

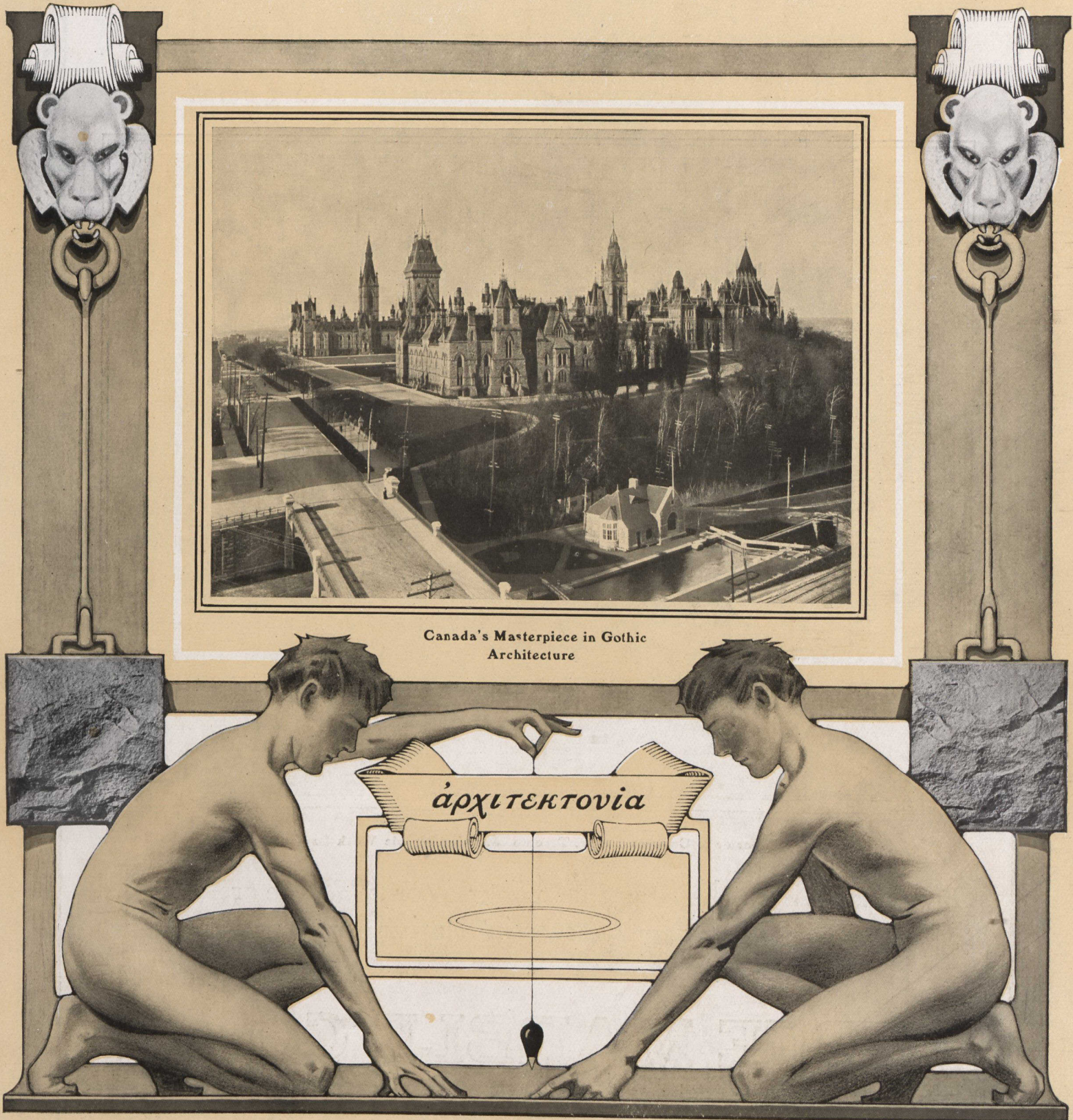
CONSTRUCTION

“ A JOURNAL FOR THE ARCHITECTURAL ENGINEERING AND CONTRACTING INTERESTS OF CANADA ”

Vol. I, No. 12.

OCTOBER, 1908

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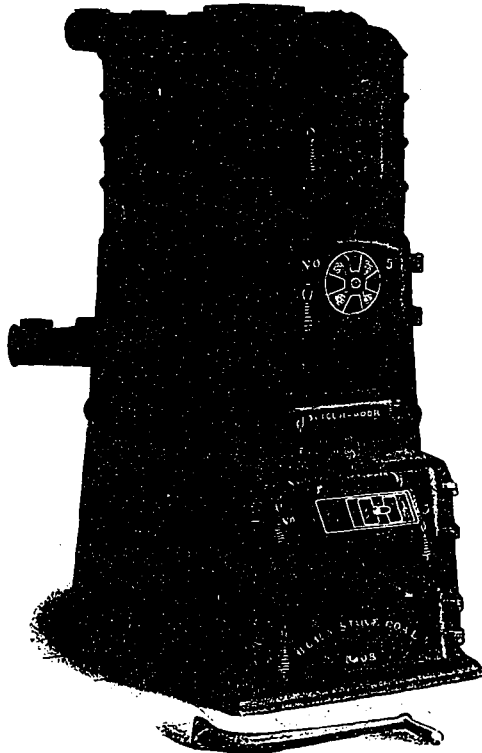
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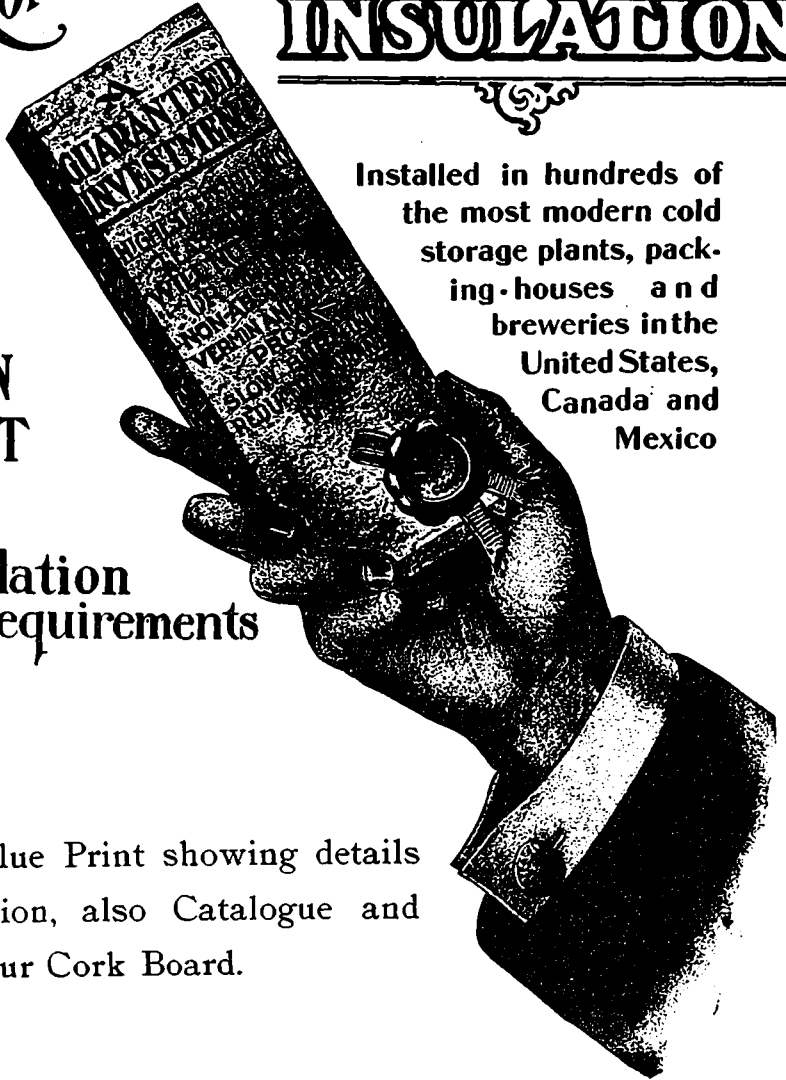
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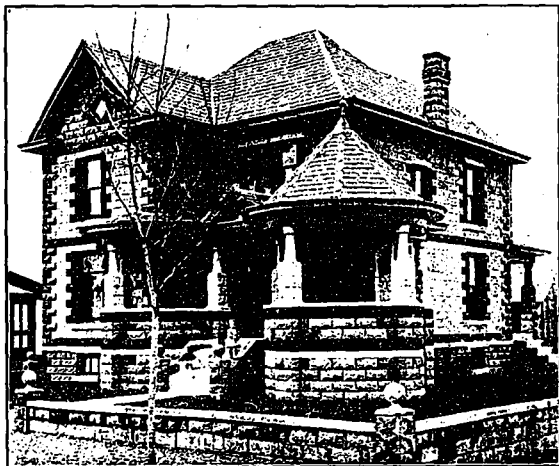
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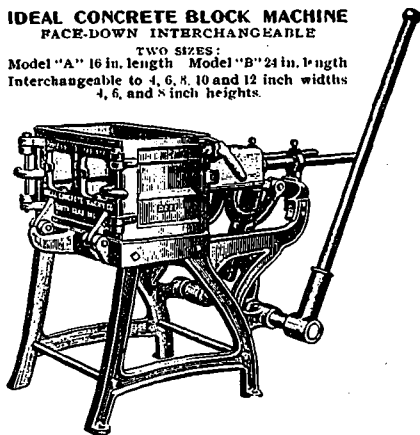
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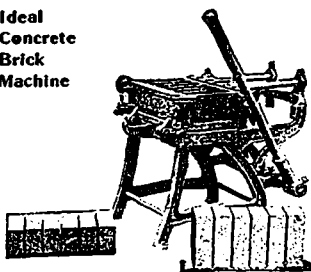
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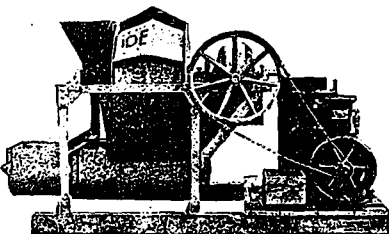
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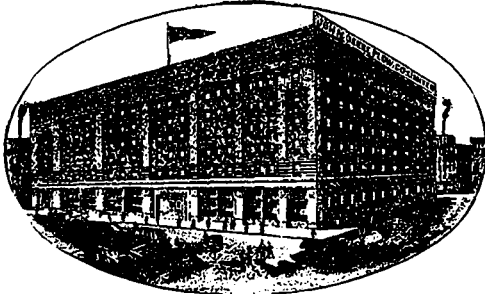
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In reply to your enquiry I would say that the 3-Way Prisms installed by you in the sidewalk in front of the Fairchild Building, in this city, have proven in every way satisfactory.

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Dict. J.D.A.
Steno. N.

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3-WAY SIDEWALK PRISM

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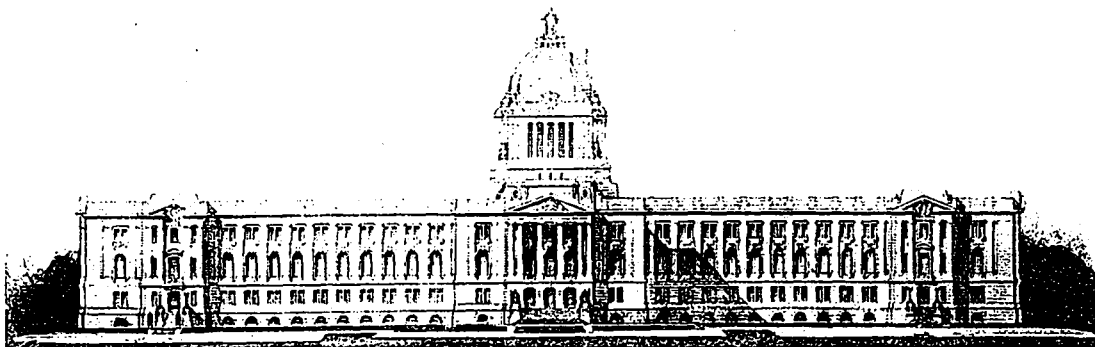
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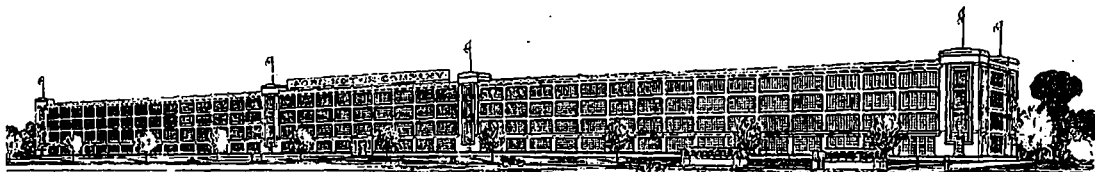
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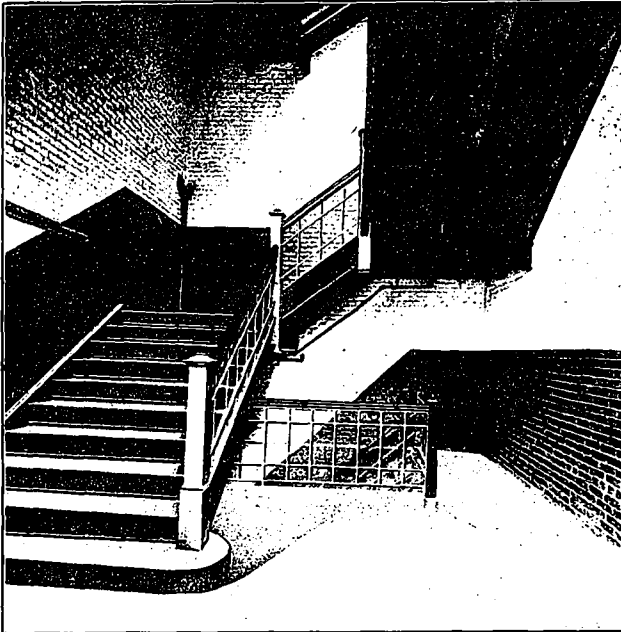
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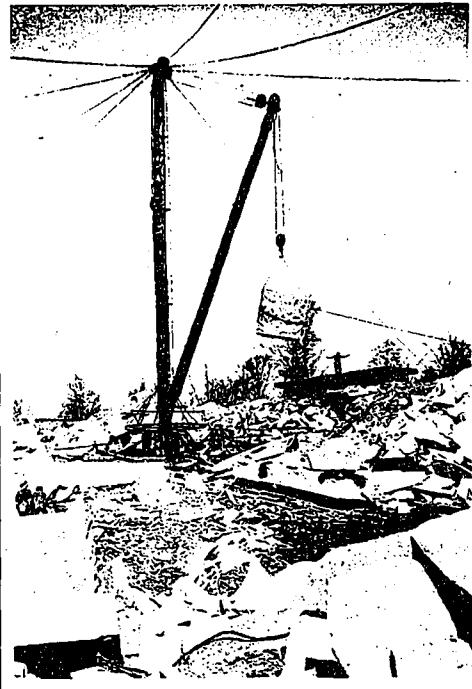
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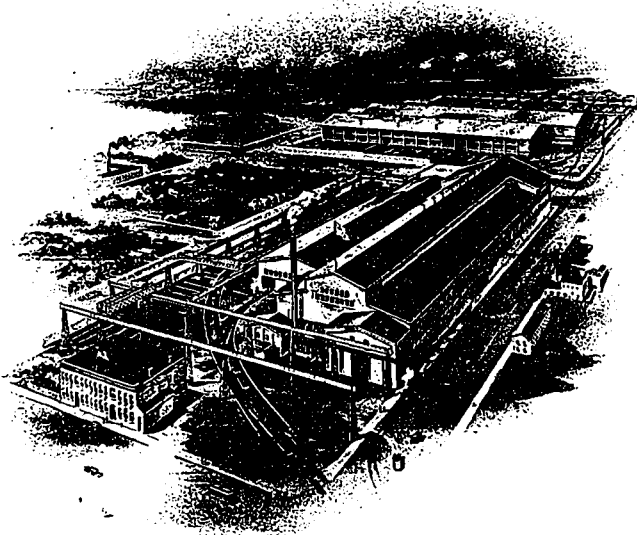
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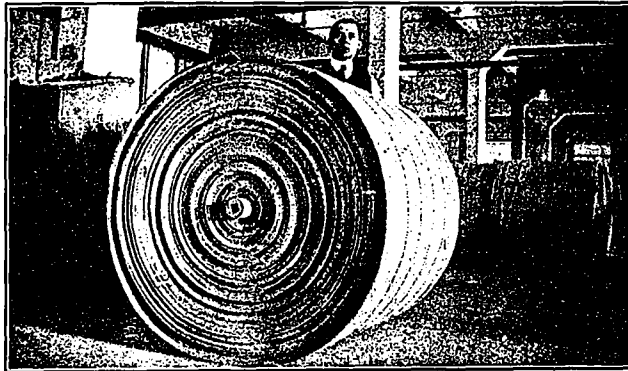
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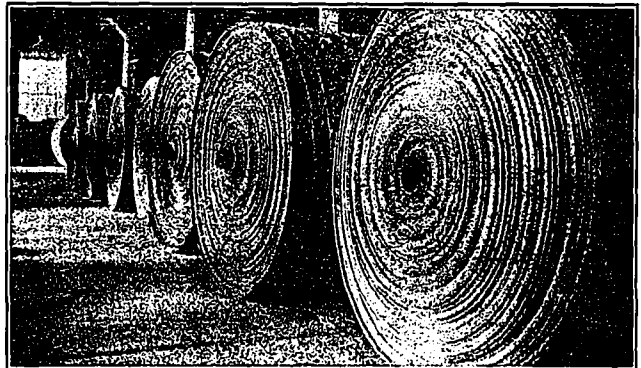
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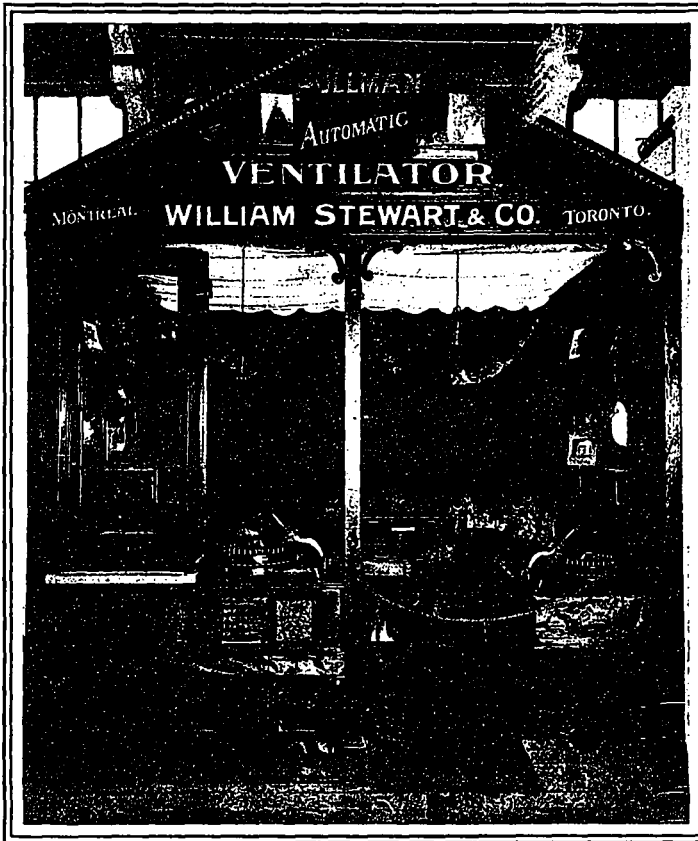
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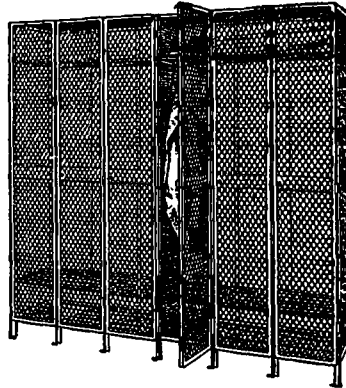
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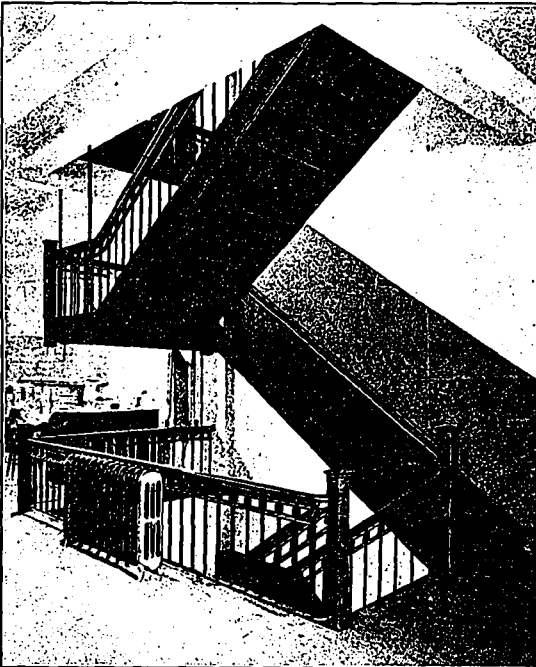
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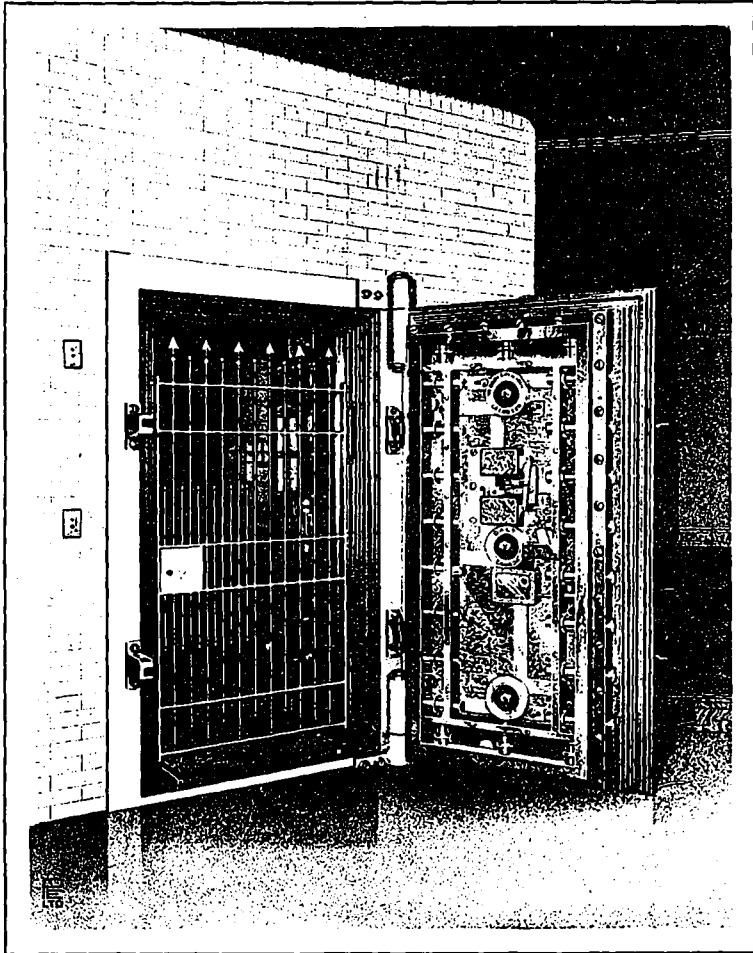
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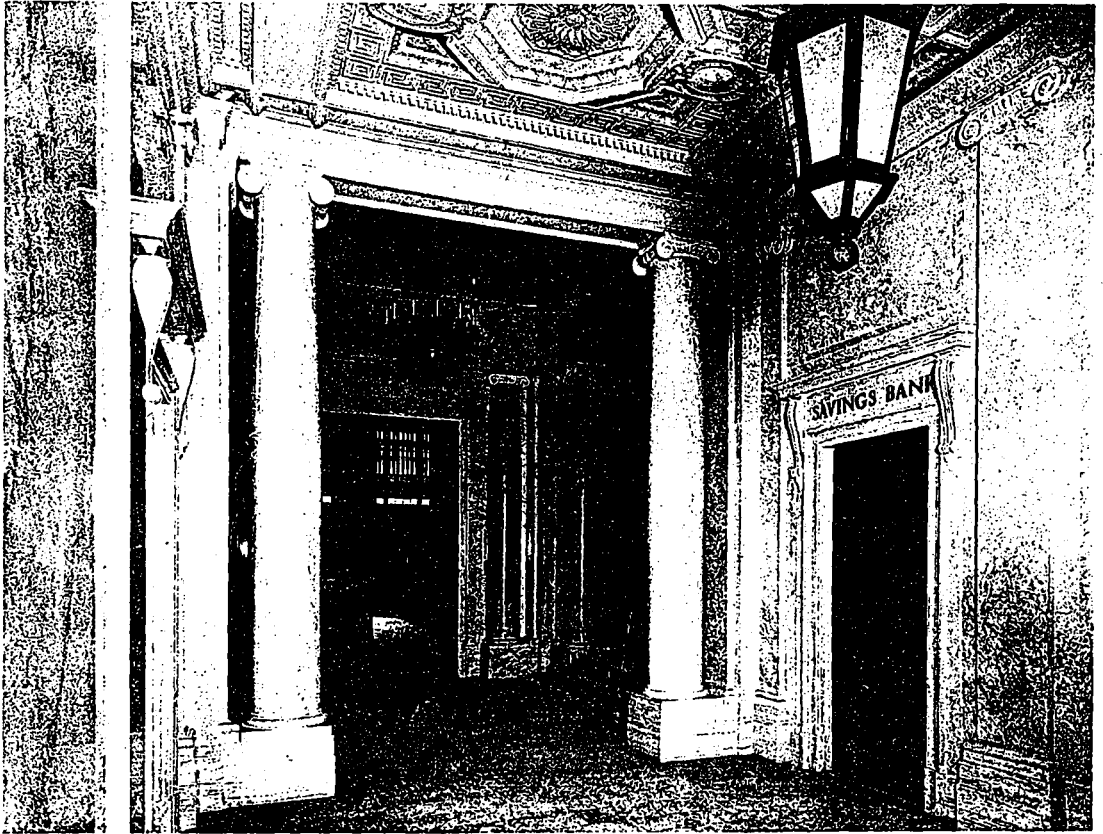
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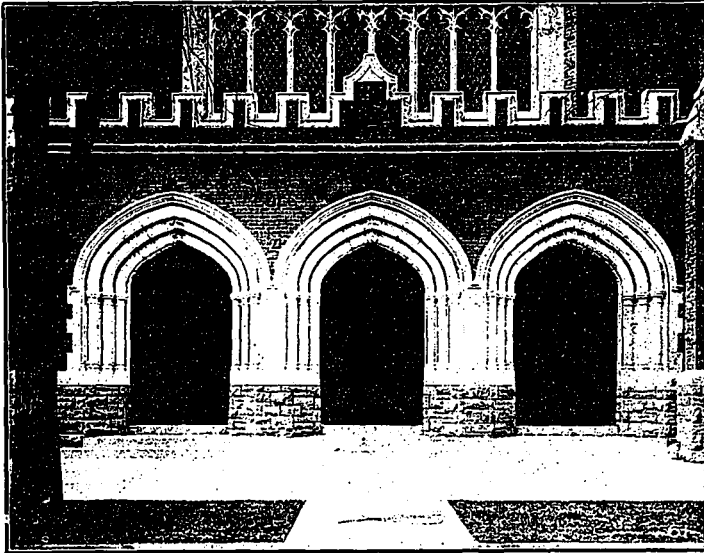
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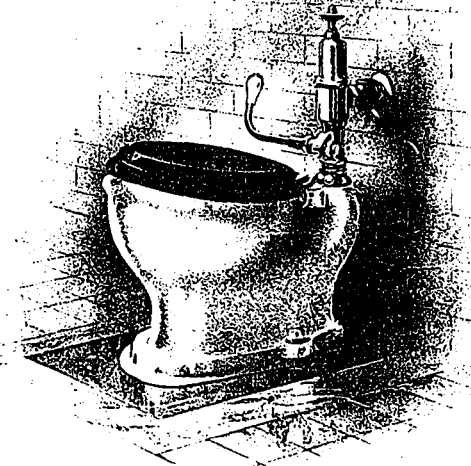


