it is with satisfaction that I observe the names of two of our leading architects on the special committee which is dealing with its construction.

The plumbing by-law was left very much to the tender mercies of providence in its last stages. No professional men were on the committee, with the result that there were a number of conditions introduced into it which a professional mind could have rectified and eliminated. The Architectural Guild, which we soon hope to recognize under a more cosmopolitan name

has done good work in helping to frame this proposed building by-law. Both the above named by-laws treat so directly with construction, it will be a simple matter to consolidate their working under one official head, and it will be a necessity to do so before long, as architects and others engaged in the building trades will find it a great inconvenience and loss of time to wait on two departments for acceptance of plans and issue of building permits. The work to be done under these by-laws will be considerable at the outset, and will certainly increase rapidly. The head of such a department ought not to be long in office, before he would be called upon to examine and report upon many buildings the city could well do without.

The formation of a building bureau, department, commission, or what ever name you please, with a trained and experienced professional man at its head—not one of your "practical" men, but one who could examine into the points of construction in plans placed before him, and give decisions on technical points of construction, and architectural design—will be of incalculable benefit to the city."

#### ENGINEERING SOCIETY.

The Engineering Society held its annual meeting in the School of Practical Science on Saturday evening, the 30th March, President H. E. T. Haultain in the chair. The minutes of last meeting were read by the secretary and approved. The report of the general committee for the session 1888-9 read by the president, showed that the Society was in a flourishing condition, and since last session had made several improvements, notably amongst which were the commencement of a library and the placing of Engineering periodicals on file. The secretary-treasurer's report showed an increase of 26 in the membership, and that the Society was in a prosperous state financially. The corresponding secretary reported that twelve papers had been read before the Society during the current session, two of which were from graduates of the school. The various papers read and discussions held were interesting and instructive to the members, as manifested by the large attendance at the ordinary meetings. The Librarian's report showed that the newly founded library contained some one hundred and fifty books of reference, five weekly engineering papers on file, besides numerous plans and specifications. The Librarian also reported that the members were making good use of the library. After the different reports had been read and adopted, the following gentlemen were elected officers for next year's general committee: President, J. A. Duff, B.A., (by acclamation); Vice-President, E. B. Merrill; Secretary-Treasurer, J. R. Deacon; Corresponding-Secretary, F. M. Bowman; Librarian, F. S. Russell; III year Councillor, J. R. Pedder; II year, M. Dunbar. A vote of thanks was passed to the retiring general committee for their services to the Society. Speeches were then made by different members on various questions affecting the well-being of the Society and the School. Among the speakers were, Messrs. L. M. Bowman and R. McDowell, (graduates) who expressed their pleasure at seeing the Society in such a flourishing condition. The meeting then adjourned until next October.

#### BRICK VS. PIPE SEWERS.

The following letter from the City Engineer of Glasgow, Scotland, fully bears out the contention of this journal that the City Council of Toronto took a retrograde step in deciding that in future all sewers of 12 inches and upwards shall be constructed of brick:

Office of Public Works,  
GLASGOW, 13th March, 1889.

"In reply to enquiries, I beg to say, the sewers in Glasgow which are built of brick are not less in diameter than 2 feet 6 inches. We use salt-glazed fire clay pipes for all sewers of smaller diameter, I would not think of using bricks for smaller sewers than the above, when fire clay pipes can be obtained, because, in the first place, the bricks would be very much more expensive, taking the material and labour also into consideration, and in the second place, they would not be nearly so satisfactory. The comparative roughness of the brick with their numerous jointings obstruct the sewage to a considerable extent, and cause a deposit which may become a fruitful source of disease. The smooth surface of the pipe allows the sewage to flow away, and a free flow of the sewage is of vital importance. Liquid sewage and sewage gas to a greater or less degree come through brick drains, if not specially well built, whereas the vitrified pipes are impervious to these. There is no doubt as to the durability of fire-clay pipes and they are not nearly so easily affected by the action of water and acids as brick sewers.

I may add that, so far as I know fire clay pipes are recommended by all engineers in this country for sewers up to 18 inches diameter in preference to bricks.

JOHN CARRICK, M. I. C. E.,  
City Architect and Master of Works, Glasgow."

To color bricks black, *La Semaine des Constructeurs* says, immerse them in a warm bath of linseed oil and asphalt.

The School of Practical Science, Toronto, shows a total attendance of 58 who are taking the civil engineering course.

Messrs. J. Stewart, A. Wright and others have purchased the plant of the Portland Cement Co., Winnipeg, and purpose engaging extensively in the manufacture of pottery and building material.