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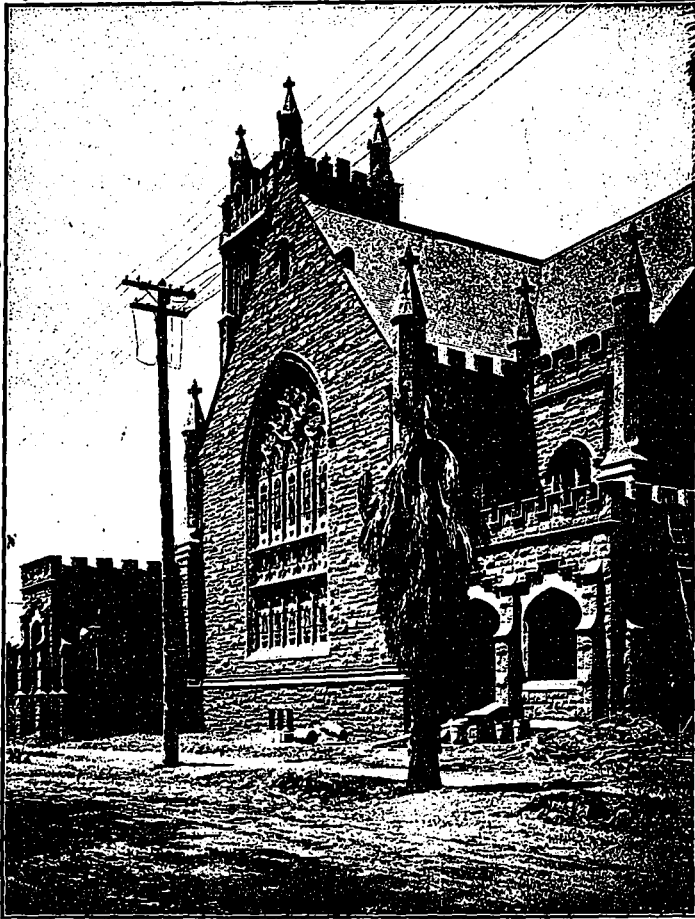
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We install the California System anywhere under the positive guarantee that it will give all the results that we claim for it.

We erect large buildings any place where our system has not been installed.

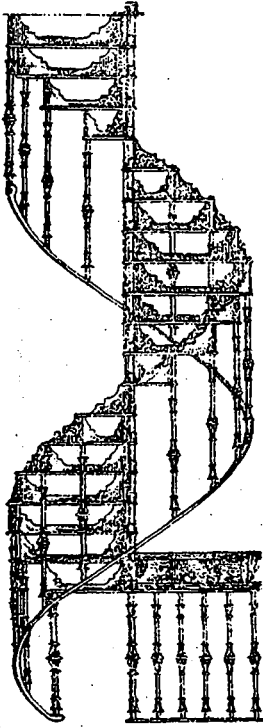
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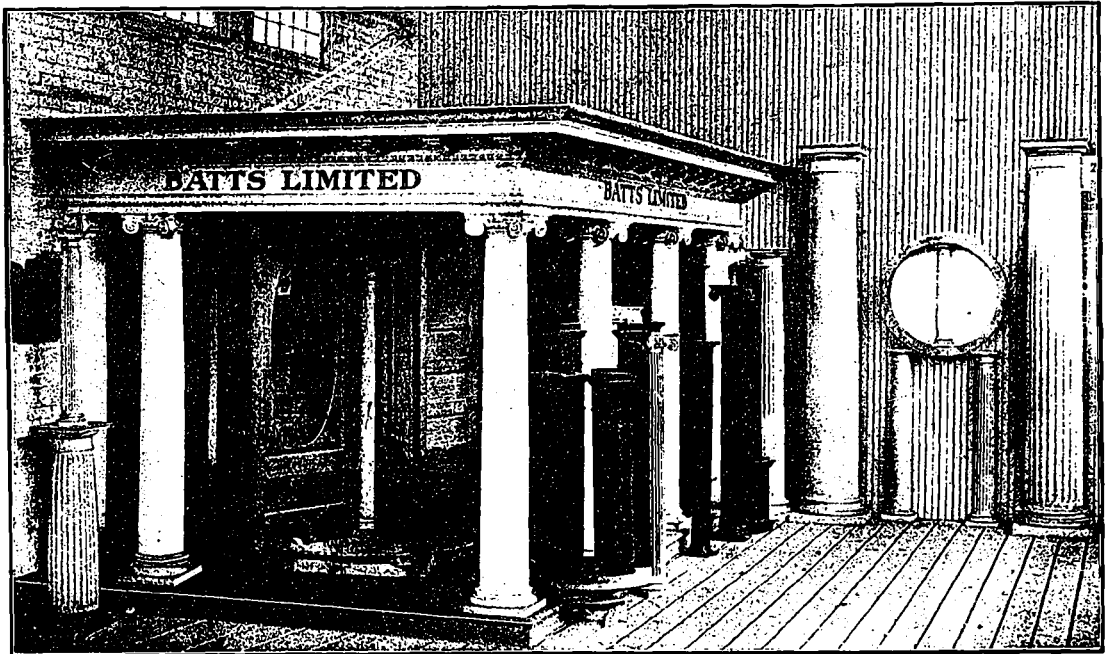
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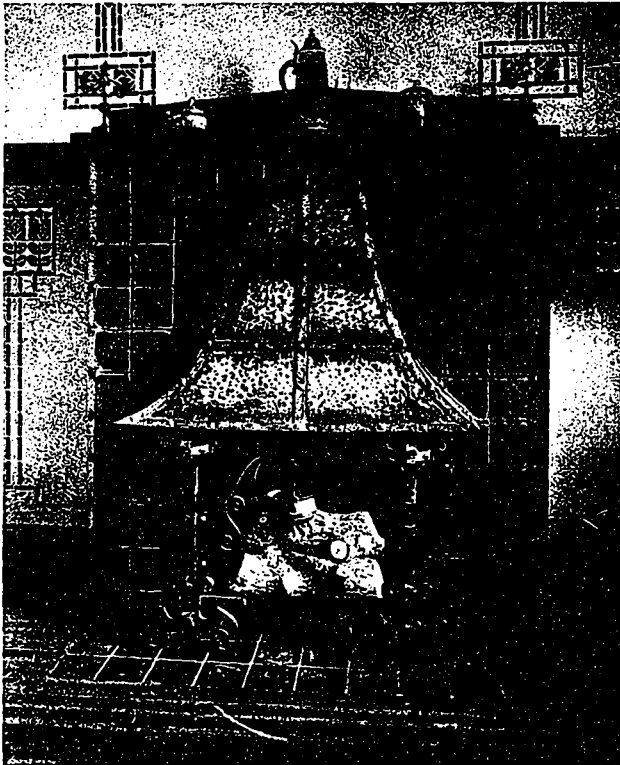
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[Carrere & Hastings and Eustace G. Bird, A.R. I.B. Associate, Architects]

The following letter from the General Contractors speaks for itself:

<p>NEW YORK.</p> <p>O. W. NORCROSS, PRESIDENT WM. J. DENHOLM, VICE-PRESIDENT ALBERT J. PARR, TREASURER THOS. O'REILLY, NEW YORK MANAGER FREDERICK MORRIS, BOSTON MANAGER.</p>	<p>BOSTON.</p> <p>WORCESTER.</p> <p>PROVIDENCE.</p> <p>CLEVELAND</p> <p>THE NORCROSS BROTHERS CO. GENERAL CONTRACTORS.</p>	<p>NORCROSS BROTHERS, A AND O. W. NORCROSS—ESTABLISHED NORCROSS BROTHERS—O W NORCROSS—1897-1902 THE NORCROSS BROTHERS CO.—MARRIAGE—CHURCHES CORPORATION—1902.</p>
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Toronto, February 5th 1908.

The Don Valley Brick Works,
Toronto.
Gentlemen.

We beg to express to you our entire satisfaction with the excellent quality of your Porous Terra Cotta Fireproofing, as supplied to us for the floors of the Royal Bank Building we now have under course of construction on King Street of this City.

We have had occasion to use a large quantity of Terra Cotta Fireproofing of both Canadian and American manufacture and it is with pleasure we state that the product as supplied us by you is equal, if not superior, to anything we have ever used. It is thoroughly well burnt and is considerably heavier than the product usually manufactured in the United States.

The 300,000 brick of your manufacture that we have used in the Royal Bank Building have proved highly satisfactory.

Again assuring you of our own appreciation of the excellent merit of your products, and the courteous treatment and prompt attention received at your hands, we beg to remain,

Very truly yours,
THE NORCROSS BROTHERS CO., LIMITED.

Per *L. E. Palmer.*

We Manufacture the Best Quality of

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Our facilities for giving prompt delivery and first-class service are unexcelled

The Don Valley Brick Works

Head Office—36 Toronto St., Toronto.

Montreal Agent, David McGill, 206 Merchants Bank Chambers.

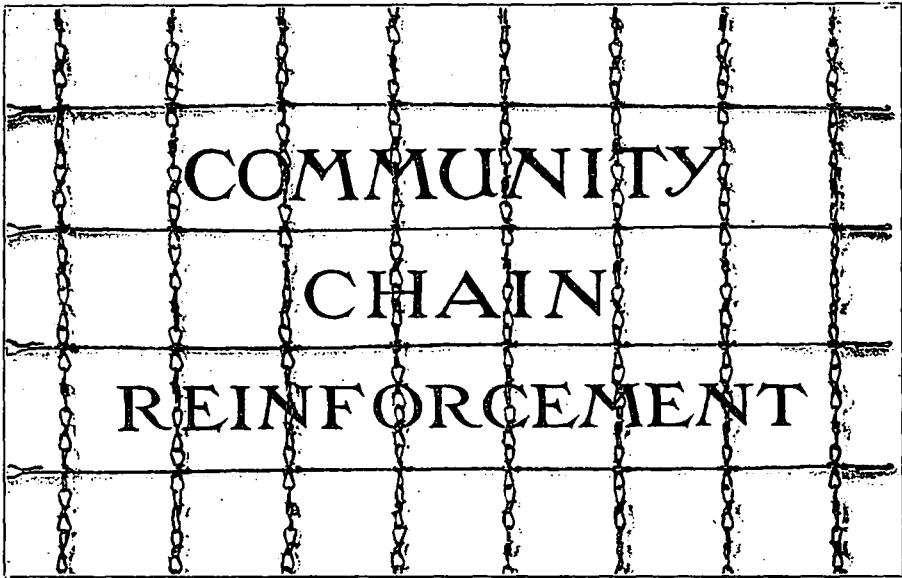
THE NIAGARA BAR

AND

COMMUNITY CHAIN REINFORCEMENT

The whole trend of slab reinforcement is toward forms of Fabric made up so as to provide mechanical bond, and enable cost of applying to be reduced to the lowest possible limit. Previous to the introduction of COMMUNITY CHAIN FABRIC, this has been accomplished by plain wire and sheet metal Fabrics.

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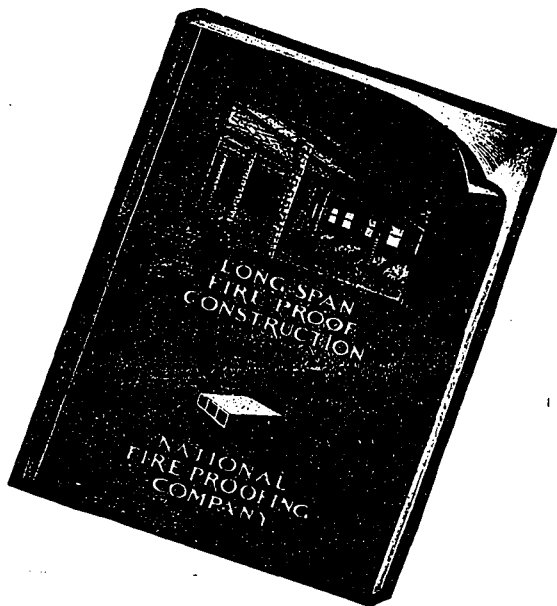


In COMMUNITY CHAIN FABRIC, we present a material having perfection of material, an ideal articulated mechanical bond, and of a flexible form which permits the lowest cost for labor in applying.

We are confident, as a result of the present season's work in this material, that COMMUNITY CHAIN REINFORCEMENT has points of advantage possessed by no other material; we have proved it, and are in a position to prove it to prospective builders, architects and engineers, who are looking for the ideal reinforcement for concrete.

PITT & COMPANY, Engineering Contractors

McClive Block, NIAGARA FALLS, ONT.



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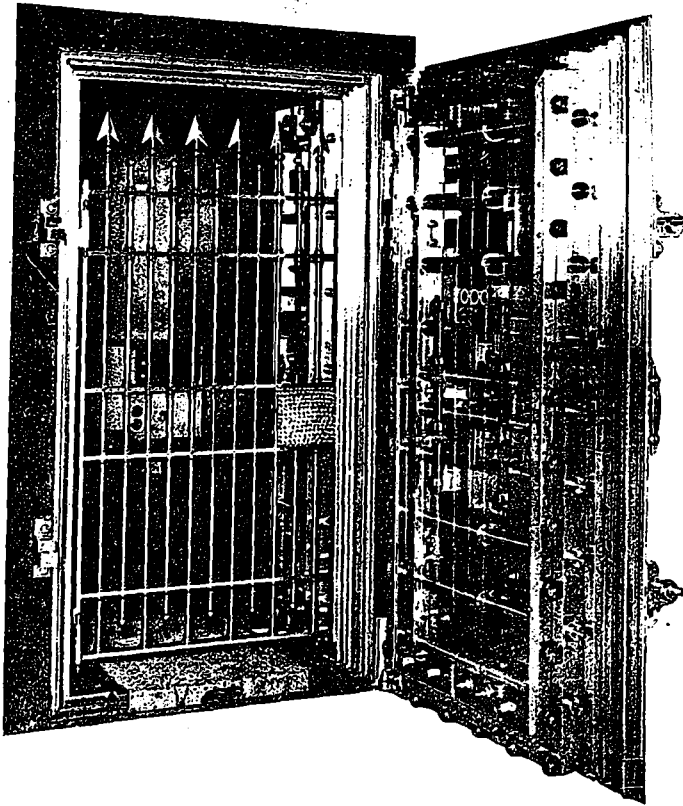
J. & J. TAYLOR

1855

(Toronto Safe Works)

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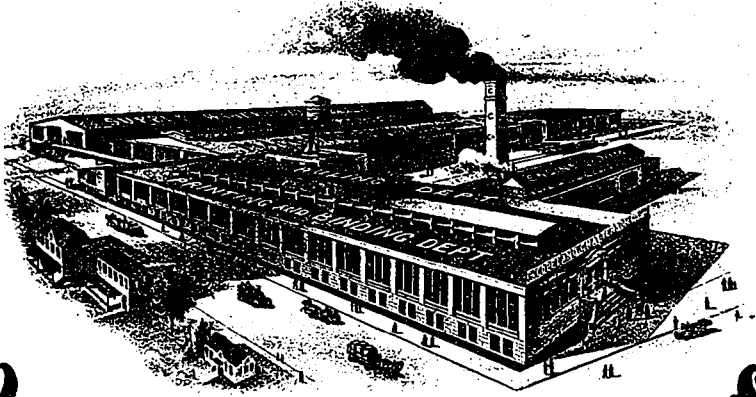
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View of Vault Door Installed by Us in the New
ROYAL BANK BUILDING - TORONTO

¶ Our Safes and Vaults are of the highest quality and are recognized as such throughout the length and breadth of Canada. They have been before the public for over half a century, and in that time have gradually developed and improved until at the present time they meet the most exacting requirements in the matter of workmanship and modern appointments.

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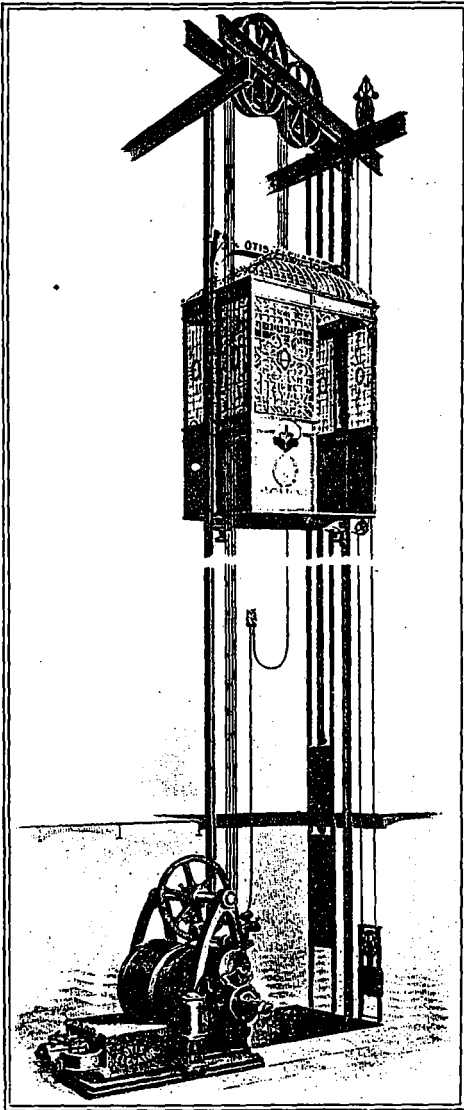
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It Was Selected Owing to its High Standing in Tests, as to
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LAKEFIELD PORTLAND CEMENT CO., Bank of Ottawa Building, MONTREAL





TWELVE NUMBERS OF "CONSTRUCTION" have been published. This, the October issue, completes our first volume and we can modestly say that our fondest hopes for the success of this the most ambitious undertaking of the publishers, have not only been satisfied but far surpassed.

Almost two years ago the publishers became convinced that there was need for a truly high-class technical journal dealing with matters of interest to building, engineering and the allied industries in Canada. A journal that in subject matter, illustrations, make-up and general typographical style, would compare favorably with the foremost journals serving these interests in England and the United States. A journal that would serve as a mirror for Canadian accomplishment along these lines, and one that would be looked upon as the authority upon all architectural and engineering matters in Canada, not only by our Canadians but by those in foreign countries, who might be interested in constructional matters in Canada.

After a very careful and thorough investigation, it was decided to publish "CONSTRUCTION." This name was selected because of its breadth of scope, insofar as we found, that to produce the highly expensive publication it was our desire to establish, it was necessary that it should not be confined to simply one branch of construction work, but should embrace the entire industry as a whole.

Several months were spent in obtaining men capable of successfully conducting such a publication, and in perfecting a competent organization, until in October, 1907, the first number appeared.

The appearance of the first number brought forth scores of letters from Architects, Engineers, College Professors, Contractors and Manufacturers, not only in Canada but in various parts of the United States, expressing their approval and appreciation of our efforts in connection with the production of our first issue. There, however, seemed to be a feeling of uncertainty among a great many architects and engineers, and among the leading men of the interests the paper was designed to serve in Canada, as to whether it would be possible to continue the publishing of such a high-class, expensive production in Canada, and, invariably a letter commenting upon the class of matter contained in our first issue, and complimenting us upon the excellent printing and the large number of high-class half-tones used in its columns, would end up by saying, "Your first production is magnificent, if you can only keep it up."

Subscriptions poured in from every direction. We put several solicitors on the road and they met with wonderful success. To give some idea of the reception that "CONSTRUCTION" met with in this field, we would say that we have in one town in Western Ontario, (of a population of about 6,000), 105 subscribers. "CONSTRUCTION" was not only subscribed to by architects, engineers and contractors, but it has proven attractive to the prospective builder, the man who proposes to expend money in the erection of a home, or a warehouse, or a factory, or a business building. He finds in "CONSTRUCTION" a subject which is generally considered a dry and unattractive one, made highly interesting. These subscriptions extend from coast to coast in Canada. We have as many subscribers in Vancouver as we have in St. John, and we have as many in St. John as we have in London.

Not only has "CONSTRUCTION" been successful in securing a large list of subscribers in Canada, but, to our surprise, we have received many subscriptions from the larger architects, engineers and colleges in the United States. We have further been successful in obtaining a large number of subscribers in England, and recently established a subscription agency in New Zealand, from which subscriptions will be solicited for the whole of Australasia. So, at the end of twelve months, the first year, we do not believe that we are over-boastful in saying that in "CONSTRUCTION" we have been successful in every branch of its promotion. We have established a large valuable subscription list: we have arranged to send the mouthpiece and exponent of the Canadian manufacturer, to be read in Australasia, where architects are tending more and more to follow our methods in building, and who constantly specify Canadian or American made goods.

We have thoroughly established a paper that supplants the foreign journals, carrying advertisements of foreign manufacturers, that were originally read by our Canadian architects and engineers. We have given the Canadian architect a journal which he is proud of, and which he considers his own. We have not only been successful in keeping up the character of the journal, to that of our first issue, but we believe we have each month established a new standard of excellence. The avowed policy of "CONSTRUCTION" is, in every instance, that which operates to the better interests of the Canadian building industry.

We have no sympathy with the owner or the architect or the contractor who makes possible a condition that gives our work to American architects, American engineers, American contractors, and American manufacturers, and we shall continue to strenuously oppose the incursion of foreign interests in this field. We know that there are some lines of goods that are not manufactured in Canada, and that it may be necessary in some few instances to specify foreign made materials or appliances, but it should be considered as an exception to the rule, and it should be so justified by circumstances.

During the coming year, we will work out many new features in our paper that will still greater improve the attractiveness and value of our journal. We shall develop the engineering features of our paper, and we hope to give our readers some very interesting matter upon purely Canadian subjects.

We trust that our readers will continue their co-operation, and that volume "Number Two" will prove much more attractive, interesting and instructive than volume "Number One."

HAS CANADA RISEN ABOVE PREJUDICE AGAINST ALIEN ARCHITECTS, OR HAS CANADA RISEN ABOVE THE NECESSITY OF THE EMPLOYMENT OF FOREIGN ARCHITECTS? - - - -

MUCH HAS BEEN SAID in these columns relative to the question of the employment of foreign architects by Canadian owners. Our declared policy in this particular has met with the approval of many, the disapproval of some, and the resentment of a few. Our reasons for the stand we take and the motives that prompt us in constantly hammering upon this question, are understood by many, misunderstood by some, and misconstrued by a few.

The following letter from Mr. F. S. Baker, F. R. I. B. A., upon this subject is of special interest, in view of the fact that Mr. Baker is the accredited representative of the R.I.B.A. in Canada, and was also associated with Messrs. Carrere & Hastings, of New York, in the preparation of plans for the Traders Bank Building, of Toronto.

Editor CONSTRUCTION:—

In your August issue you have a leading article in which you refer to the occasional employing of U. S. American architects by Canadian capitalists, and I cannot help feeling, although I may be wrong, that you have got hold of the wrong spirit in dealing with this matter.

"I pass over the question of duty on the plans of U. S. American architects, as smuggling may be carried on in any department of work and is simply an evasion of the law, and come to the injured air with which most Canadian architects speak of the bringing in of U. S. American architects by any capitalist.

"Surely Toronto has risen above this stage, the volume of building in this splendid city has only been surpassed during the last few years, by seven or eight cities on the continent, and who will say that another decade may not put Toronto much nearer the top of the list. Are we not above such prejudices?

"It is a wholesome city to live in or visit, and it is not to be wondered at if a prominent U. S. American architect is offered a commission here that he jumps at the opportunity of making frequent visits to such a town.

"I contend, and have previously contended, that we should welcome this sort of competition—it has educated our capitalists in the spending of money, to obtain fine structures. Structures which will go down into history as being well proportioned scholarly buildings, whose construction resists the ravages of decay.

"It has encouraged our students who go abroad to study to come back to Canada, where, owing largely to the occasional incursion of U. S. American architects, good work in every sense is appreciated by those who have money to invest in building.

"I think we should consider the welfare of the country ahead of the petty annoyance of those whose education does not allow them to see beyond the disagreeable fact that an alien has been considered more capable of dealing with a problem than they.

"If you will let your mind dwell on any one of the dozens of buildings which have been erected by U. S. American architects in Canada, I think you will admit that in every case they made for progress and have improved the condition of the entire building population of our country.

"Of course the architect who will allow work to be designed and built under cover of his name by another, is just as reprehensible as the man who would bring in the drawings of a U. S. American architect without paying the legal tax demanded by the Government of the country. I am, Yours truly,

Toronto, Sept. 19, 1908. "F. S. BAKER."

We by no means believe Mr. Baker is influenced in his views upon this subject, by his professional associations with United States architects, nor would we say he lacks national spirit as a Canadian architect, but we do believe that Mr. Baker does not grasp the broader national significance of the many intricate questions involved in the policy of permitting United States architects, with their foreign connection, to enter the Canadian field, compete on the same basis with the resident architect in Canada, who is debarred by heavy customs duties and rules of architectural competition in the United States, and who, therefore, depends solely upon the work of this country for both his experience and his livelihood.

We never have in any way opposed foreign architects coming into Canada, opening up an office and competing for work here, but we do oppose conditions that make it possible for foreign architects to take our larger work to New York or any other city in the United States and there use it as a "tail end" of a great business.

We do not approve of the petty jealousies that might discourage competent, ambitious architects from coming into this country, becoming a resident and competing for work here. We maintain that every good designer that comes to this country, acquaints himself with conditions here, and the materials we have at hand, makes a valuable citizen, greatly to be desired, and adds materially to the wealth of the country. But, if we permit of the five hundred competent architects (any one of whom could take a Canadian building simply as a filler in slack time), from the larger United States cities to compete for work in Canada on an equal basis with our resident architect, who is barred from the United States and depends solely upon Canadian work, how can we expect to induce the competent foreign architect to come to Canada and establish a solely Canadian practice.

Mr. Baker asks if Toronto, with its large volume of buildings has not risen above the prejudice against foreign architects. We ask, has Canada, with its rapid development, its great natural resources, its worthy national pride, not risen above that stage where we must meekly submit to the incursion of foreign architects without a murmur. Is it not high time, if we have not capable designers, that we should take steps to either encourage foreign architects to come to Canada, or develop architects of our own, capable of designing our buildings? Must we forever, hopelessly, consent to be the industrial dumping ground of the United States? Are we to be blinded by the glare of American greatness? Is our national individuality to be forever lost and sacrificed by the acceptance and adoption of Yankee ideals and American standards?

American architects, as we have pointed out in these columns before, are influenced in their work by the materials they have at hand. They have developed ideas and tastes suited to the materials with which they must build. They have learned how best to handle, in their design, bricks of various colors and textures, made from clays to be found in the United States. They have cultivated the use of American woods and know how best to use stone quarried in the United States, to produce various desired effects. They have never studied Canadian bricks, or stones, or woods to know what effects could be produced with them. Their work even in Canada is never influenced by the possibilities of materials peculiar to this country. If a Canadian material is used, it is only because it happens to be a counterpart of a United States material that the architect had in mind when he designed his building. So when a foreign architect, with a foreign practice, plans a building to be erected in Canada, every effect he attempts to produce is studied out and influenced by the materials he has been accustomed to. The result is that the structure, when completed, is a United States building in a Canadian setting.

A representative of a United States architectural firm, made the statement, in regard to the use of United States

materials in a recently erected structure in Canada, that it was impossible to secure these materials in Canada, and, therefore, it was foolish to raise such a question. We would answer that, had the architect been a Canadian, practicing in Canada, such materials would never have been specified, and that the very fact of it being impossible to produce the materials specified, in Canada, is one of the strongest arguments against the employment of foreign architects to plan Canadian buildings.

Mr. Baker states that United States architects have contributed much to the architecture of Toronto by recently constructed buildings, planned by them. This may be quite true, but the question still remains: Would not the money expended by these American architects have produced equally as worthy structures in the hands of some Canadian architect? If they were to be judged from the standpoint of Yankee standards, possibly not, but we can point to many structures, planned by Canadian architects, that are just as well proportioned, just as scholarly and whose construction will resist the ravages of decay just as effectively as any of those planned by United States architects. We know of no great masterpiece in architecture executed in Canada by a United States architect, the excellence of which takes it beyond the field of comparison with our Canadian buildings. The work of our average Canadian architect compares most favorably with that of the average architect in the United States, and the architecture of our buildings generally in our larger cities compares very favorably with that of cities of like size in the United States. We are free to admit that there are greater architects in the United States than we have in Canada, and that there are many structures in the United States that far exceed anything we have in Canada in architectural beauty and massiveness of construction, but it is only this large work that involves great sums of money that develops great architects, competent to do such work. We shall never develop such architects in Canada if we employ foreign architects to do our big work.

We agree with Mr. Baker that the welfare of the country should be considered ahead of the "petty annoyance" of those who do not see beyond the disagreeable fact that an alien has been considered more capable of dealing with a problem than they, and we will allow that there may be some few individual cases in which it would be found expedient to bring in an alien specialist to work in conjunction with a Canadian architect on some especial work, but we maintain that the general practice of going to the United States to have our buildings planned, is wrong, decidedly wrong, and should and must be discouraged. If a special case arises, let the circumstances justify the exception.

It must further be remembered that it is not only the Canadian architect who has just cause for complaint against this rapidly increasing practice of employing alien architects, but the contractor, the material dealer and manufacturer, the business man, the laborer, in fact every Canadian whose business does not directly connect him with the employed alien architect, has even greater reason than the Canadian architect to deprecate this encroachment of the foreign architect in the Canadian field. A vast army of manufacturers, contractors, dealers, mechanics and laborers in Canada depend solely upon building operations for business and employment, and any agent or condition that tends to divert moneys expended in this important industry into channels that lead to the coffers of the foreign contractor, manufacturer or mechanic, and builds up a Canadian market for foreign products at the expense of "Made in Canada" goods, operates against the general welfare of the country.

As we have stated before, when an owner employs an alien architect, he not only brings the architect but he also brings with him his connection, and that portion of the money expended in the erection of the structure that goes out of the country is not only confined to the archi-

tect's fees, but almost invariably includes a very large percentage of the total sum paid the alien contractor and alien building material manufacturer.

Contractors and manufacturers of building materials in the United States could not wish for a condition that would more effectively operate in their favor in this market than that which renders the services of the United States architect in demand in Canada.

The United States architect is the advance agent of the American contractor and manufacturer, and his employment by Canadian capitalists operates against the industrial welfare of the country. Every time an alien architect is employed to plan a Canadian building the owner invites and encourages a condition that takes from, instead of adding to, the industrial wealth of the country.

The spirit which prompts these, our views, upon this matter is not one of prejudice or jealousy. We have the most profound esteem for the United States architect, who possibly leads the world in combining art and utility in architecture. We are free to admit that the work of United States architects in this country has been of a highly creditable character: their business methods have been such as to gain for them many friends, and some of our Canadian architects would do well to take heed of the clean-cut business tactics of these alien architects.

This is purely a policy of national pride, self preservation, industrial protection and the greatest good to the greatest number.

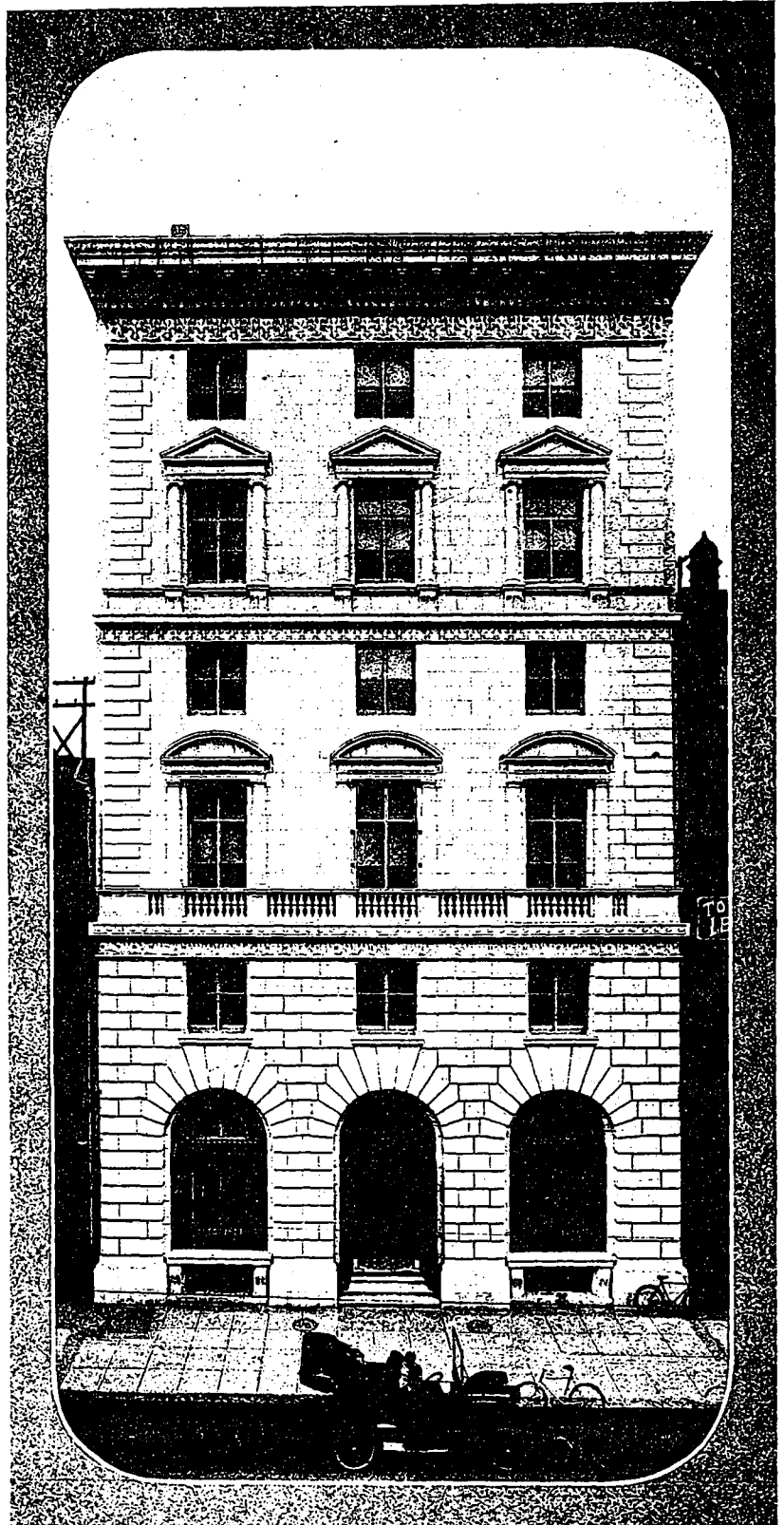
AN EXAMPLE THAT CANADA WOULD DO WELL TO FOLLOW IN A NATIONAL WAY—THE IMPORTANCE OF HOME PREFERENCE—MEANS MUCH TO INDUSTRIAL AND MANUFACTURING INTEREST.