#### SANITATION IN SCHOOLS.

NOWHERE is there greater need for compliance with sanitary laws than in our public school buildings. Until quite recently, however, little attention was paid to the matter. In some communities, however, the value of sanitation in schools is being recognized. In the Hygienic Institute in Berlin a course of instructions is given to the school officers, covering the most important and practical principles in school hygiene. These instructions relate to the construction of school buildings, light, heat, ventilation, care of the school-room, construction of desks, disposal of waste, drinking water, infectious diseases, and kindred matters. These lectures are illustrated by the use of material collected in the Museum of Hygiene and by visits to the model schoolhouses of Berlin. Results have justified this course.

In the city of Boston the Committee on School Hygiene, observing the lack of proper sanitation and knowing its value, have, for the purpose of placing school buildings in the best possible sanitary condition, resolved the following: "That the Committee on Accounts be requested to instruct the janitor in each school that he shall keep all the windows and doors in his school open for five hours each day of the week just preceding the opening of the school year (in September), in order that the building may be thoroughly aired for the purpose of disinfection; also, that on one of the days mentioned (the last day preferred) the building shall be heated sufficiently to remove all dampness which may be present; also, that on the first of the days named the water shall be turned on in all the faucets on the premises which empty into receptacles communicating with drains or cess-pools, and allowed to flow long enough to insure the perfect working of the traps attached, from which the water may have evaporated during vacation time; also, that during the week mentioned the whole inside of each room shall be thoroughly brushed or rubbed down; that all the painted surfaces in the school shall be cleansed with a solution of corrosive sublimate (1 part to 500); that all the floors shall be mopped or wiped with a cloth moistened with the same solution; and that all the desks, furniture, and apparatus shall be cleaned, and, where possible, washed or rubbed with a disinfectant solution."

#### PUBLICATIONS.

WE are indebted to Prof. Ware, of Columbia College, N. Y., for a copy, in pamphlet form, of an instructive paper, of which he is the author, entitled "The Instruction in Architecture at the School of Mines." This paper was read recently before the Alumni Association of Columbia College.

We have received a pamphlet entitled "Rust on Construction of Sewers," containing the able paper on "Construction of Toronto Sewers," read before the Canadian Society of Civil Engineers, by Mr. C. H. Rust, of this city, together with the instructive discussion thereon by members of the Society.

The Toronto public library contains 20,000 works of reference. For the convenience of the users of this valuable collection, a handsomely printed and bound reference catalogue has just been published, for a copy of which we are indebted to Mr. Bain, the Librarian. This catalogue has been carefully arranged in the manner which will make it of the greatest service to seekers after special information, to whose thanks the librarian and assistant librarian are justly entitled.

We appreciate the kindness which prompted the publication of the following in a recent number of the *California Architect*: "Our friends across the line are determined not to be outdone, and so present a journal as well edited and illustrated as many of those in the United States. We heartily congratulate the editor on the greatly improved appearance of his journal." We desire further to express our pleasure at the signs of improvement and prosperity which mark the pages of our Western contemporary.



RECREATION AND ENTERTAINMENT

CARVING.

By W. STEVENS HICKS.

As a branch of sculpture—as the art of cutting a hard body by means of a sharp instrument, and as a term generally employed in speaking of figures and foliage cut out in ivory or wood in contradistinction to sculpture or figures cut upon metal or stone—the art of carving is of the greatest antiquity. It is frequently mentioned in the Bible. The prohibition in the Second Commandment against any graven image evidently refers to it. It was practised by all the civilized nations of antiquity, and most frequently, in aid of religious observances, images or emblems of deity being created by it both for public and private devotions. Even among the most uncivilized tribes who have any external religious rites, rude representations of this kind are common. In Catholic countries carved images of saints and relics are still used both for churches and for private devotion. Besides this almost universal use, carving was early employed for purposes of ornament. Many eastern nations have excelled in it. India and China have long been famed for their artistic skill both in wood and ivory, particularly the latter. The ancient Babylonians practised the art among other purposes in the carving of heads for staffs and signet rings. In the family of Abraham, who was a Chaldean, these ornaments appear according to some allusions to have been preserved. The pledges which Judah gave to Tamar along the shaft and the signet ring. Among the Greeks, statues of the gods carved in wood and overlaid, were common at an early period. At a later period plates of ivory were used for overlaying statues, and were also largely employed for smaller ornamental work. In the early and middle ages, wood carving became general for the decoration of Christian Churches and altars. One of the most ingenious and useful purposes to which carving has been converted in more modern times, is that of engraving wood cuts for printing. These have been applied to almost innumerable uses in manufactures as well as art. Some of these applications have given way to the art of engraving in metal and other processes, but new ones are continually arising. One of the latest developments of the art of carving is the invention of carving by machinery. A patent was taken out in 1829 by Mr. Joseph Gibbs, for the cutting of ornamental forms in low relief. These were executed with great accuracy, and were used in ornamenting the floors of Buckingham palace, London, England. A machine, the principle of which has not been made public, has since been used successfully by Mr. Cheverton, for obtaining miniature reductions of life sized statuary. A machine patented in 1845 by Mr. Jorday, is caduced, so far as that is possible, by revolving tools; the finish is afterwards given to carvers to finish by hand labor. This machine was used for the carving decorations of the interior of the Houses of Parliament, England.