A TRADE PREFERENCE resolution recently passed by the Greater Pittsburg Builders' Exchange League displays a spirit of civic pride and loyalty that we in Canada would do well to take pattern after, in a national way. The arguments set forth in the resolution showing the importance of having work done in the community in which it is being erected should apply much more forcibly to Canada as a country.

There is much less reason why Pittsburg should appeal to the prospective builder to so arrange for the plan and erection of his building to give Pittsburg architects, contractors and mechanics the preference over those of Philadelphia, New York or Chicago or any other city in their own country, than Canada as a nation should wish to influence the expenditures of money spent in building into channels where they remain and add to the wealth of the country rather than have this patronage go to the United States, our natural competitor. The resolution is well worth reading. It is as follows:

Whereas, About 50 per cent. of the workmen in the building trades of Greater Pittsburg since January 1 have been and are now out of employment. These men and their families spend their earnings here. In the past a noticeably large proportion of work having been let or sublet to out of town contractors, who in turn draw from outside sources for their materials and labors, thereby taking away capital which is lost to the business interests of the city.

Be it Resolved, That this organization, representing all branches of the building industry of Pittsburg, and striving for home progress and home loyalty, appeals to every owner of property, every promoter of building operations and every organization for civic advancement to encourage and wherever possible to favor local trade to the end that local architects, engineers, general contractors, subcontractors and building material dealers may be given a preference in all contracts and business transactions, thereby aiding resident workmen to procure employment, as well as the promotion and protection of home enterprises.



WHITE MARBLE FACADE OF ROYAL BANK BUILDING, TORONTO. CARRERE & HASTINGS AND
EUSTACE G. BIRD, A.R.I.B.A., ASSOCIATE ARCHITECTS.

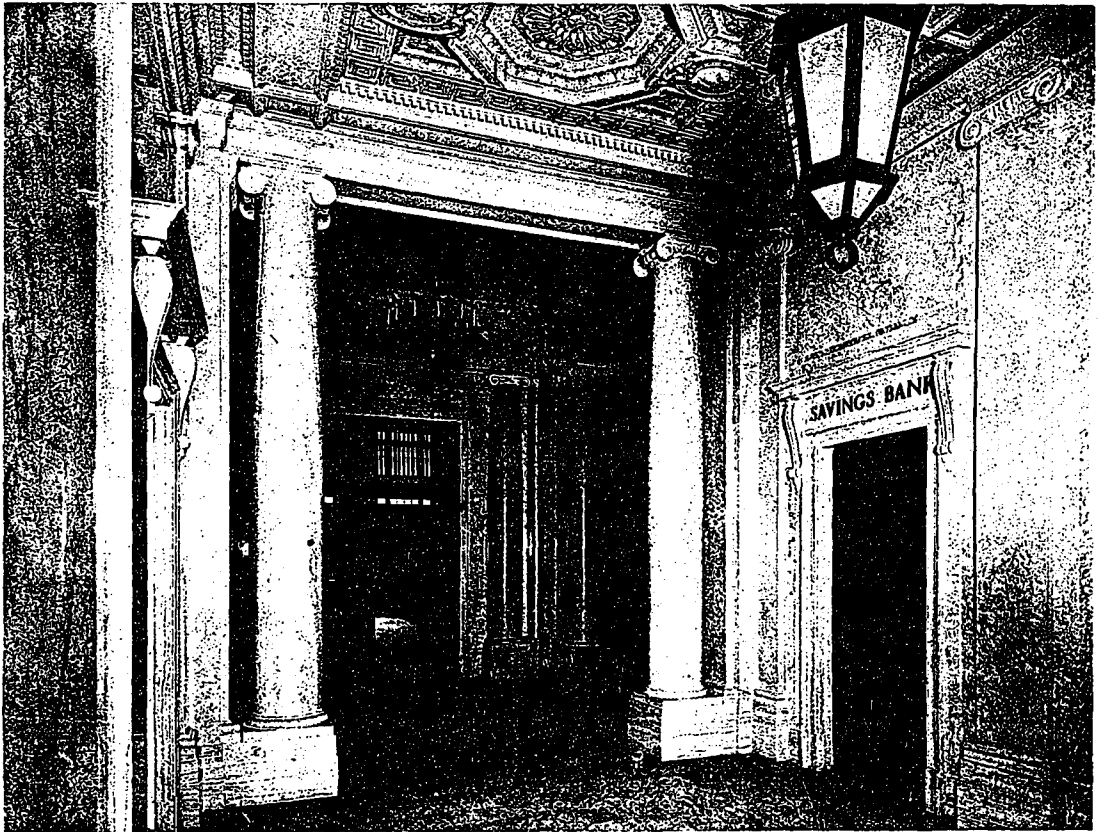
VENETIAN ARCHITECTURE IN BUSINESS BUILDING.-- New Royal Bank Building, Toronto, an Innovation in Commercial Building Architecture.--The Whitest Facade in America.--Many Other New Features in Place and Detail.

ONE OF THE most noteworthy recent acquisitions to Toronto's business building architecture is the new Royal Bank building at 10 King street. The building architecturally presents a most handsome appearance, and the plan has been thoroughly studied out to provide for every requirement for the present and future needs of the institution for which it was built.

To the traveller who has visited the Grand Canal in Venice, this building will recall to his memory the many

lighted, the owner is at a disadvantage in securing tenants. In this building we think the architects have solved this problem, for every part of it is amply lighted, notwithstanding it is almost completely surrounded by other structures.

It has often been remarked: "Why do the business streets of Toronto look so gloomy?" It is not the fault of sunshine, then what is it? Compare the Royal Bank with its surrounding buildings—it is the lack of light building material in our commercial buildings that brings



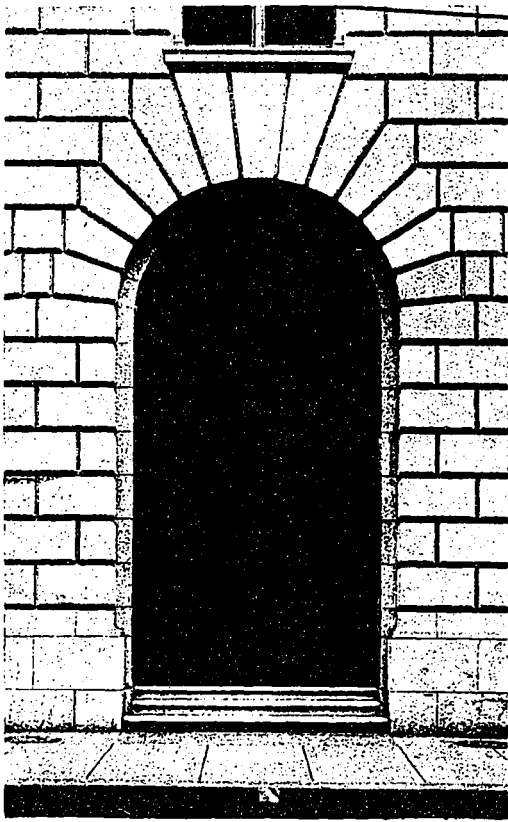
DETAIL OF MAIN HALL AND ROTUNDA, ROYAL BANK BUILDING, TORONTO, LINED WITH CANADIAN MARBLE AND ADORNED WITH MONOLITHIC MARBLE COLUMNS AND PILASTERS OF THE IONIC ORDER FROM THE SAME QUARRIES. CARRERE & HASTINGS AND EUSTACE G. BIRD, ASSOCIATE ARCHITECTS.

palatial marble palaces which adorn it. It is evident that the architects of this building have made a study of this class of architecture, and are so thoroughly conversant with it as to be able to adapt the style to modern requirements and at the same time not deprive it of its refinement and beauty of outline and proportion.

With the growth of our modern cities where buildings are erected closely together and are only separated by imaginary lines, one of the most difficult problems which confronts the designer of commercial buildings is the attainment of daylight to illuminate the different parts of the structure. Unless every apartment is amply

about these conditions. Most of the edifices are constructed and faced with dark red brick, and where stone is used, it invariably matches the brick as much as possible. Light material not only gives the street a light appearance, independent of the weather conditions that prevail, but it adds dignity and distinctiveness to the whole, and we think it would be most advantageous to the city if the men who will become responsible for our future public and commercial buildings would realize the importance of this great factor in the making and beautifying of our city streets.

The front of the Royal Bank is built of white marble



DETAIL OF MAIN ENTRANCE, ROYAL BANK BUILDING, TORONTO, SHOWING THE MASSIVE ORNAMENTAL IRON DOORS. CARRERE & HASTINGS AND EUSTACE G. BIRD, ASSOCIATE ARCHITECTS.

from the Dorset Quarries, Vermont, and with the exception of some buildings in China, it perhaps presents the whitest facade in the world. The marble is of very fine grain and can be easily cleaned by the use of a hose.

The building in plan is approximately fifty feet wide and one hundred and ten feet in depth. On entering, it presents a spacious hall and rotunda lined with Canadian marble from the Missisquoi quarries in Quebec and adorned with monolithic marble columns and pilasters of the Ionic order from the same quarries. This is the first building in which this Canadian marble has been used to any extent. The architects consider this decorative marble, which was practically unknown to exist, to be equal to and superior to many of the imported European marbles, and it was through their persistence and encouragement that they were able to succeed in obtaining from the quarry (the development of which was in its infancy) such large and handsome columns and pilasters which add so much to the dignity of the halls.

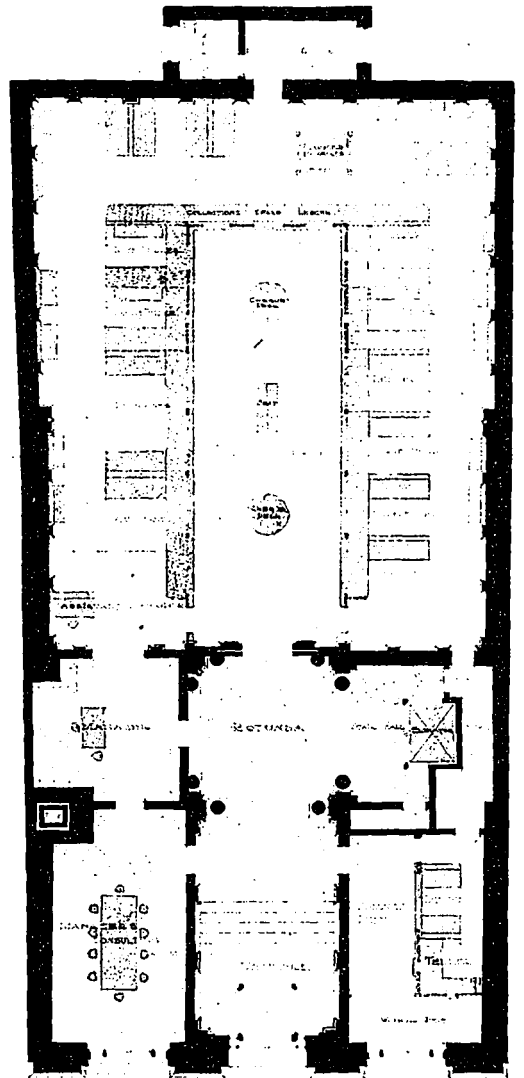
The main banking room is situated immediately beyond the rotunda and on axis of the main entrance. To the right of the hall is the Savings Bank department, which has been made a special feature of this bank; while it is separated from the main banking room, to all appearances it is directly connected thereto by a corridor invisible to the public. Off this savings department there is a ladies' writing room. To the left of the main hall is the manager's and assistant manager's rooms, separated only by an archway which brings the entire main banking room in the manager's range of vision.

The banking room proper is entirely in keeping with the exterior architecture, in so far as the composition is

concerned. The ceiling is twenty-four feet high, coffered and richly ornamented and finished to match the wood-work in the room.

The floors are of Knoxville marble relieved with rouge Jasper marble. The walls are paneled twelve feet high and enriched with ornamented pilasters and heavy carved cornice. This paneling is of most carefully selected white oak finished in a most beautiful gray brown tone. This wood is also used in the architectural feature surrounding the large doorway and in the body of the counter screen and for the furniture. The counter screen has a base and shelf of rouge Jasper marble, and is richly carved from the solid wood.

The walls above the paneling are of hand tooled artificial stone, which gives the entire room a dignified and monumental effect, and with the soft tone of the wood-work makes a beautiful and harmonious composition.



PLAN OF BANKING ROOM FLOOR, ROYAL BANK BUILDING, TORONTO, A FEATURE OF WHICH IS THE PROVISION MADE FOR SAVINGS BANK DEPARTMENT. CARRERE & HASTINGS AND EUSTACE G. BIRD, ASSOCIATE ARCHITECTS.



DETAIL OF STAIRCASE AND ELEVATOR ENTRANCE TO THE UPPER FLOORS, ROYAL BANK BUILDING, TORONTO. CARRERE & HASTINGS AND EUSTACE G. BIRD, ASSOCIATE ARCHITECTS.

The grille work above the counter screen and all the gates leading to the clerks' departments is of solid bronze of handsome design and exquisite workmanship of a color to tone with the woodwork. The ornamental grilles weighing some three tons in the large doorway are of black iron cast from special models. These tend to give the banking department an appearance of solidity and security.

Daylight is obtained through a large paneled skylight and three windows in the north wall, and the room is illuminated at night by one large handsome chandelier surrounded by many small ones.

The vaults are in the basement, access to which is obtained by plunger lift, and a stairway at the rear of the clerks' department. The clerks' coat room and toilet are also located there.

The main story is heated by direct and indirect systems of steam, and the absence of all radiators and pipes from the sight of the casual observer is a pleasant feature of the banking rooms. These rooms are thoroughly ventilated by invisible means.

Access to the five stories above the banking story is obtained by electric elevators and stairway to the right of the rotunda. These stories are laid out for offices to rent and are well lighted, as are also the halls and toilets. The top story is devoted to a large lunch room,

fifty feet by twenty-five feet, for the use of the officers of the bank, with a complete culinary department in connection therewith. The caretaker's quarters are also located in this story.

The building is of fireproof construction throughout, and is complete with a system of fire hose appliances.

Messrs. Norcross Brothers Company, with offices in Worcester, Boston, and in New York, were the general contractors for the entire work.

The several branches of the work were executed by the following contractors:

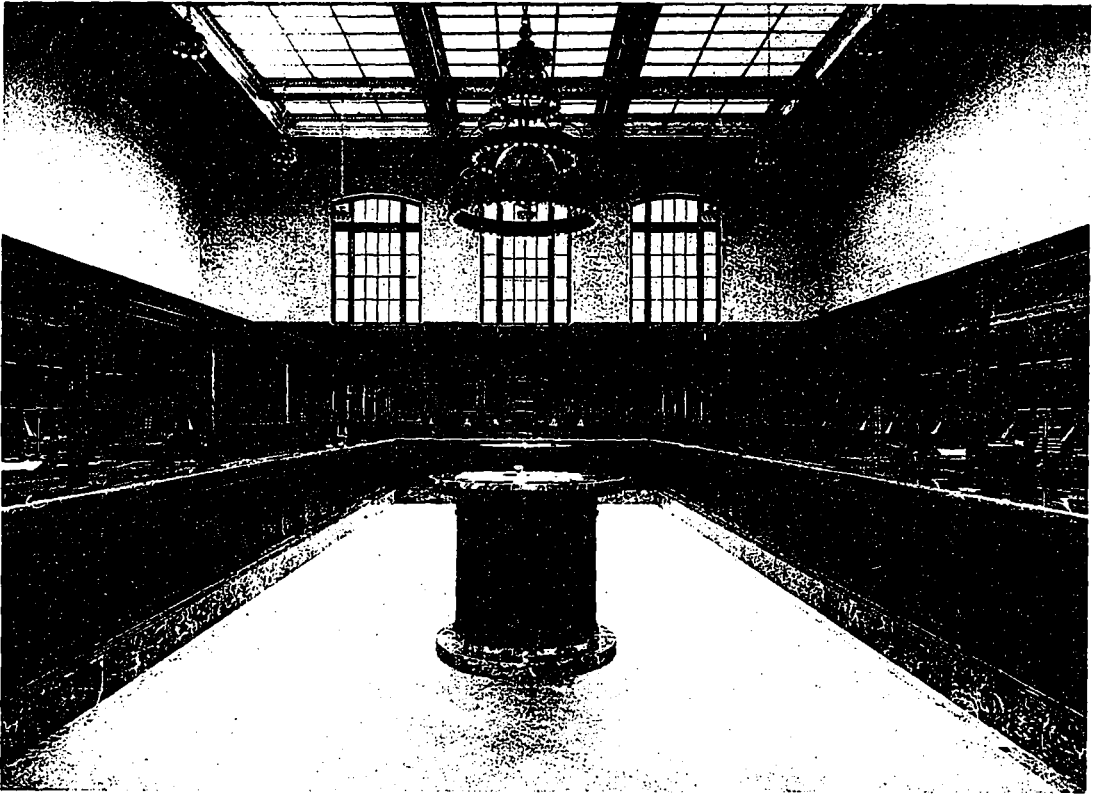
All the masonry, including the exterior marble work, the general carpenter work, and the erection of the steel work were executed by the general contractors, the brick and terra cotta fireproofing being supplied by the Don Valley Company.

The other branches of the work were carried by the following concerns: Plastering, Allen-McIntosh Company, Montreal; ornamental marble, Hoidge Marble Company, Toronto, and the Missisquoi Marble Company of Phillipsburg, Quebec; cabinet work, Globe Furniture Company, Walkerville; structural steel, The Canada Foundry Company, Toronto; heating and plumbing, W. J. McGuire Co., Toronto; electrical work, Phillip LaHee, Toronto; sheet metal work, A. B. Ormsby, Toronto; ornamental iron and bronze work, The Canada Foundry Company, Toronto; hardware, Aikenhead Hardware Company, Toronto; painting and glazing, Thornton-Smith Co., Toronto; vault work, J. & J. Taylor Co., Toronto; furniture, Canadian Office & School Furniture Co., Preston; elevators, Otis-Fensom Elevator Co., Toronto; electrical fixtures, Mitchell Vance Co., New York; vault fittings, John Kay Company, Toronto; hangings, John Kay Company, Toronto; rugs, Courian & Babayan, Toronto.

AT A RECENT MEETING of the Ottawa Chapter of the Ontario Association of Architects, Mr. E. L. Horwood and Mr. F. L. Alexander were re-elected to the offices of president and secretary, respectively, for the ensuing year.



BOARD ROOM, ROYAL BANK BUILDING, TORONTO. CARRERE & HASTINGS AND EUSTACE G. BIRD, ASSOCIATE ARCHITECTS.



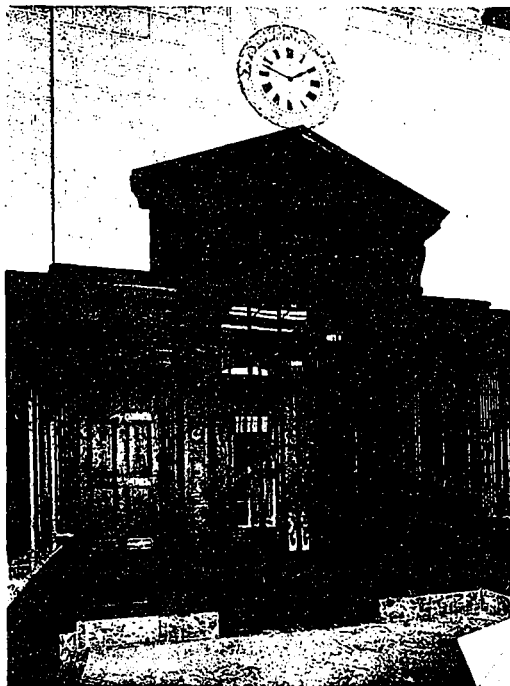
MAIN BANKING ROOM, ROYAL BANK BUILDING, TORONTO. CARRERE & HASTINGS AND EUSTACE G. BIRD, ASSOCIATE ARCHITECTS.

QUALIFICATIONS OF AN ARCHITECT....

Originality, Sense of Harmony and Constructive Ability Required.

THE ARCHITECT must be a born creator; he is not a copier. He must have not only ability to construct but an artistic temperament to be a successful architect. These were the views of a prominent architect as recently set forth in the following statement:

The architect is born. He cannot be made. If the boy does not show some creative skill, even while in his teens, there is not one chance in a thousand that he will ever become a successful architect. The copier is not an architect. The architect may copy, but he does something besides copying. He mixes his own ideas with those of others, and nothing that he does is devoid of his personality. The boy who can draw a



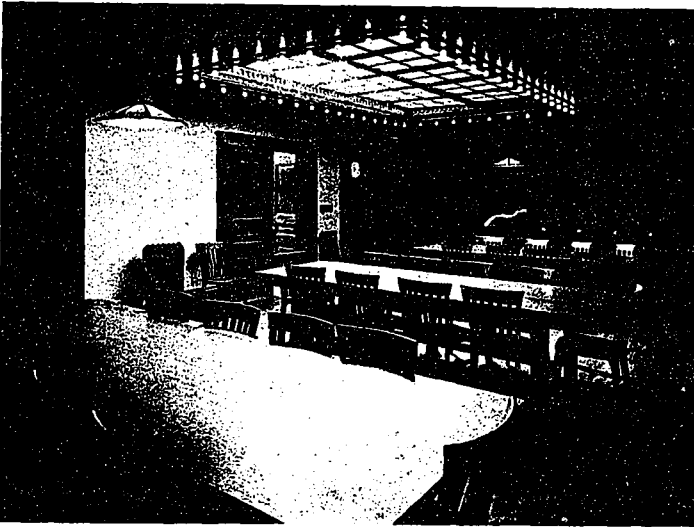
INTERIOR VIEW SHOWING DETAIL OF BANKING ROOM ENTRANCE, ROYAL BANK BUILDING, TORONTO. CARRERE & HASTINGS AND EUSTACE G. BIRD, ASSOCIATE ARCHITECTS.

plan geometrically correct may be entirely without the artistic temperament necessary for success in architecture.

Not only the ability to construct, but also that quality of ability which creates in advance the plans of construction, is essential to the proper practice of architecture. The successful architect is both a nature-made and a self-made man. Nature-made in that he possesses the natural ability necessary to success, and self-made because he has thoroughly trained his natural ability. The most pronounced natural capacity without special training is likely to fall short of the goal, while all the education that all the world can give will not make more than a mechanical architect out of the man who could not be more than a successful draftsman or copier. The architect possesses something which is not a part of the man of business—a

sense of harmony, an artistic mental attainment, a creative ability—yet he must have some of the qualities of the successful business man—an appreciation of the importance of detail and the ability to handle men and things.

The greatest hardship with which an architect has to contend is due to the fact that the very nature of his work,



DINING ROOM ON TOP FLOOR, ROYAL BANK BUILDING, TORONTO, WHERE THE OFFICERS AND EMPLOYEES OF THE BANK TAKE THEIR NOON-DAY LUNCHEON. CARRERE & HASTINGS AND EUSTACE G. BIRD, ASSOCIATE ARCHITECTS.

combining as it does the practical with the artistic, prevents the average man from distinguishing between real merit and mediocrity, and he frequently fails to command the appreciation and encouragement which his work deserves, and which is given more frequently in other professions.

The architect is a creator of originality. He is not a mere plan drawer and specification writer. He naturally does something. He is not an artist in a painting or sketching sense, yet he has the artistic temperament, without which any practitioner is wholly inadequate if the work is to be intelligently and thoroughly done. The conscientious, hard working architect, endowed with a fair degree of talent, usually gets from his profession an income less than the earnings of a small contractor. At the minimum rates established by the American Institute of Architects few architects today acquire a competency for old age. Yet the public regards these absurdly low rates as exorbitantly high.

Not only is the remuneration inadequate to the skill required and the actual labor expended, but it is totally inadequate to the responsibility placed on the architect—to what may be called the moral risk involved, for, in a sense, an architect should be morally, if not legally, a guarantor of the technical quality of his work. And such a guarantee is absurd, when the man on whom rests the responsibility for both plan and execution gets a bare pittance for his pains.

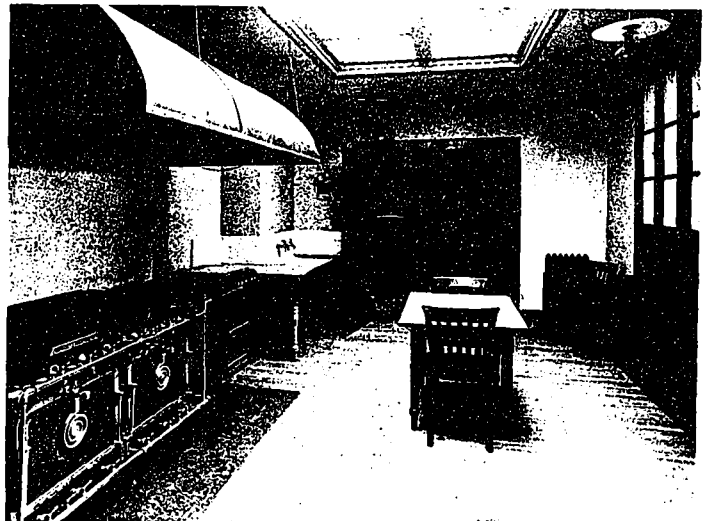
NEW METHOD OF LAYING BRICK.—Devised to Save Time and Energy of Bricklayer.

A NEW METHOD by which it is possible to lay a large number of bricks in a given time, has been devised by Frank B. Gilbreth, of New York. It is described as the packet system, and is said to materially reduce the time of construction. The packet, which is simple in character, consists of a little modern frame or tray, which allows the bricklayer to place his fingers underneath the brick while it is resting on edge. The bricks are piled on edge, face up, in what the bricklayers call "bull headers," in two rows of ten bricks each, making a weight of about ninety pounds plus the weight of the packet. The entire load is placed on specially constructed wheelbarrows. This is done by tenders at the car or cart. After the tenders have so stacked the bricks, they remain undisturbed until the bricklayer picks them up from the packet, one at a time, and places them upon the wall.

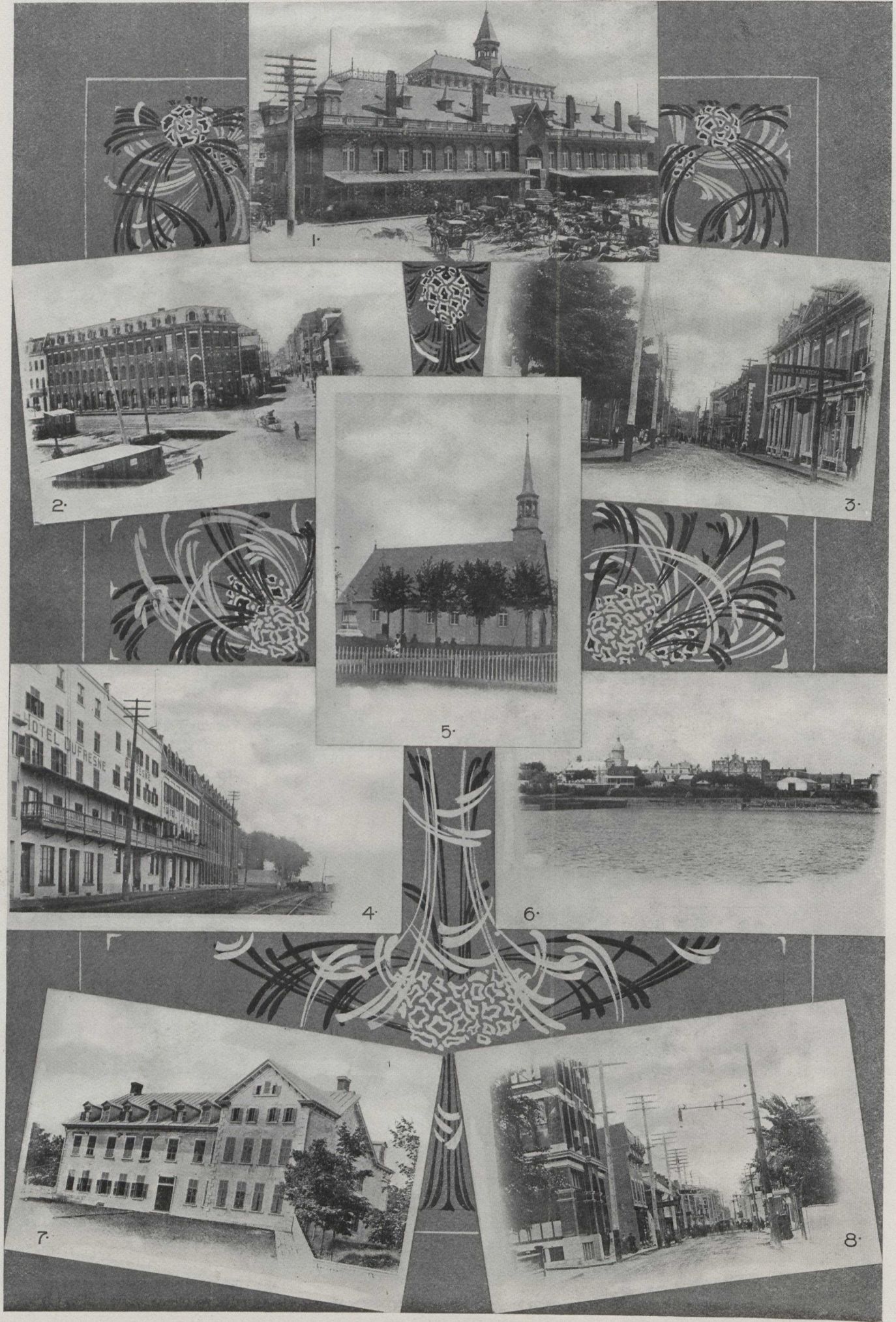
Arriving where the bricklayer is working, the last packet is placed on the stock platform of the scaffold. The last step is the placing of the packet on the wall by the bricklayer, requiring but the moving of the arms and hands.

The tossing of a brick in the hands of a bricklayer, so characteristic of the old method, is made entirely unnecessary.

The best face of the brick is always upward, and the time and energy saved by the bricklayer in not being obliged to pick up two pieces of a broken brick instead of a whole brick, nor especially select the best bricks for the exterior four inches of the wall, nor to discard the broken bricks, are some of the advantages claimed for this system. Thus, in the course of a day the advantage of having all the best bricks put on the same packets, and the inferior, chipped and broken pieces put on others, amounts to a surprising increase in the total work accomplished by a gang of bricklayers.



CULINARY DEPARTMENT, ROYAL BANK BUILDING, TORONTO, WHICH IS EXCEPTIONALLY WELL EQUIPPED. A NOTEWORTHY INNOVATION IN BANK BUILDINGS. CARRERE & HASTINGS AND EUSTACE G. BIRD, ASSOCIATE ARCHITECTS.

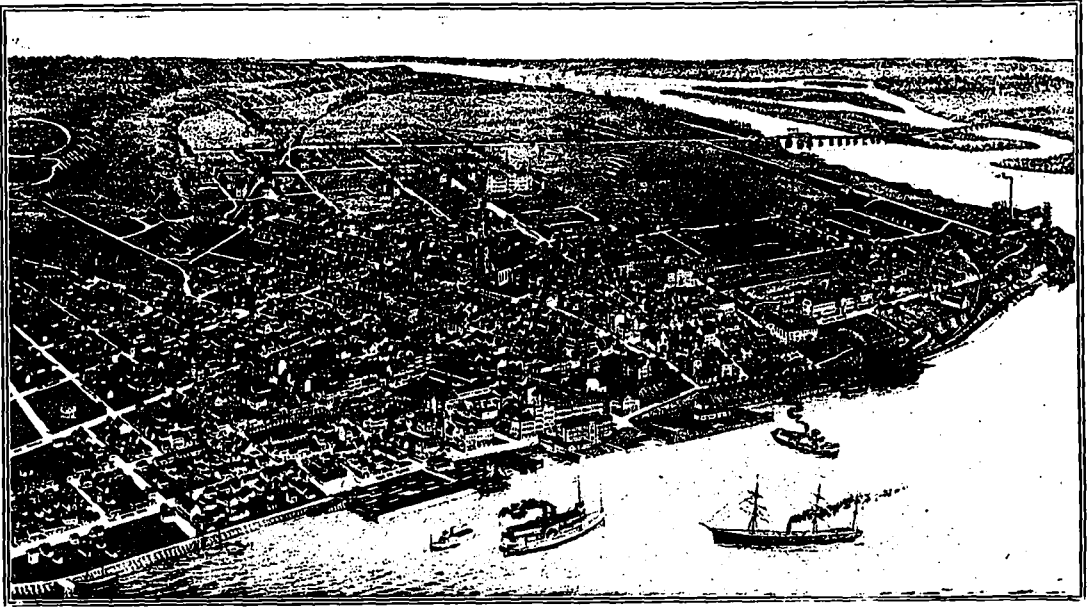


Three Rivers Before the Fire

Photos by P. F. Pinsonneau

- 1. MARKET PLACE
- 3. NOTRE DAME ST.
- 5. PARISH CHURCH
- 7. CUSTOMS HOUSE
- 2. COR. FLEUVE AND DU PLATON STS.
- 4. HOTEL DUFRESNE
- 6. MONASTRY OF THE URSULINES
- 8. DES FORGES ST.

Construction, October, 1908



BIRD'S-EYE VIEW SHOWING THREE RIVERS AS IT APPEARED IN 1881. PHOTO BY P. F. PINSONNEAULT.

AFTERMATH OF THREE RIVERS FIRE.---A Conflagration Made Possible by Wooden Shacks in Business Districts.---Lack of Adequate Building Regulations and Inefficient Fire Protection.---A Condition Not Uncommon in Canadian Cities.

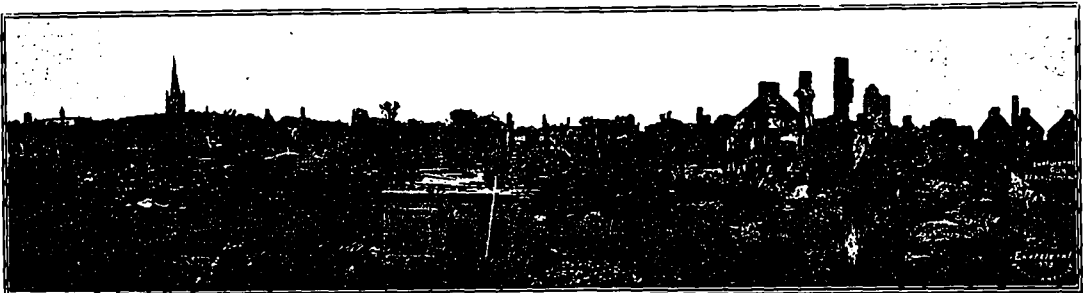
THREE RIVERS, which was swept by flames June 22, probably serves better to vividly impress on the mind the awful destructiveness of fire, unchecked in its progress, than any similar misfortune that has visited other Canadian cities. Particularly is this so in view of the fact that the burned district was practically built up with structures of solid masonry, some of them, quite true, old and mediæval in design, but nevertheless splendid specimens with their thick and sturdily constructed walls of the thorough methods employed by builders in the days when Canada was little more than a name. All were intended to withstand, at least, to a certain degree, the ordeal in which they so signally failed.

After the flames had gleefully licked up everything in their path, nothing remained of the once thriving district, but a state of utter chaos. In but a few hours' time, to use the words of Mayor Tourigny, "the soul of the city was gone," and where the business centre had

shortly before stood, complete desolation ruled supreme. Yet it is in this desolation that the partially standing walls, the piles of brick and stone, and tumbled debris, all point out in their own mute way the great lesson, or rather lessons, which should, even at this date, be of utmost interest to not only architects, engineers, and owners, but to innumerable municipalities throughout the Dominion, where similar conditions exist, and where like results are liable to occur any day.

It is not sufficient to make a cursory examination of the ruins to appreciate their significance. It requires that one must go a step further and make, more or less, a sort of an hypothetical study in order to arrive at the causes which led up to this wholesale devastation.

And it is by this process of investigation that we learn of the lack of strict building regulation, the lack of adequate fire protection, the old story of unprotected door and window openings, of exposed parts in a building of a combustible nature, of the fallacy of converting



PANORAMIC VIEW OF THE BURNED DISTRICT, SHOWING HOW COMPLETELY THE FIRE SWEEPED EVERYTHING IN ITS PATH. PHOTO BY P. F. PINSONNEAULT.

buildings to purposes for which they were never intended; and, also how even a material, not fireproof, but fire retarding in a limited way, can at times successfully protect a building and its contents by resisting ignition.

Unfortunately for Three Rivers, many of its structures were built in the days when fireproof materials, and modern building appliances and equipment were unknown and unavailable. The builders of that time made the best of their materials and ability, and the conscientious way in which they performed their work was brilliantly reflected in the admirable manner in which these structures withstood the ravages of time these many years.

It is hardly to be expected that the business buildings of the smaller cities and towns all should be of fireproof construction, even though computation places the difference in cost at from 15 to 25 per cent. over ordinary brick or stone construction. It is quite agreed that in places of this size, the wood joists, wood floors, and ordinary lath and plaster partitions are the accepted components of the interior of the average building; and while this mode of construction is not by any means the most desired, it serves its purpose well in the absence of fire. This type of internal construction was generally char-

In the short space from the noonday to dusk over seven hundred buildings, representing an aggregate value of approximately \$2,000,000, were entirely destroyed, and the heart of the town, covering an area of a half a mile square, was wiped out of existence.



RUINS ALONG DU PLATON STREET, ONE OF THE CITY'S BUSINESS THOROUGHFARES. PHOTO BY P. F. PINSONNEAULT.

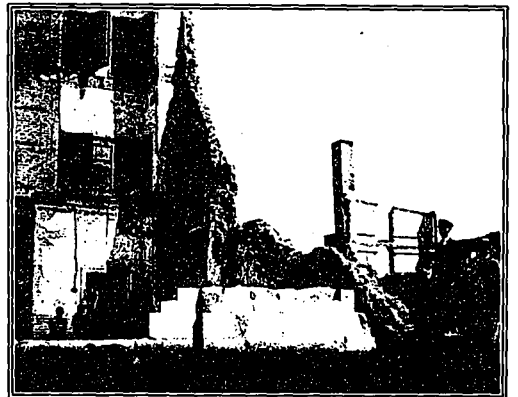
acteristic of the buildings of Three Rivers, and while this was a contributory source to the flames, yet the complete destruction of the afflicted district was due in the main to external neglect.

The stricken portions of the town laid between St. Roth street on the east, and St. Charles on the west, and extended from the river front as far back as Royal street. It included Notre Dame and Badeau streets, and the various thoroughfares in which the chief business interests were centred. With one exception every hotel, bank, store, office and dwelling within these limits, including the post office, customs house, the public offices of St. Maurice and Champlain Counties, as well as the historic parish church, fell a victim to the flames.



DOOR OF THE BANK OF HOCHELAGA, SHOWING THE DIS-INTEGRATED MASONRY AND TWISTED WATER PIPES. PHOTO BY P. F. PINSONNEAULT.

What was the condition that brought about this wholesale devastation? In following the course of the fire, not one, but many conditions present themselves, all of



PARTIALLY STANDING WALLS OF THE BANK OF HOCH-ELAGA, SHOWING THE LOCATION OF VAULTS WITH DOORS THROWN OPEN. PHOTO BY P. F. PINSONNEAULT.

which contributed in no small degree to make this conflagration possible.

The fire originated in a wooden shed adjoining the stable of Joseph Duval, a carter, on St. Roth street, and

almost before the alarm was sounded, the flames were greedily devouring the dry timbers of the roof. In scarcely more than a moment's time the neighboring barns and sheds were burning. A stiff southwest wind was blowing, and with maddening fury the fire spread. Within an hour the outbreak had developed into a sea of flames against which the local fire department, numbering a handful of men, and augmented by an army of volunteers, were totally unable to cope.