The spring exhibition of paintings, water-color drawings statuary, architectural designs, stained glass, etc., held under the auspices of the Montreal Art Association is now in progress.

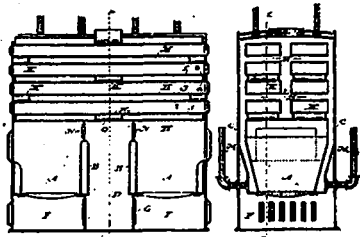
A lovely parlor in light hues, on a ground scale, is arranged as follows: The floor is inlaid in oak and natural cherry, and the walls have the palest tint of pink watered-silk paper, with a frieze of roses on a pale-blue ground, and cornice of pink, blue, and gold. The ceiling is in cream-color with gold stars sprinkled over it and a square panel of roses in the centre. The slender crystal and gold chandelier has pink candles.

We are indebted to the municipal authorities of Kansas City, Mo., for a copy of the annual report of Mr. W. B. Everhart, Superintendent of Buildings, of that city. In addition to the number, value, etc., of new buildings erected during the year 1888, the report contains statistics showing the volume of business done during the year, some of the engravings of principal buildings, and other interesting and valuable matter.

MANUFACTURES AND MATERIALS

Sectional Water-Heater.

Richard Digley, Toronto, Canada, patented in Canada, Feb. 1889.



Claim.—1. A hot-water heater composed of a series of sections, preferably rectangular in shape, and having smoke-flues formed between the plates of the sections, and a water-space formed between each section, the said water-spaces being connected together by vertical passage-ways arranged substantially as and for the purpose specified.

2. A hot-water heater composed of a series of sections, preferably rectangular in shape, and having longitudinal smoke-flues formed between the plates of the sections, and a water-space formed between each section, the said water-spaces being connected together by suitable passage-ways arranged as herein described and extending from a point near the grate to the crown of the said heater, substantially as and for the purpose specified.

3. A hot-water heater composed of a series of sections, preferably rectangular in shape, and having smoke flues formed between the plates of the sections, and a water-space between each section, connected together by suitable vertical passage-ways, in combination with a fire-box located at each end of the heater and connected with the smoke-flues passing through the sections, substantially as and for the purpose specified.

4. A hot-water heater composed of a series of sections, preferably rectangular in shape, and having smoke flues formed between the plates of the sections, and a water-space formed between each section, the said water-spaces being connected together by suitable vertical passage-ways, in combination with two fire-boxes located at each end of the heater, the said fire-boxes being separated by an air-space through which the smoke and heated gases pass from the fire-boxes on their way to the smoke-flues, arranged, as described, in the sections of the heater.

5. A hot-water heater having two fire-boxes separated by an air-space extending to a point where the smoke and heated gases pass into the flues arranged in the heater, combined with the adjustable dampers arranged above the water-lacks of each fire-box, substantially as and for the purpose specified.

6. A hot-water heater composed of a series of sections, preferably rectangular in shape, and having smoke-flues formed between the plates of the sections, and a water-space formed between each section, the said water-spaces being connected together by suitable vertical passage-ways extending from a point near the grate to the crown of the fire-box in combination with two fire-boxes separated by an air-space extending upwardly from the bottom of the ash-pit, from which it is separated by adjustable dampers arranged substantially as and for the purpose specified.

7. A hot-water heater composed of a series of sections having smoke-flues formed in each section and connecting with each other, the said sections being joined together, so as to form the water-space between each section, substantially as and for the purpose specified.

Mr. R. Hill, of Toronto, will shortly open and operate a new stone quarry at Longford Mills, Ont.

Mr. Henry Back, Woodstock, N. B., has just patented a method of adapting materials for interior cornices.