Raging up Badeau street, the fire made quick work of the structures in its path. It then leaped across the street, left destruction in its wake, and next spread to the wooden sheds at the rear of Des Forges St. In forty-five minutes' time the flames had swept across four cross streets, and over two hundred buildings in this section were ablaze. The stores on Badeau and Notre Dame streets were quickly wiped out, and the residences on Water street and the boulevard were shortly in ruins. Sparks from the burning buildings were flying in every direction, and time and again five and six house tops took fire simultaneously. On the flames went, seemingly gathering momentum as they forged ahead, and Duplanton, St.



ALL THAT REMAINS OF THE MARKET PLACE ARE THREE PARTIALLY STANDING WALLS AND A CHAOTIC PILE OF BRICK AND STONE. PHOTO BY P. F. PINSONNEAULT.

Pierre, Laviolet, Alexander and Bonaventure streets were in order laid low. The unrelenting hand of fire was manifest in the desolation on every side.

But how came it that the fire was so quick and consummate in its work? How was it that the flames, notwithstanding the barriers afforded by solid walls of masonry, found their progress practically unimpeded? And why, may be asked, were not the Three Rivers fire brigade, and the citizens who readily lent their aid, able to contend with this force and check it in its march? All these questions deserve careful consideration, for they involve a multiplicity of reasons.

Of course, it must be taken into consideration that there was a high wind, an element that is quite beyond the control of mankind; but, yet a high wind is invariably a contributory agency to most conflagrations, and without it, the force of the fire would be modified and less intense, and the only means of communication would be by direct contact, a condition infinitely easier to handle.

But go back to the origin of the fire. We find in its very inception, the wooden shed joining the stable of Joseph Duval, and again in the similar shoddy structures at the rear of DeForges St., which invited and brought disaster to that thoroughfare, a condition altogether too common in many of the smaller cities and towns throughout the country, and which even exists to a certain degree in some of the more advanced municipalities. Why civic authorities permit such structures being built and becoming a menace to the business districts, can only be ascribed to either their lack of intelligence to appreciate the danger which surrounds them, or their total indifference to the public's welfare.

Had Three River a well defined fire limit, properly supervised, precluding the



DOOR OF MARKET PLACE IN WHICH IS FURTHER SEEN THE EFFECT OF THE FIRE ON THE HEAVY STONE MASONRY. PHOTO BY P. F. PINSONNEAULT.

erection of wooden sheds and barns at the rear of business places, the chances are that the town would be conducting its routine work in its regular and unperturbed way to-day. It was the need of a strict building regulation, and the penalty of neglect was heavy. Other neglects also show conclusively that Three Rivers overtook a disaster of this kind.

Even sometime before the fire occurred, several insurance companies were withdrawing their risks, owing to the alleged inefficiency of the fire brigade, poor water supply, and absence of fire alarms; surely good reasons for any company desiring to cancel their liabilities.

What was the character of Three Rivers fire department? It consisted of a handful of men, and was miserably equipped to fight even a moderately sized fire, much less the conflagration it was called upon to battle. When not pressed into duty of this kind, some of these men served as police officials, while others were engaged in carrying out civic improvements, such duties scattering them to all parts of the town, and making it possible for the fire to gain considerable headway before they could reach it.

This disadvantage was further added to in the absence of fire alarms. There was no system of quickly communicating with the department in case of an outbreak, and we learn on the fatal day in question that the noonday Angelus calling the faithful to pray, soon became the tocsin which summoned the people to fight for their lives.

After the brigade had responded, and hundreds of citizens were lending a helping hand, another condition presented itself in the way of a poor water supply, a lack of pressure, and inadequate facilities to increase the force of the streams which were directed against the flames. Outside cities which were appealed to for aid

offender in this respect. There are many places in fact, despite repeated warning, which are precisely in the same position. There are a number of municipalities in which the installation of fire alarm systems, better water



PARTIAL VIEW OF WINDSOR HOTEL SHOWING THE HAVOC WROUGHT BY THE FLAMES UPON AN EXCEPTIONALLY HEAVY PIECE OF CORNICE-STONE MASONRY. PHOTO BY P. F. PINSONNEAULT.

supply facilities, and the proper manning and equipment of fire stations have been projected and long deferred owing to petty wrangling on the part of the municipal councils; and there are also a number of places where penurious officials have failed to see, and will fail to see, the necessity of improvements along this line, until the city or town which they have the honor of serving, meets with the same fate as overtook Three Rivers.

But apart from the official neglect, there were two other phases which were conducive to the spread of the conflagration, viz., the inflammable roof and the unprotected door and window openings. How effectively these aided the progress of the flames is easily seen. Sparks from the burning buildings enabled the fire to eat its way repeatedly through five and six house tops at a time. Had the roofs of these structures been covered with a material, even though not fireproof, but fire retarding to a degree, many of them would have escaped. It is principally to the tin roof which successfully resisted the attacks of the continually falling hot embers, that the Ursuline Convent to-day owes its existence.

Without a question of doubt, a large portion of the loss at Three Rivers can be charged directly to inflammable roofs, and yet the roof of a building is too often given, but little consideration by the architect, owner, and city building departments.

The facility with which the flames also beat their way through door and window openings, strongly corroborates the repeated admonition of the Underwriters that more loss of fire can be ascribed to unprotected apertures of this kind than to any other cause. Where the brick and stone walls obstinately denied entrance to the



THE CUSTOMS HOUSE, ERECTED AS A RESIDENCE FOR THE EARLY GOVERNORS, AS IT APPEARED AFTER THE FIRE. PHOTO BY P. F. PINSONNEAULT.

sent men, engines and appliances, but they arrived after the business district was a thing of the past.

Certainly a miserable state of affairs under less dangerous circumstances. Still Three Rivers is not the only

"red tongue of destruction," it readily found ingress by quickly devouring the wooden doors and window frames, and forcing the unfortified glass to yield. Closed in by a seething mass of flames without, and a raging inferno

green sward which practically isolated it from the other buildings, a condition which prevented the flames from communicating by direct contact. However, it was completely gutted, its bare walls standing to-day stripped of everything. The church was built in 1664, and remodelled in 1714. It had not long ago been restored, and was valued at \$80,000. This loss is felt, not only by people of the Roman Catholic faith, but also regretted by other denominations, as the church was one of the ancient landmarks of the city, and a veritable mine of historical lore.

Among the destroyed buildings were a number of structures that were being used for other purposes than those for which they were originally designed. Included in these was the building used as the Three Rivers customs house. It was designed for a residence, the home of the early governors, and was ill-adapted to the purpose for which it was afterwards devoted.

The fallacy of hazarding the safe keeping of receipts of entry and other important documents in a structure like this is only too apparent. Custom receipts and records, and the articles of merchandise and commodities to which they pertain, should be housed under all circumstances in fireproof buildings. Records of exports and imports are of sufficient importance to the statistics of the government to warrant better protection than was afforded by this building, which so easily succumbed to the flames.

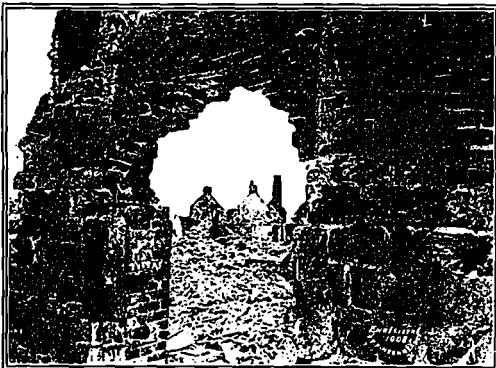
Yet it is quite likely that this same type of building,



THE RUINS OF THE HISTORIC PARISH CHURCH WHICH OWES ITS DESTRUCTION TO THE FIRE FINDING ITS WAY INTO THE INTERIOR THROUGH THE BELFRY AND UNPROTECTED DOOR, AND WINDOW OPENING. IT WAS KNOWN AS THE SECOND OLDEST CHURCH IN CANADA. PHOTO BY P. F. PINSONNEAULT.

within, the walls expanded, crumbled, fell, and the havoc was done.

If the rear of these buildings, where the wooden sheds and barns were located, had been equipped with the present day armored doors, and the metal frame and sash and reinforced glass of the modern fireproof window, Three Rivers would have had a fire, but no conflagration. True, equipment of this order costs a little more in the beginning, but the cost is generally more than offset in reduced insurance rates, and it can be re-



ANOTHER STANDING DOORWAY OF THE MARKET PLACE. PHOTO BY P. F. PINSONNEAULT.

garded as the very basis of economy when consequences of this kind are considered.

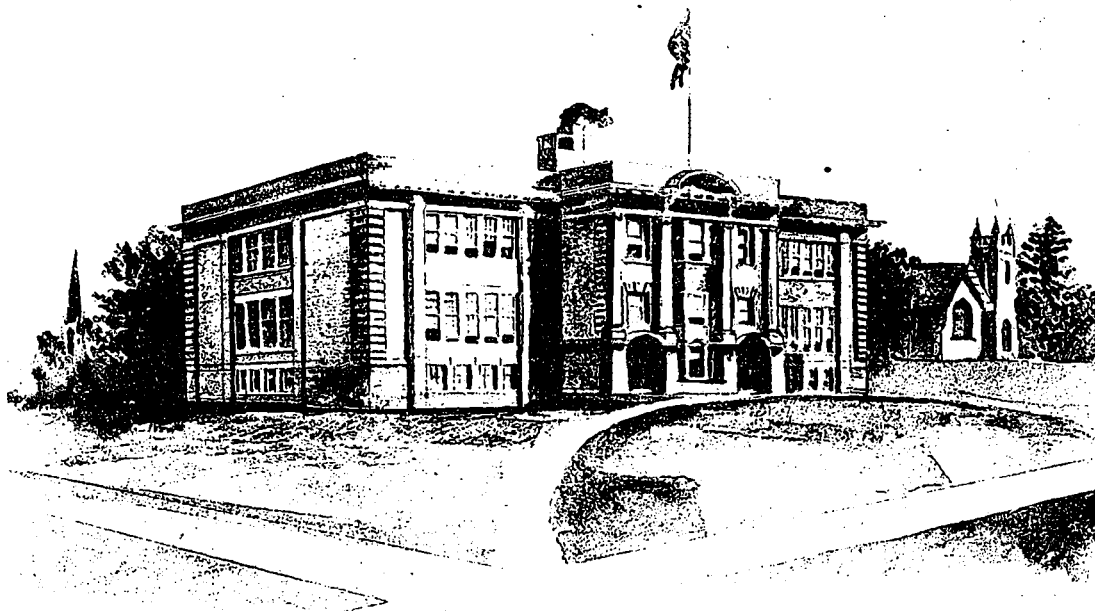
Furthermore, the destruction of the old parish church, a severe loss to the community, was accomplished by the sparks and embers which lodged on the window sills, and in the belfry opening, thus finding food in these unprotected parts. While the edifice stood right in the hottest part of the fire's path, yet it was surrounded by a broad



DOORWAY OF PARISH CHURCH LOOKING TOWARDS THE REAR WALLS AND SHOWING HOW COMPLETELY THE STRUCTURE WAS GUTTED. PHOTO BY P. F. PINSONNEAULT.

used for the same purpose, can be found in other places, and the chances are that they will continue to exist until

(Concluded on page 46.)



PERSPECTIVE VIEW OF RECENTLY ERECTED SCHOOL BUILDING, PARIS, ONT. MESSRS. SIMPSON AND YOUNG, ARCHITECTS.

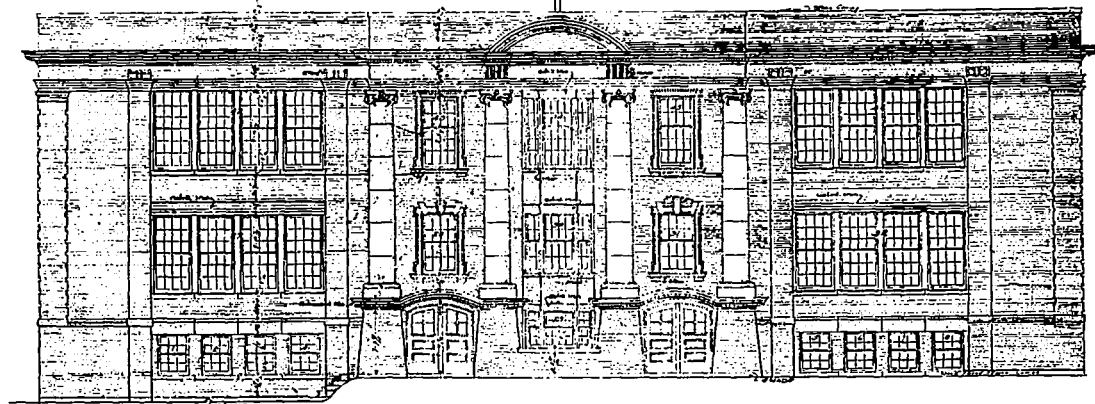
NEW SCHOOL AT PARIS, ONT.---An Exceptionally Good Example of a Modern Combination Public and High School Building Especially Adapted to the Requirements of a Small Town.---Arrangement of the Various Rooms Produces a Well Balanced Plan. . .

IN VIEW of recent catastrophies many cities and towns are taking vigorous steps to provide a better and safer class of structures for educational purposes. While Canada has probably not shown in the past as high a state of development in school building construction as has been manifest in many sections of England and the United States, this can possibly be better ascribed to the fact that this country has not as yet had the problem of congested districts with which the other countries have had to deal.

However, in many instances of recent work, Canada can point to a class of building which will compare most

favorably in every respect with those of either England or her neighbor at the south.

These buildings show that architects are making a greater effort to meet modern requirement in structures of this type, and that the matter of light, heat, ventilation and sanitary equipment is being more thoroughly considered and more intelligently worked out. They further point to the fact that location of the class rooms and their proximity to the entrances so as to permit of ready ingress and egress, without conflict or congestion, is demanding greater attention than heretofore. The corridors as a rule are more spacious and well ven-



FRONT ELEVATION OF NEW SCHOOL BUILDING, PARIS, ONT. MESSRS. SIMPSON AND YOUNG, ARCHITECTS.

tilated and lighted, and the stairways are arranged so as to lead directly to the entrances without any turns.

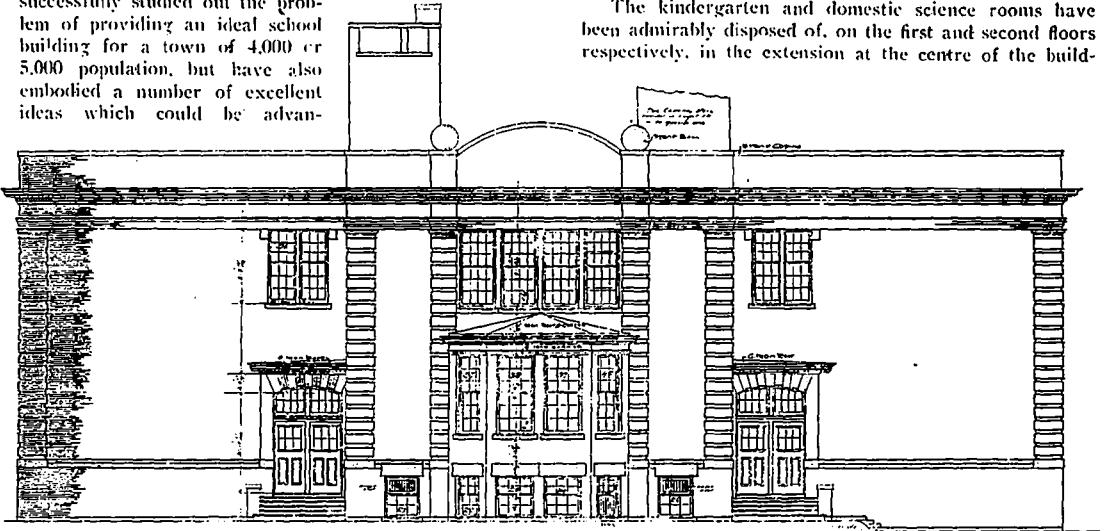
It is with considerable pleasure and satisfaction that we are able to submit for the benefit of our readers, in the accompanying illustration of the new public and high school building recently erected at Paris, Ont., a modern example of what Canadian architects are doing in this line.

The structure is the most recent effort of Messrs. Simpson & Young, Toronto, in school building design, and the architects have not only successfully studied out the problem of providing an ideal school building for a town of 4,000 or 5,000 population, but have also embodied a number of excellent ideas which could be advan-

vided in four well placed entrances, two of which are located at the front of the building and two at the rear.

The general layout of the first and second floors has produced a well balanced and symmetrical effect, all class rooms, which are with two exceptions of a uniform size, being grouped around commodious corridors, in a manner which necessitates only a few steps in order to reach the stairways leading to the exits. It will be observed that every room is arranged so as to bring the rays of light only over the left shoulder of the pupil, thus avoiding any possibility of conflicting shadows.

The kindergarten and domestic science rooms have been admirably disposed of, on the first and second floors respectively, in the extension at the centre of the build-



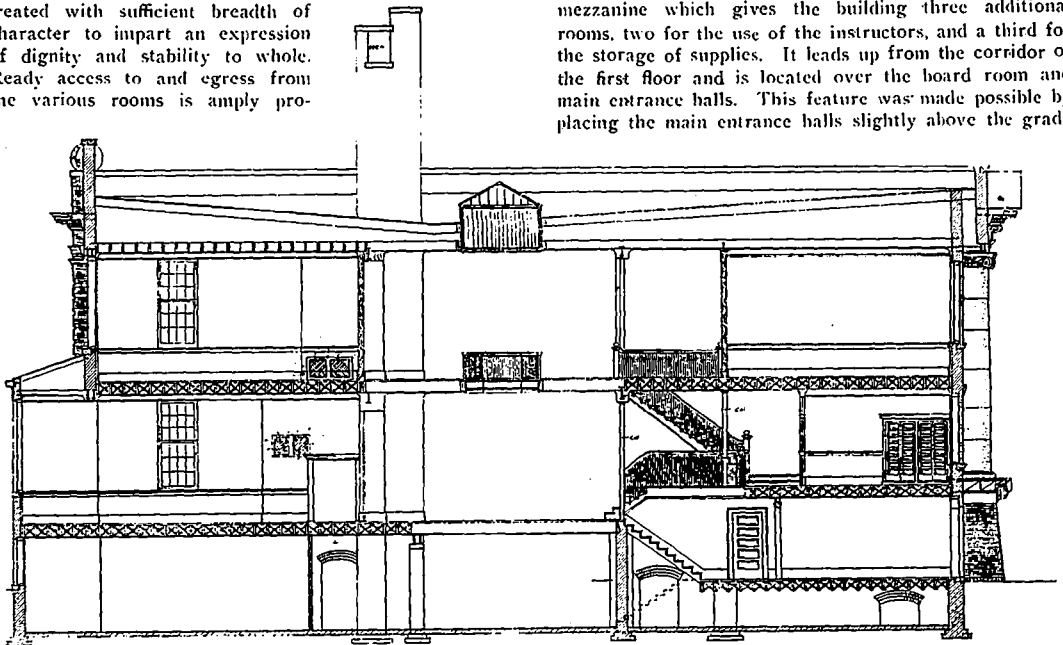
REAR ELEVATION OF NEW SCHOOL BUILDING, PARIS, ONT. MESSRS. SIMPSON AND YOUNG, ARCHITECTS.

tageously appropriated in planning structures of this nature for our large municipalities.

The exterior of the building which present a pleasing color effect with its walls of buff pressed brick and gray stone columns and trimmings, is of the classic style of architecture; the design being treated with sufficient breadth of character to impart an expression of dignity and stability to whole. Ready access to and egress from the various rooms is amply pro-

ing, in the rear, while the space between the domestic science room and the class room on either side, has been well utilized in providing separate lavatories for male and female teachers.

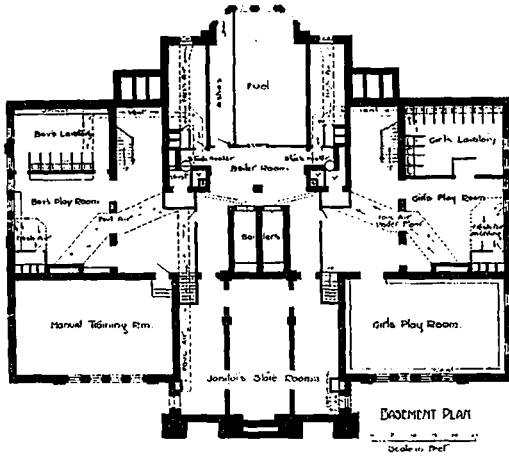
An exceptionally splendid feature of the plan is the mezzanine which gives the building three additional rooms, two for the use of the instructors, and a third for the storage of supplies. It leads up from the corridor of the first floor and is located over the board room and main entrance halls. This feature was made possible by placing the main entrance halls slightly above the grade



SECTIONAL ELEVATION OF NEW SCHOOL BUILDING, PARIS, ONT. MESSRS. SIMPSON AND YOUNG, ARCHITECTS.

line, and utilizing the space between them for the purpose of a board-room, thus giving it an ideal location.