The Dominion Sanitary Pottery Company, St. Johns, Que., have commenced operation in their second pottery.

Messrs. Alonzo Langlais and A Ramsay & Son, Montreal, have been granted a patent for a glass bevelling machine.

The Ormstown Brick and Terra Cotta Company have undertaken to supply Montreal contractors with three million bricks.

The Stelarton (N.B.) Brick and Tile Company propose increasing the size of their works and their manufacturing capacity.

Messrs. Stahlschmidt & Co., of Preston, are supplying the office furniture for the New York Life Insurance Company's new building in Montreal.

Mr. E. Bowler, of St. Johns, P. Q., has entered into partnership with Mr. W. B. Malcolm, of Toronto, for the manufacture of sanitary ware at St. Johns, under the name of the Dominion Sanitary Pottery.

The Globe Furniture Company, of Northville, Mich., has purchased the business of the Bennett Furnishing Company, at London, Ont. The City Council has granted the new Company exemption from taxation for ten years on condition that they give steady employment to thirty men.

DEATH OF MR. LIONEL YORKE.

As we go to press, we learn with deep regret of the sudden death of Mr. Lionel Yorke, the well-known contractor, which took place on Saturday night, the 13th inst. Mr. Yorke was taken ill on returning from a visit of inspection to his stone quarries at the Forks of the Credit, and survived but a short time after reaching home. A *post mortem* examination revealed the cause of death to be fatty degeneration of the heart. During the twenty years of his residence in Toronto, Mr. Yorke erected some of the most important buildings in that city. As is well-known, he was at the time of his untimely death, engaged on the construction of the new Parliament Buildings. Deceased was a native of England, and was fifty-five years of age. He was known as a man of sterling integrity and large sympathies.

# CONTRACTS

## CONTRACTS AWARDED.

The contract for the Collingwood Marine and General Hospital has been let to Messrs. Bryan Bros.

The contract for building a large summer hotel at Union Park, has been let to S. Armour of Brookville, Ont.

Messrs. Longdon & May, of Ingersoll, Ont., have secured the contract for the brick work of a new three-story block for Mr. C. S. Graves, in Tilsonburg.

The building committee of the new Methodist Church at Woodstock, Ont., have accepted the plans prepared by Messrs. Cuthbertson & Fowler, of that town.

Messrs. Walters & McNeely have received the contract for the building of the iron bridge from Belleville across the bay of Quinte to Prince Edward County. The cost will be about \$100,000.

## CONTRACTS OPEN.

ACTON, ONT.—A new manse for Knox church is to be erected.

OWEN SOUND ONT.—The site has been selected for a new public school.

KINGSTON, ONT.—The city is agitating the question of the erection of a new drill hall.

VANCOUVER, B. C.—\$5,625 have been subscribed towards the new Y. M. C. A. buildings.

LUCAN, ONT.—The citizens will be asked to vote money for the erection of a high school.

LONDON, ONT.—The erection of an additional story to the jail building in this city is contemplated.

SAULT STE. MARIE.—The Ontario Government has granted \$1,000 towards a High School here.

BERLIN ONT.—A new piano factory is to be built here.—Messrs. Nelson & Forsyth will enlarge their foundry.

BROCKVILLE, ONT.—A by-law has been passed authorizing the expenditure of \$100,000 for drainage purposes.

ST. THOMAS, ONT.—Improvements to cost from \$10,000 to \$12,000, are to be made to the Duke House hotel in this city.

MONTREAL, QUE.—The citizens have appointed a committee to secure the erection and endowment of a medical college for women.

WINNIPEG, MAN.—A large five story hotel costing \$200,000 is to be erected this year.—A Club House to cost \$12,000 will be erected for the St. George Snow Shoe Club.

PETERBOROUGH, ONT.—The Ashburnham Town Council will erect a Town Hall, at a cost of \$3,000. By-laws will be submitted asking \$10,000 for a public school and \$20,000 for a Collegiate Institute building.

TORONTO, ONT.—The Public School Board estimates will contain \$307,700 for new buildings and improvements.—The construction of a bridge at the head of Sherbourne St., at a cost of \$100,000, has been recommended by the Board of Works.—The following building permits have been issued from the office of the City Commissioner during the last month: Chas. W. Abrey, detached 2 story and attic brick residence, Bernard ave., east side of Bedford road, cost \$2,700; J. Rowland, alterations and additions to store 334 Yonge st., cost \$1,700; H. Lewis, four attached 2 story and attic brick and rough cast dwellings, Duke st., near Ontario st., cost \$4,500; Dr. A. R. Abbott, two 3-story brick stores and alterations, Trauley st., \$5,600; Dr. L. H. Pollard, alterations and additions, corner Shuter and Dalhousie streets, cost \$1,200; Callagna & O'Leary, mansard roof to hotel, Queen and Jarvis streets, cost \$1,200; J. E. Thompson & Co., four brick stores and music hall, King street, cost \$50,000; Richard Tinning, 2 story and attic brick dwelling, Murray st., cost \$5,000; Mr. Crane pair 3-story brick stores, Spadina ave. and Oxford streets, cost \$7,000; Brady & Ball, pair 2-story and mansard rough cast dwellings, Elm st., cost \$17,000; Mr. Shepherd, eight attached 2-story and mansard rough cast dwellings, Spadina Place, cost \$5,600; C. Evans, pair and one detached 2-story and attic brick dwellings, Markham st., cost \$6,000; I. Wardell, alterations to stores and erection of hall in rear, Spadina ave., cost \$4,000; Thos. Wilkins, 2-story and attic brick dwelling, Suffolk Place, cost \$3,500; Wm. Bailey, detached 2-story and attic brick dwelling, Classic Ave., cost \$2,500; W. S. Lee, six 3-story attached stores, east side Spadina ave., cost \$16,000, and pair 2-story and attic brick dwellings, Sullivan st., cost \$6,500; Jas. Lumbers, pair semi-detached 2-story and attic brick dwellings, Sherbourne st., cost \$6,500; Mark Hall, 2-story brick addition and alterations, 239 and 241 Sherbourne st., cost \$4,000; Jas. Leighton, pair semi-detached 2-story and attic brick dwellings, Sussex Ave., cost \$6,000; J. M. Pagsley, 2-story and attic brick dwelling, 127 Bloor st. west, cost \$10,000; R. Armstrong, ten attached 2-story and attic brick dwellings, Church and Wellesley streets, cost \$30,000; Davis & Henderson, 4-story brick warehouse and bindery, 84 Bay st., cost \$20,000; Henry Lucas, 2-story and attic detached dwelling, Concord ave. and College st., cost \$3,000; Robert Heath, three story brick stores, College st., cost \$6,000; James Coucher, boat house, foot of Brock st., cost \$1,200; Jas. Hewlett, five attached 3-story brick stores, 242 Carlton st., cost \$11,500; C. Dempsey, pair semi-detached 2-story and attic brick dwellings, cost \$6,000; R. McRae, 4-story brick warehouse, Colborne st., cost \$10,000; T. R. Earl, two pairs semi-detached 2-story and attic brick dwellings, Markham st., north of College, cost \$16,000; Public School Board, 2-story brick school, Grace St., cost \$16,000, and 2-story brick school, Muter st., cost \$16,000; S. Rogers, 3-story brick warehouse, Princess St., \$3,000; H. F. Swallow, pair semi-detached 2-story and attic brick dwellings, 503 Sherbourne st., cost \$4,500.—The citizens on the 9th inst. sanctioned a by-law for the expenditure of upwards of half a million dollars for water works extension. Tenders for a portion of the work and supplies will be asked shortly. Particulars may be had from Secretary Water Works Department



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MANUFACTURERS OF

OFFICE, SCHOOL,  
CHURCH AND LODGE

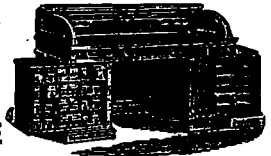
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Plate Glass shipped to and Fixed at any point in the Dominion.



Notice to Contractors.

TENDERS will be received by registered post, addressed to the Chairman of the Committee on Works, up to 2 o'clock p. m., of the

23rd day of April, 1889,

for the

SUPPLY OF CEMENT.

Forms of tender can be obtained at the City Engineer's Office on and after the 16th inst. A separate deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of \$500, must accompany each and every tender, otherwise it will not be entertained. All tenders must bear the bona fide signatures of the contractor and his sureties (see specification) or they will be ruled out as informal. The committee does not bind itself to accept the lowest or any tender.

Signed, WM. CARLYLE,  
Chairman Com. on Works.

Committee Room, Toronto, April 9, 1889.



A New and Beautiful Exterior Decoration for Ceilings and Walls. (Patented.)  
Must be seen to be appreciated. Costs less than the higher priced decorations. The Press speaks of it in the very highest terms of approval.