The building is equipped with a modern steam heating and ventilating system; sufficient cubic contents

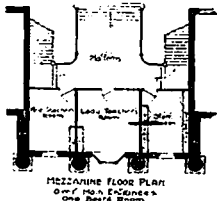


BASEMENT PLAN, SCHOOL BUILDING, PARIS, ONT. MESSRS. SIMPSON AND YOUNG, ARCHITECTS.

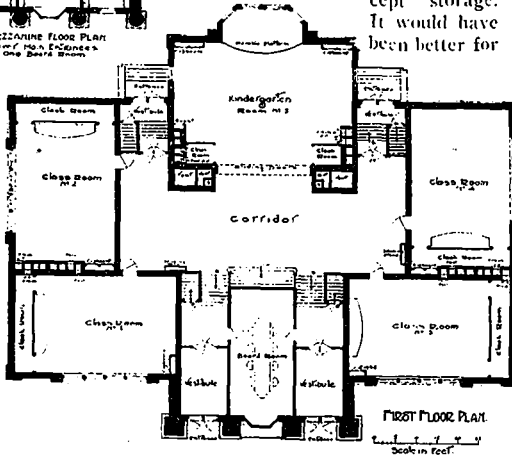
have been provided per pupil, and all rooms are supplied with fresh air at regular intervals.

In addition to the manual training room, the basement, which is equipped with a fireproof ceiling, provides for boys' and girls' recreation rooms, having at the rear, adequate lavatory facilities, the plumbing throughout being of the best approved type. The sexes are segregated by the central portion, which is occupied by the janitor's store room, boiler room, and fuel room.

What might be considered waste space in the centre front portion of basement, is unavoidable, as the office coming at, or near, the grade line leaves the space in the basement so low as to be useless for any purpose except storage. It would have been better for



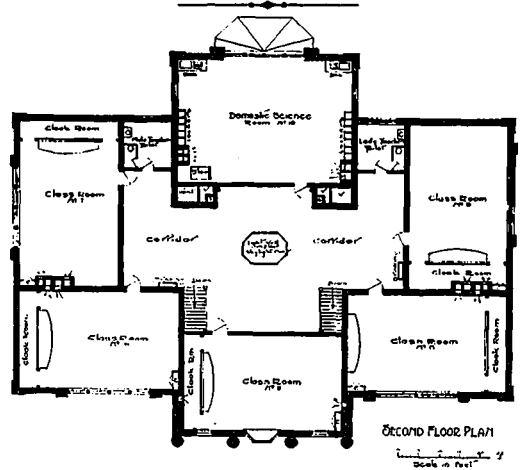
MEZZANINE FLOOR PLAN



FIRST AND MEZZANINE FLOOR PLAN, SCHOOL BUILDING, PARIS, ONT. MESSRS. SIMPSON AND YOUNG, ARCHITECTS.

an ideal plan to place the boilers and fuel room under this portion, and lower the basement floor to give sufficient height, and the portion now used for boilers, etc., could have been made into a drill room or recreation room, but

owing to the position of the lot, it was impossible to deliver coal or remove ashes except from the rear of the building.



SECOND FLOOR PLAN, SCHOOL BUILDING, PARIS, ONT. MESSRS. SIMPSON AND YOUNG, ARCHITECTS.

AFTERMATH OF THREE RIVERS FIRE

Continued from Page 43

the "fire fiend" shows his hand, or until the matter of political patronage replaces them with more substantial buildings.

Summarizing these facts, it seems quite evident that Three Rivers invited the fate which overtook her. It is the inevitable destiny of all cities and towns where similar conditions exist. Canada has had a number of like misfortunes within the past year, and in each instance the result is due to the same contributory neglect. Some of these places have failed to profit by experience, and are rebuilding along the same lines.

There is perhaps no better indication of the unsafe condition of any city or town than when insurance companies begin to increase their rates or cancel their risks. A study of the condition at Three Rivers taught some of the companies that they were exceeding the limit of what might be termed a fair hazard, and they concluded it was more profitable to withdraw from this field.

In the first place, they found the mills, factories, and warehouses, destitute of water curtains or sprinkler systems. In the second place there was a decided absence of fireproof doors and windows, or other equipment designed to arrest the progress of fire. Again, fire alarms were unknown, the town's water supply was greatly below the standard, and the fire department was wholly inadequate to cope with a grave situation. Added to this was the great danger lurking in the wooden sheds and barns at the rear of business places, the shame of so many municipalities.

Every building department, or the civic authorities upon whom such responsibilities devolve, owes it to the community to see that menacing structures of this sort are not only condemned, but removed. Condemnatory proceedings are absolutely ineffectual, if after a building has been pronounced unsafe or a source of danger, it is permitted to stand indefinitely. If in order to meet an economic condition, it is necessary to sanction the erection of barns and kindred structures at the rear of business places, then it should be made mandatory that such shall be built of brick, stone, concrete, or other incombustible materials, and properly equipped.

PROPOSED VICTORIA COLLEGE LIBRARY---Part of a General Scheme for Future Building---A Perpendicular Gothic Design---Plan Provides for Indefinite Extensions without Detracting from the Symmetry of the Structure

PLANS HAVE BEEN completed for the proposed Library building to be erected in connection with Victoria College, Toronto, and the design as executed by Messrs. Sproatt & Rolph, Toronto, provides for a structure that will control the style of buildings erected in the future in keeping with a general scheme

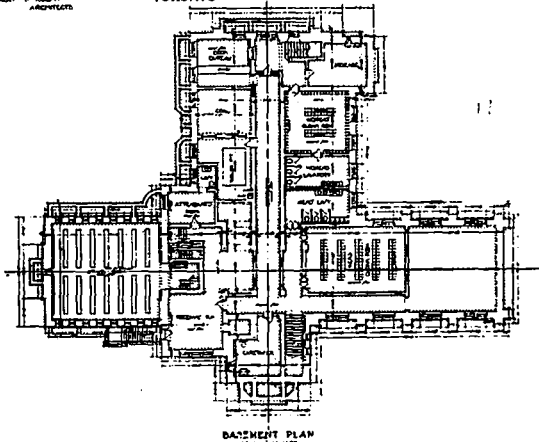
ple dignified lines, all tend to give a charming flavor of Old Oxford.

Close inspection of the plans will show that the architects have given careful thought to both present requirements and the demands of future growth. The stack room can be extended indefinitely along Charles street, and additional accommodation for students can be furnished by extensions southward on North Drive. Such extensions can be made without sacrifice of any of the features of the distinctive architectural style of the building.

The ground floor contains the men's reading room with seating capacity of between 80 and 100; a woman's reading room with seating capacity of about 50; librarian's room; cataloguing room; magazine room; faculty room; book delivery; a vault and two lavatories.

The first floor contains five seminary rooms; a reading room; four research rooms and one store room.

LIBRARY FOR VICTORIA COLLEGE
TORONTO
SPROATT & ROLPH
ARCHITECTS

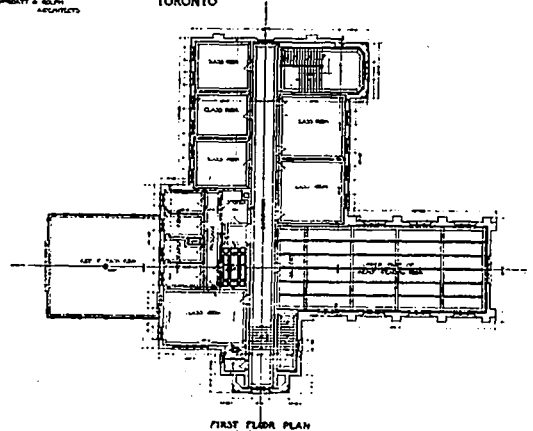


BASEMENT PLAN

mapped out by the building committee and approved of by the college Board of Regents.

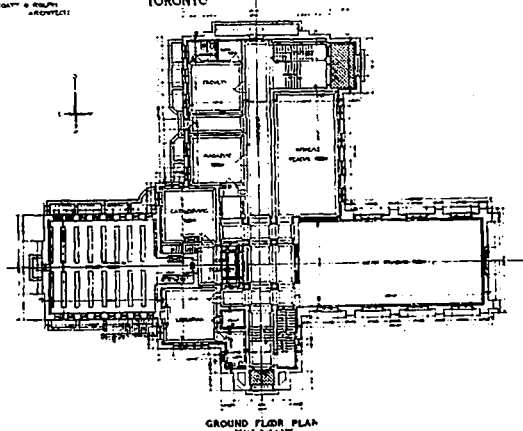
The architectural style, as will be seen, is Perpendicular Gothic, and the material to be used in the walls is to be grey Credit Valley rubble stone. The grey tone

LIBRARY FOR VICTORIA COLLEGE
TORONTO
SPROATT & ROLPH
ARCHITECTS



FIRST FLOOR PLAN
SCALE 1/8" = 1'-0"

LIBRARY FOR VICTORIA COLLEGE
TORONTO
SPROATT & ROLPH
ARCHITECTS



GROUND FLOOR PLAN
SCALE 1/8" = 1'-0"

of this Canadian stone will give excellent expression to the design, and at the same time will not prove to be costly construction.

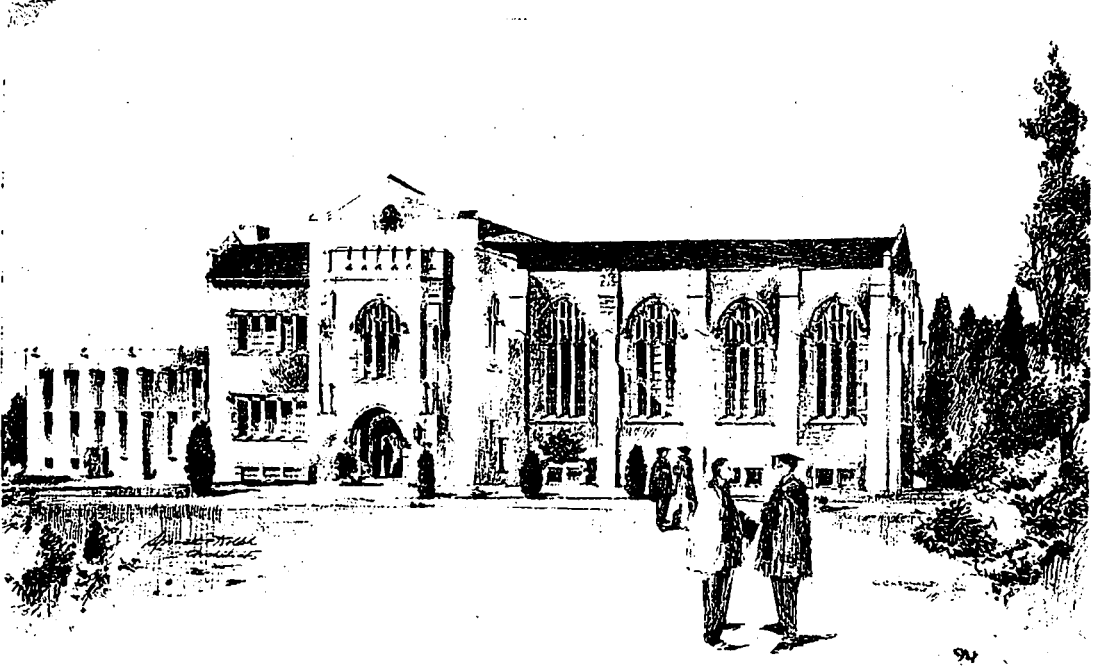
The general scheme of the design with its heavy buttresses, large traceried windows, bold entrances, its sim-

The basement has boiler room; unpacking room; book bureau; men's and women's cloak rooms; men's and women's lavatories; cloak room and lavatory attendants; caretaker's room with lavatory; a vault and fire-proof stack room, with steel shelving to accommodate 65,000 volumes.

The reading rooms are situated so as to insure perfect quiet and freedom from disturbance from students changing books and from messengers or casual visitors.

The stairs are located near the entrances, and give access to the seminary rooms and above and to the cloak rooms below, so that traffic along the corridor between the delivery desk and the reading room is minimized. Special care has been taken to insure a maximum distribution of natural light in all working parts of the library.

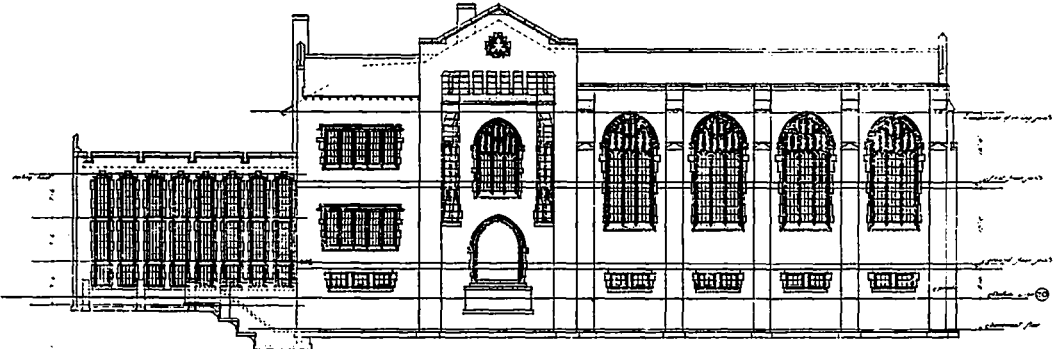
The library will be a most creditable addition to Toronto's college architecture. The structure, as planned, will cost \$75,000.



PERSPECTIVE VIEW OF NORTH SIDE OF PROPOSED LIBRARY BUILDING, VICTORIA COLLEGE, TORONTO. THE DESIGN IS PART OF THE GENERAL SCHEME FOR FUTURE BUILDINGS OF THIS COLLEGE. IT IS A GOOD EXAMPLE OF PERPENDICULAR GOTHIC. SPROATT AND ROLPH, ARCHITECTS.



EAST ELEVATION



NORTH ELEVATION

SCALE 3/4" = 11'

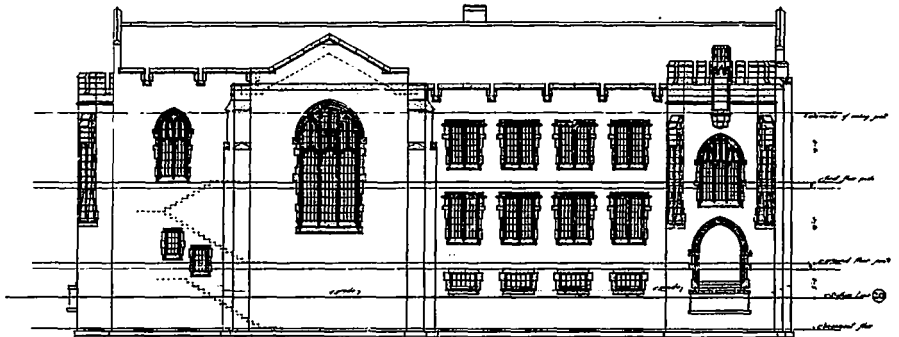
PROPOSED LIBRARY
VICTORIA COLLEGE
TORONTO 1887



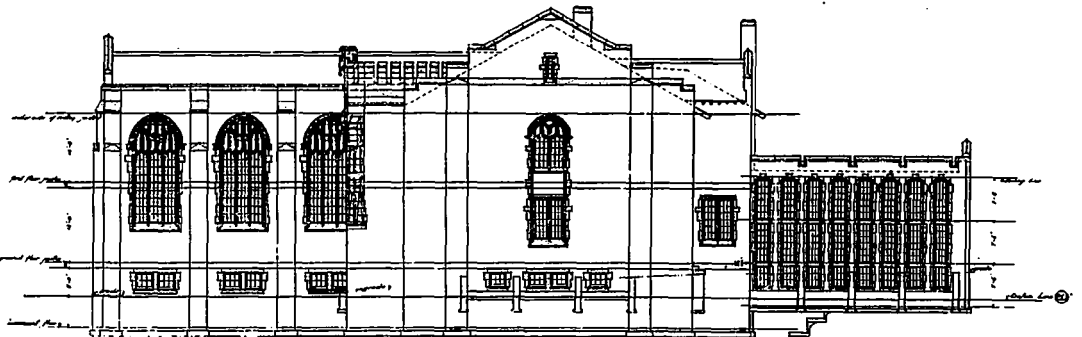
PERSPECTIVE VIEW OF WEST SIDE OF PROPOSED LIBRARY BUILDING, VICTORIA COLLEGE, TORONTO. THE DESIGN AS WORKED OUT TENDS TO GIVE AN ATMOSPHERE OF OLD OXFORD. SPROATT AND ROLPH, ARCHITECTS.

LIBRARY FOR VICTORIA COLLEGE
TORONTO

SPROATT & ROLPH
ARCHITECTS

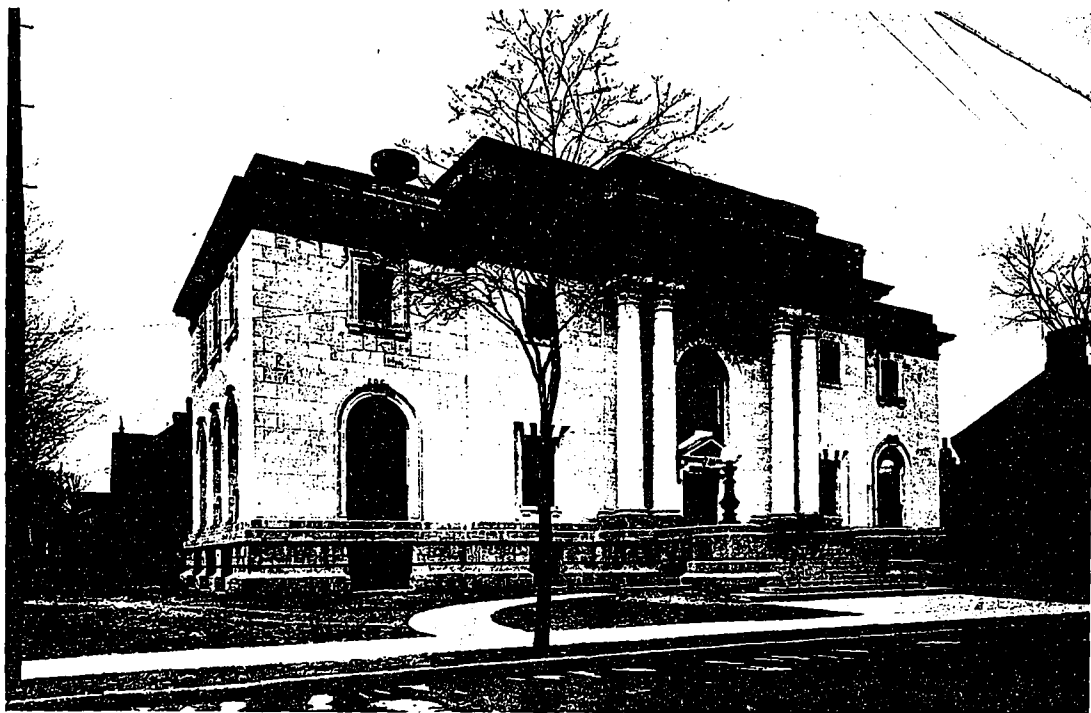


WEST ELEVATION



SOUTH ELEVATION

SCALE 3/16"=1 FT.



PUBLIC LIBRARY BUILDING, OTTAWA, WHERE THE FIRST GENERAL ASSEMBLY OF THE ARCHITECTURAL INSTITUTE OF CANADA, AS A CHARTERED BODY WAS HELD.



VICTORIA HOTEL, AYLMER, P.Q., ABOUT NINE MILES DISTANT FROM OTTAWA, WHERE THE BANQUET OF THE ARCHITECTURAL INSTITUTE OF CANADA WAS HELD ON SEPTEMBER 29.

GENERAL ANNUAL ASSEMBLY OF A. I. C.---Condensed Proceedings of Canada's National Architectural Association.---Organizers Indicate a Broad Spirit in Formulating By-Laws, Code of Ethics, Schedule of Charges and Other Matters of Import. ∴ ∴



CANADA'S MEMORIAL TO QUEEN VICTORIA, OTTAWA.

the several branches of the profession, and in raising the standard of architecture generally throughout the Dominion.

Although this first Assembly, since the granting of the charter to the Institute, was not so well attended as might have been expected, the zeal and fervor of the members that were present, in undertaking the laborious task of adopting by-laws, code of ethics, and a schedule of charges to govern the operations of the Association in its future career, augurs much for the important place the Institute will occupy in the development of the architectural profession of Canada.