SOLE AGENTS FOR ONTARIO:

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364 YONGE ST.,

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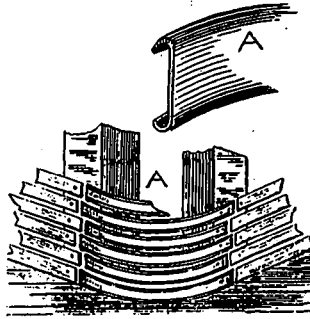
SHOW ROOMS:

231 Queen Street West,

TORONTO.

SEND FOR PRICES.

Radigan's Patent Metallic Lath.



THE object of this invention is to form circular corners on stud partitions, both outside and inside, when required, or only on the outside. This has hitherto been done by making the grounds with coopers' laths, which, owing to shrinkage, caused the plaster to crack—but curves of any required radius may be made with these Metallic Laths, and which will form a strong and firm ground in line with the wooden lathing for plastering on, and as shown in Cut A, the laths are keyed top and bottom, thus forming a double key. The attention of Architects and Plasterers is called to this invention. Give them a trial and be convinced. Send for circulars and price list.

JOHN RADIGAN,

68 Mary Street, HAMILTON, ONT.



Notice to Contractors.

TENDERS will be received by registered post, addressed to the Chairman of the Committee on Works, up to 2 o'clock p. m. of the 23rd DAY OF APRIL, 1889, for the construction of the following works, viz:—

STONE FLAG SIDEWALKS

on Jarvis street, both sides, from Queen street to Bloor street.

ASPHALT PAVEMENT,

Jarvis street, from Queen street to Bloor street. Plans can be seen and forms of tender obtained at the City Engineer's Office, on and after the 16th inst. A separate deposit, in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 2 1/2 per cent. of the value of the work tendered for, must accompany each and every tender, otherwise it will not be entertained. All tenders must bear the bona fide signatures of the contractor and his sureties (see specifications), or they will be ruled out as informal. The Committee does not bind itself to accept the lowest or any tender.

(Signed) WM. CARLYLE,  
Chairman Com. on Works.

Com. Room, Toronto, April 9, 1889.

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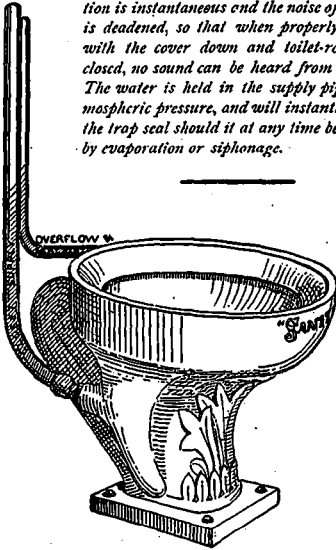
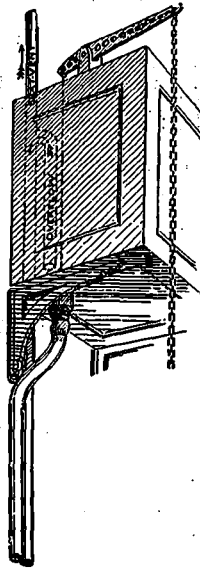
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# Sanitas Water Closet

## THE SANITAS PATENT WATER CLOSET

Has the simplicity of the Short Hopper, all the sanitary advantages and conveniences of the best improved modern closets, and others peculiar to itself, in being anti-siphonic, quick-acting, self-sealing, free from splashing or waste of water, and, when properly set, almost noiseless in operation.

The supply pipe between the cistern and the closet stands permanently full of water, and, discharging below the level of the standing water in the bowl, the action is instantaneous and the noise of flushing is deadened, so that when properly set and with the cover down and toilet-room door closed, no sound can be heard from without. The water is held in the supply pipe by atmospheric pressure, and will instantly restore the trap seal should it at any time be lowered by evaporation or siphonage.



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House and Sign Painter,  
Graining, Paper-Hanging and Kalsomining.  
40 Victoria St. TORONTO.

### TO BUILDERS.

TENDERS addressed to the undersigned will be received up to 5 o'clock p. m. on Wednesday, the 24th of April, for the erection of an addition to a store in King Street West. The lowest or any tender not necessarily accepted. Plans may be seen on and after Monday, 13th April.

**DARLING & CURRY,**  
Mail Building, TORONTO.

### ANNUNCIATORS

-) AND (-

### HOUSE BELLS

ELECTRIC.

CHINA

PUSHES

- A -  
SPECIALTY



Description and prices on application from the manufacturer.

40 Wellington St. East, TORONTO.

# Gurney's New Hot Water Heater for 1889

Unequaled for Heating

**PUBLIC BUILDINGS**

-) AND (-

**PRIVATE RESIDENCES,**

Green Houses and Conservatories.

The Most Complete Apparatus ever invented;  
The only Heater with a Circular Fire-Pot and Iron Stove Linings, insuring perfect combustion.

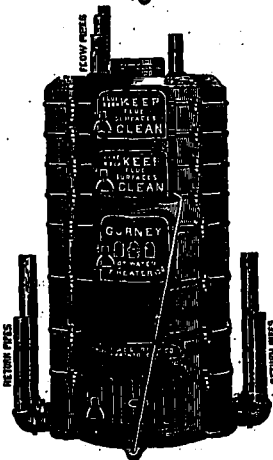
The minimum of friction and the maximum of surface combined constitute a perfect Water Heater.

MANUFACTURED BY

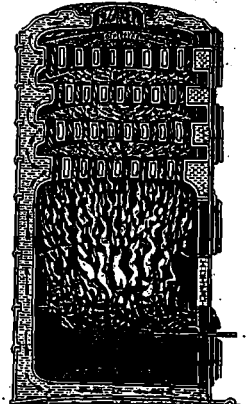
**THE E. & C. GURNEY CO.**  
TORONTO,

Hamilton, Montreal, Winnipeg, Boston, Mass.

Send for our new Circular on Hot Water Heating.



Elevation.



Section.



Litharge, Am.....	6 1/2	8
Sienna, burnt.....	15	20
Umber, .....	18	12 1/2
<b>CEMENT, LIME, etc.</b>		
Line, Per Barrel of 3 bushels, Grey.....		40
" " " " " " White.....		50
Plaster, Calcined, New Brunswick.....		2 00
" " " " " " Nova Scotia.....		1 00
Hair, Plasterers', per bag.....		1 00
Cement, Portland, per bbl.....		3 50
" " " " " " Thorold.....		3 50
" " " " " " Queenston.....		3 50
<b>HARDWARE.</b>		

<b>Cut Nails:</b>		
American Pattern, 1 1/2 inch, per keg.....		4 45
" " " " " " 1 3/4 to 1 1/2 inch, per keg.....		3 50
Canadian Pattern, 1 1/2 inch, per keg.....		3 75
" " " " " " 1 1/2 to 1 3/4 inch, per keg.....		3 14
" " " " " " 2 to 2 1/2 inch, " ".....		3 25
" " " " " " 2 1/2 to 3 1/2 inch, " ".....		3 00
" " " " " " 3 inch and larger.....		2 75
" " " " " " Sced nails 10c. per keg extra.....		
Finishing nails, 1 inch, per keg.....		5 80
" " " " " " 1 1/2 inch, " ".....		5 10
" " " " " " 1 3/4 " " " ".....		4 45
" " " " " " 2 " " " " " ".....		4 50
" " " " " " and larger.....		4 10

**MONTREAL PRICES.**

<b>Lumber, Etc.</b>		
Ash, 1 to 4 in, M.....	\$16 00	30 00
Birch, 1 to 4 inch, M.....	18 00	25 00
Blackwood.....	14 00	18 00
Walnut, per M.....	55 00	95 00
Butternut, per M.....	25 00	40 00
Cedar, flat.....	95 00	30 00
Cherry, per M.....	65 00	90 00
Elm, Soft, 1st.....	15 00	17 00
Elm, Rock.....	8 00	10 00
Maple, hard, M.....	75 00	35 00
Maple, Soft.....	16 00	20 00
Oak, M.....	40 00	55 00
Pine, select, M.....	25 00	40 00
Pine, 2nd quality, M.....	25 00	30 00
Shipping Culls.....	13 00	15 00
Mill Culls.....	10 00	12 00
Lath, M.....	1 00	1 00
Spruce, 1 to 2 inch, M.....	10 00	15 00
Spruce Culls.....	4 50	6 00
Shingles, 1st quality.....	2 00	2 00
" " " " " " and " " " ".....	1 25	2 00
<b>Cement, etc.</b>		
Portland Cement, per barrel.....	\$ 2 75	3 00
Roman.....	2 75	3 00
Fire Bricks, per M.....	22 00	30 00

<b>Cut Nails:</b>		
Hot-cut Am. or Can. pattern, 3 inch and above.....		\$2 65
Hot-cut Am. or Can. pattern, 3 1/2 inch and above.....		2 05
Hot-Cut Am. or Can. pattern, 3 1/2 and 2 inch.....		1 15
Am. pattern, 1 1/2 and 1 3/4 inch.....		4 07
" " " " " " 1 1/2 inch.....		4 15
Can. Pattern, cold-cut, 1 1/2 and 1 3/4 inch.....		3 15
" " " " " " 1 1/2 inch.....		3 65
Finishing Nails, per 100 lb. keg, 1 1/2 to 1 3/4 inch.....	6 60	4 50
Finishing Nails, per 100 lb. keg 1 1/2 to 1 3/4 inch.....	4 25	4 00
and 1 1/2 inch.....	5 25	4 70
Finishing Nails, per 100 lb keg, 2 inch and up.....	3 65	3 50

<b>Paints, etc.</b>		
White Lead, pure, 25 to 100 lb. kegs.....	6 00	0 00
" " " " " " No. 1.....	5 25	5 50
" " " " " " No. 2.....	4 75	5 00
" " " " " " No. 3.....	4 50	4 75
" " " " " " dry.....	5 25	5 75
Venetian Red, English.....	1 50	1 75
Yellow Ochre, French.....	1 25	3 00
Whiting, London, washed.....	0 50	0 50
" " " " " " Paris.....	1 15	1 25

<b>Oils:</b>		
Linseed, raw.....	0 55	0 58
" " " " " " boiled.....	0 60	0 61
Olive, pure.....	0 90	0 00
" " " " " " machinery.....	0 95	1 00
" " " " " " extra, oil, per case.....	3 00	3 25
" " " " " " 1/2 pts.....	2 40	3 00
" " " " " " 3/4 pts.....	2 70	3 00
Spirits turpentine.....	0 71	0 73

**J. H. FARR & CO.**

THE ONLY CANADIAN MANUFACTURERS OF

**ROOFING PITCH**

— ALSO —

**ASPHALT ( — ) PAVING PITCH**

Morse Street, - TORONTO.

**THE BELL ART STAINED GLASS WORKS,**  
*MANUFACTURERS OF*  
**ECCLESIASTIC and DOMESTIC ART GLASS**  
*Of Every Description.*  
**LEAD GLAZING AND SAND CUT A SPECIALTY.**  
**110 RICHMOND ST. WEST - TORONTO, ONT.**  
**D. BELL, - MANAGER.**

— THIS SPACE BELONGS TO —  
**R. FORSYTH,**  
**130 BLEURY STREET, MONTREAL.**

AGENT FOR CANADA FOR

**GRANOLITHIC**

For Sidewalks and Floors.

Toronto Office: 14 TORONTO ARCADE.

SEND FOR CIRCULARS.

**Builders' Hardware.**

**SPECIALTIES:**

*Hopkins and Dickinson's* **BRONZE HARDWARE.**  
*Yale & Towne Mfg. Co.'s* **"BOWER-BARFF" GOODS.**  
*Chicago Spring Co.'s* **DOUBLE ACTION SPRING HINGES.**  
*B. G. Tisdale's* **IRON STABLE FITTINGS.**

Write for full particulars of above goods.

**AIKENHEAD & CROMBIE,**  
**- TORONTO**



**BUFFALO SEWER PIPE COMPANY,**

THE ONLY MANUFACTURERS IN BUFFALO OF

Steam Pressed, Salt Glazed

**Vitrified Drain & Sewer Pipe**

Office and Factory:

NEAR NIAGARA STREET,  
 Black Rock,  
 BUFFALO, N. Y.



Samples may be seen at any time at the office of the City Engineer, Toronto, Ont.

**MAQUIRE'S Ventilating**

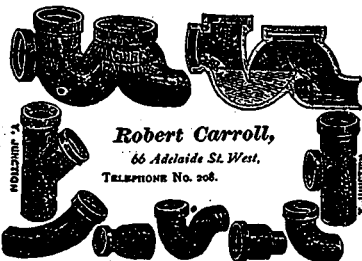
**Sewer Pipe,**

**Self-Flushing and Self-Cleaning Trap.**

**Chimney Tops,**

**Fire Brick,**

**Fire Clay,**



*Robert Carroll,*  
 66 Adelaide St. West,  
 TELEPHONE No. 208.

**PORTLAND**

—AND—

**THOROLD CEMENTS**

always on hand.

**NOTICE.**

We do not handle any of the cheap grades of Scotch Pipe which are offered in the market to-day. All our stock is made up of first-class Ohio (American) and Standard (Canadian) pipe, all of which is made from fire-clay, highly vitrified and salt-glazed, and have stood the severest strain and smoke tests, and will not decay in the ground by sewer gas.