The thorough, conscientious and unbiased discussion, relative to the many questions before the Assembly, showed that this representative gathering was prompted in their every action by their desire to form the basis and foundation of an Institute that would encourage the

THE Second General Annual Assembly of the Architectural Institute of Canada, which was held in the Assembly Hall of the Public Library, Ottawa, Sept. 28, 29, 30, and October 1, 1908. Under the Presidency of Mr. A. F. Dunlop, R.C.A., and Mr. Alcide Chausse acting as Secretary, was one which will always be memorable in the history of this Association, which promises to be one of power and efficiency in the binding together of

highest attainment and most ethical conduct of its present and future members.

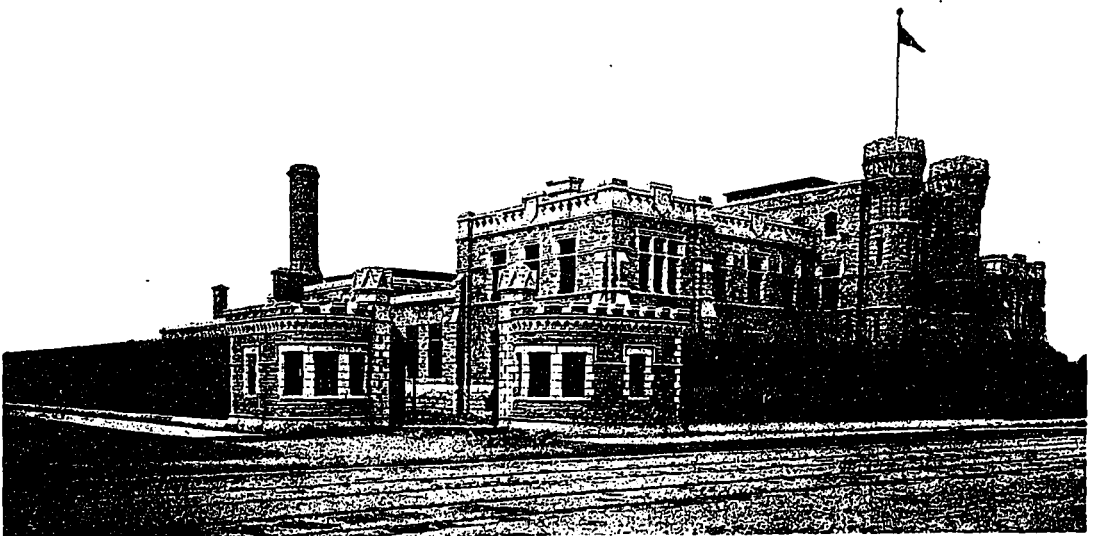
The work of the Assembly was confined almost absolutely to the adoption of by-laws, etc.; no papers were read, and the visiting members were entertained by trips about the city and its surroundings, and a banquet held at the Hotel Aylmer, P.Q., on Tuesday evening, Sept. 29.

Toronto was selected for the next Assembly, to be held in 1909. The following officers were elected for ensuing year.

President, A. F. Dunlop, R.C.A., P.Q.A.A., Montreal; Treasurer, J. W. H. Watts, R.C.A., Ottawa; Secretary, Alcide Chausse, A.I.A., M.S.A., Montreal; Vice-Presidents, Messrs. Maurice Perrault, P.Q.A.A., Montreal; S. Hooper, Pres. Man. A.A., Winnipeg; F. S. Baker, F.R.I.B.A., Toronto. Councillors, Messrs. H. B. Gordon, Toronto; D. Ewart, Ottawa; Edmund Burke, Toronto; Wm. H. Archer, Vancouver, B.C.; C. B. Chappell, Charlottetown, P.E.I.; J. E. Wise, Fort William, Ont.; G. E. Fairweather, St. John, N.B.; H. E. Gates, Halifax, N.S.; C. Clemesha, Regina, Sask.; R. P. LeMay, Quebec; E. L. Horwood, Ottawa; S. Frank Peters, Winnipeg; J. P. Hynes, Toronto; and Alphonse Monette, Montreal.

PRESIDENT'S ADDRESS.

The First Session of the Convention was called to order at 2.30 p.m. Monday, Sept. 28, with President Mr. A. F. Dunlop in the chair. After the meeting had been declared open, Mr. J. H. W. Watts, of Ottawa, welcomed the Assembly to Ottawa, in the absence of the President of the Ottawa Chapter. He mentioned the fact that the Mayor of the city had been at the Convention in the morning, for the purpose of extending a welcome to the Assembly on behalf of the city. The President stated that he would like to consider his Worship present, in view of the fact of his being at the Hall before the Con-



ROYAL MINT AT OTTAWA. A STRUCTURE RECENTLY CONSTRUCTED WHICH IS IN KEEPING WITH THE GENERAL STYLE OF ARCHITECTURE ADOPTED FOR PUBLIC BUILDINGS IN OTTAWA. IT IS ONE OF THE SEVERAL INTERESTING PLACES VISITED BY MEMBERS OF THE INSTITUTE.

vention was opened. The President then delivered his address, which was as follows:

"I will not say, as I did one short year ago, that on behalf of the Provisional Board, but on behalf of the Architectural Institute of Canada. I welcome you most cordially to the National Assembly of Architects of the Dominion of Canada, under the charter granted it by the Dominion Government.

"These few words of welcome give but a slight indication of what has been accomplished in one short year. In 1907 the first meeting of the Architects of Canada took place in Montreal, with a view of forming a National Organization. Notices were sent out to all the architects of the Dominion, and a very large number attended. Steps were taken to bring the project to a permanent organization; all the points were thoroughly discussed, and it was decided to submit to Parliament an Act providing that the Institute of Architects be granted a charter.

"It will not be necessary for me to go into the details of the great work, or the opposition met with by certain bodies, and also of the determination to kill the project. A report by your Council will be ready, which gives a full and interesting history, and although stated by some that the time was not opportune for the formation of the Institute, I am proud to be able to put before you the Bill of Incorporation granted on the 16 day of June, 1908, by the Dominion Parliament.

"We have to thank the Hon. F. L. Beique and Mr. J. C. Walsh, M.P., who deserve our gratitude for the pains they took to carry out the Bill successfully through all its stages.

"The Institute has a great and noble work before it. We are working for a common good, for the better education of our students, for a higher standard of our architects, and for the building up of a true interchange of knowledge of our noble profession in this vast land of ours.

"I must again thank all who have by their presence, good will, or otherwise, assisted in this noble work, for the success of the Architectural Institute of Canada."

After this, Mr. Horwood, of Ottawa, having arrived, extended a welcome on the part of the Ottawa Chapter. The Secretary read the roll call, and the report of the last meeting, as published in book form, was adopted.

MISCELLANEOUS REPORTS.

The Report of the Council was then read and adopted. This Report gave a brief review of the work connected with the founding of the Architectural Institute of Canada, and dealt with the powers conferred upon them in the matter of procuring legislation to make the Architectural Institute of Canada a Chartered body. It spoke of the opposition that the Committee and Legislature had met with from the Quebec Association of Architects, and stated that the clauses objected to by the Quebec Association of Architects were eliminated, and that, through the efforts of Mr. F. L. Beique in the Senate and Mr. J. C. Walsh, M.P., in the House of Commons, the Bill of Incorporation was finally granted.

The Publication Committee reported that they had published the proceedings of the last Convention, and according to instructions from the Council, had started the publication of a Quarterly Bulletin.

Projects of the by-laws, code of ethics, schedule of charges, regulations governing Architectural Competitions, were prepared and were submitted for the adoption at the Assembly. The Report stated further that the present condition of the Institute was most excellent, and that there was bright promise of the execution of its original purposes and plans.

ENROLLMENT OF NEW MEMBERS.

After the adoption of this Report, Mr. Chausse presented the following names to be elected as Associate

Members: Ernest E. Carver, Ernest M. Butler, Calgary; Geo. E. Baker, Summerside, P.E.I.; H. W. New, Winnipeg; Eric Mann, Montreal; J. A. Karch, Montreal; P. Levesque, Quebec; Geo. W. Hall, Brantford; A. C. Hutchison, Montreal; Joseph N. Power, Kingston; Geo. W. Wood, Montreal; P. Viau, Montreal; Thomas B. Daniels, Montreal; James M. Havill, Toronto; J. S. Routhier, Ottawa; James A. Ellis, Toronto; J. E. A. Benoit, Toronto; Geo. C. Egg, Nelson, B.C.; Geo. Thomas, London, Ont.; Thomas R. Wilks, Moncton, N.B.; J. O. Tourgeon, Montreal; Edward A. Ross, Winnipeg; W. S. Painter, Montreal; Dan. Conroy, Toronto; Alexander Garrie, Nelson, B.C.; J. L. B. Larfeniere, Montreal; W. G. F. Robertson, Brandon; W. A. Mahoney, Guelph, Ont.; Chas. F. Bridgeman, Winnipeg; R. J. Bunyard, Moose Jaw, Sask.; J. H. Booth, North Sydney, C.B.; Ernest John Greenstreet, Edmonton; Francis J. Gregg, Lethbridge, Charles Raley, Lethbridge; B. S. McIlroy, Calgary; R. M. Ogilvie, Ottawa.

After considerable discussion over the adoption of the Secretary's report, before by-laws had been dealt with, the report was received.

Mr. Baker brought up the question of how the proceedings were being published, and thought that this was a source of income that the Institute might well consider. The Secretary dealt at some length with the difficulties encountered in publishing the proceedings, and suggested that he be given an assistant. The Secretary's report was accepted, and the gentleman recommended by the Council, were received as members.

The Treasurer's report was then read.

On motion of Mr. Watts, Treasurer, Mr. Meredith and Mr. Taylor, both of Ottawa, were appointed as special auditors of the Treasurer's books.

CONSIDERATION OF BY-LAWS.

The next matter taken up was the by-laws.

Clause 1 was accepted as suggested.

Clause 2, defining the term "architect," brought up considerable discussion. It was finally adopted as follows: The term "architect" as used in this Institute, shall mean a person who is, or has been, engaged in the designing or superintending of the erection of buildings.

Clause 3 was adopted as follows: The objects of the Institute shall be to facilitate the acquirement and interchange of professional knowledge among its members, and encourage it in all branches in connection with the profession, and to hold exhibitions.

Clause 6 was adopted as follows: Honorary members and corresponding members shall be subject to fees or dues, and shall not be entitled to vote.

Clause 7 was adopted as read, also Clauses 8 and 9.

QUALIFICATIONS FOR MEMBERSHIP.

Clause 10 brought up considerable discussion, and, as amended by Mr. Baker, was finally adopted, and read as follows: Every candidate for election as a Fellow, must have been engaged in the practice of the profession of architecture for at least ten years.

Clause 11 also brought about quite a lengthy discussion, and there seemed to be considerable difference of opinion as to whether Associate Members' qualifications should be governed by the fact, as to whether or not he had passed an architectural examination that admitted him to the practice of the profession, but was finally amended to read as follows: Every candidate for election as an Associate, must have been engaged in the practice for at least two years, or must have passed such qualified examination as would satisfy the Council as to his professional ability.

Clause 12 was adopted, without discussion, and Clause 13 was amended by Mr. Gordon to read as follows: "Members shall be elected by vote of the Assembly."

Clause 14 was adopted as read.

Clause 15 was adopted as read, with the exception of

that part which stated that members should be recommended "by three Fellows" which was made to read "three members."

Very prolonged discussion followed the reading of *Clause 16*. There seemed to be a very wide difference of opinion as to whether a Fellow should be elected by letter ballot or by the ballot of those present at the General Assembly. Mr. Baker believed that a letter ballot would make it possible for members to pack the Assembly with proxies. During the discussion, a letter was read by the Secretary, addressed to the President from Moncton, signed by four resident New Brunswick architects, which asked that a representative member from Moncton be placed on the Council, that better protection be given against contractors and others who were not members of the Institute; also that the Council should notify members at least six weeks previous to the annual meeting.

An amendment was made by Mr. Baker, providing that the election to the Class of Fellows shall be by vote of the voting members, taken at the General Assembly, held after a lapse of at least six weeks from the date of mailing notification to each member; this amendment, however, was lost, and Mr. Gordon's motion, which read as follows, was adopted: "Election to the Class of Fellows shall be by vote of the voting members, taken by letter ballot, according to a form prescribed by the Council. Such ballots shall be taken at the Annual General Assembly. All members shall be notified of the proposed election at least one month before said meeting. Associates, as well as Fellows, shall have the right to vote."

Upon the recommendation of the Secretary, *Clause 15A*, to be inserted between *Clauses 15 and 16*, was adopted; it read as follows: Election of the Associate Members shall be by letter ballot of the voting members, after the applicant's qualifications and standing have been favorably passed upon by the Council, 10 per cent. of negative ballots to bar an election. Associates, as well as Fellows, shall have the right to vote. This clause brought up considerable discussion, it being thought by some that the number of black-balls required to bar an applicant should be named, rather than considered on a percentage basis. Mr. Baker was strongly opposed to having the letter ballot system, which he believed would by no means work at all successfully, or even satisfactorily.

Clause 17, as read by the Secretary, was adopted.

Clause 18 was also adopted, after which the session was adjourned.

SECOND SESSION, MONDAY EVE., SEPT. 28.

The meeting was called by Mr. J. W. H. Watts, who acted as Vice-Chairman in the absence of Mr. Dunlop. The Assembly immediately proceeded to carry on the work as left off in the afternoon session. *Clause 19* was read and accepted.

Clause 20 was next read and adopted without change.

The Vice-Chairman at this point stated that the by-laws as presented by the Council for adoption were copied from the Constitution of the Canadian Society of Civil Engineers.

ENTRANCE AND MEMBERSHIP FEES.

Much discussion arose over *Clause 21*, which read as follows: "Fellows shall pay the annual subscription of \$10.00, and Associates shall pay the annual subscription of \$5.00." The discussion that followed brought out the fact that, while this fee was not as great as some of the members would like to have it, it still was within the reach of all prospective members of the Institute. The clause was adopted.

Clause 22, read as follows: "Associates shall upon admission pay an entrance fee of \$10.00; an additional payment of \$10.00 shall be due from an Associate upon

his transfer to the Class of Fellows." Some discussion arose over this clause; several members present seemed to wish some additional information with regard to just what should be required of an Associate before he was made a Fellow. It, however, seemed to be the consensus of opinion that the clause should be adopted, with the addition of the words, "Fellows shall be elected from the class of Associates." A motion to this effect was passed.

Clause 23, which read as follows, elicited considerable discussion: "Every person admitted to the Institute shall be liable for all dues until he shall have signified to the Secretary, in writing, his desire to withdraw, when, if his dues having been fully paid up to and including the current year, his name will be omitted from the list of membership." This clause was finally adopted, with the omission of the phrase, "after and including the word 'when,' which made *Clause 23* read as follows: "Every person admitted to the Institute shall be liable for all dues until he shall have signified to the Secretary, in writing, his desire to withdraw."

Clause 24 was adopted as read, with the exception that the words "annual meeting" should be supplanted by the words "general annual assembly."

DISFRANCHISEMENT AND EXPULSION.

Clause 25, after much argument re the depriving of voting rights and expulsion of members, was finally made to read as follows: "No Fellow, or Associate whose dues are in arrears, shall be allowed to vote. Should his dues not be paid when they become six months in arrears, he shall lose the right to receive the publications of the Institute. Should his dues become nine months in arrears, he shall again be notified in the form prescribed by the Council, and, if such dues become one year in arrears, he shall forfeit his connection with the Institute. The Council may, for causes deemed by it expedient, extend the time for payment."

Clause 26, after some lively discussion, was declared adopted to read as follows: "Any person who for non-payment of dues, has been struck off the roll of membership, may again, if the Council approves, join the Institute, on payment of all arrears to the time of his suspension, and, on payment of one year's arrears of dues in addition thereto."

Clause 27, which was amended to read as follows, was adopted: "The amount of the annual dues to be paid for the support of the Institute, may be changed from time to time, at the General Assembly of the Institute, provided that notice of intended action thereon shall be given to the members two months previously by circular. No alteration in the amount of said fee shall apply to the fiscal year, during which it is made, but shall take effect on and after the first day of July next succeeding the date of said alteration."

Clause 28 was amended after a great amount of discussion with regard to a member compounding his fees, and being designated a life member. This discussion seemed to find a wide variety of opinion with regard to whether a man should be asked to pay a stipulated compounded fee and still be liable to expulsion, but this clause was finally amended to read: "Any Fellow may compound his fees and be designated a life member."

Clause 29, as amended and adopted, would read as follows: "The Council may exempt from payment of annual dues any member who, from ill health, advanced age, or for other reasons assigned, does not carry on a lucrative practice, and is unable to pay such dues. The Council may remit the whole or part of any arrears, or accept, in lieu thereof, desirable additions to the library of the Museum."

CONTRACTING BY MEMBERS PROHIBITED.

Clause 30, stating that no member shall, himself, be either a building contractor or a manufacturer, or dealer in building materials or supplies, nor shall he enter into

partnership with any building contractor, or manufacturer or dealer in building materials or supplies, met with considerable opposition by two or three members present. Mr. Baker believed that this clause was entirely unnecessary and superfluous, and moved that it should be eliminated from the by-laws. This motion was seconded by Mr. Mahoney, and was lost. Mr. Hooper seconded the adoption of the motion, which was carried, and Clause 30, as originally read was declared adopted.

Clause 31 was amended and finally adopted to read as follows: The Officers of the Institute shall consist of a President, three Vice-Presidents, Treasurer, Secretary, and fourteen councillors.

Clause 32 was amended to read as follows: There shall be a Council consisting of the President, Vice-Presidents, Treasurer, Secretary, and Councillors, and of this Council four shall constitute a quorum.

Clause 33 and 34 were adopted as read.

Clause 35, after some discussion with regard to the work devolving upon the Secretary, was made to read as follows: "The Secretary shall keep an accurate record of the transactions of the Institute and of the Council. He shall also keep a correct roll of members' names, with their addresses and dates of their admission. He shall conduct the correspondence of the Institute, give notice of all meetings, supervise the printing, and, under the direction of the Council, edit the transactions of the Institute. The Secretary shall be paid an honorarium of \$200 per annum and disbursements."

Clause 36, 37, 38, were declared adopted as read.

Clause 39, by motion of Mr. Gordon, which was seconded by the Secretary, had the following clause added to it: "Except the first meeting of the Council shall be held immediately following the annual general Assembly of the Institute."

On motion of Mr. Foulds, which was duly seconded, the following clause was to be inserted in the by-laws in place of Clause No. 40: "Two auditors be elected at the General Annual Assembly."

The meeting was then adjourned.

THIRD SESSION.

The Third Session of the Assembly was called to order at 9.45 a.m., Tuesday, by the president, Mr. A. F. Dunlop.

The first clause to be considered was No. 41, which was amended to read as follows: "The officers shall be elected by letter ballot of the Fellows and Associates, blank ballots being sent to each by the secretary, at least one month before the date of the General Annual Assembly. At the Assembly, two scrutineers shall be appointed by the presiding officer, and the unopened letter ballot shall be turned over to them. The person receiving the largest number of votes shall be declared elected."

Clause 42, as amended by motion of Mr. Gordon, was adopted to read as follows: "Should any Fellow be elected to more than one office, he must choose which he shall hold, and the vacancy arising from his declining to hold extra office or offices, shall be filled by the Fellow who shall have received the next highest number of votes, after those already elected to said office or offices." "The presiding officer shall decide."

Clause No. 43, by vote of the Assembly, was eliminated. It read as follows: "The scrutineers of the ballot at the General Annual Assembly for the election of officers and Council shall be Associates appointed by the presiding officers."

INTERMEDIATE MEETINGS.

Clause No. 44, respecting meetings, was adopted as read. As a result of the discussion that followed, the quorum provided for in this Clause was reduced from 15 to 10, and "one month" was substituted for "twenty-one

days." A very lively discussion ensued re an amendment to an amendment to this Clause by Mr. Baker, making it obligatory to hold quarterly meetings for the purpose of reading papers and engaging in a discussion thereon. Mr. Baker did not seem to think that the idea of having local chapters in the various cities throughout the country was a good one, insofar as he believed it would tend to confuse matters in view of each province having its own Association. Mr. Watts opposed Mr. Baker's views, insofar as he maintained that the work done by local chapters was sometimes of greater importance than that done by the parent Association: He brought out, as an illustration, the work that has been done by the Ottawa Chapter of the Ontario Association, in the matter of calling the Government's attention to the large number of plans for Canadian buildings coming in from the United States upon which no duty was paid. Mr. Baker's amendment was lost, and Mr. Gordon's amendment, which was seconded by Mr. Chausse, was carried. This amendment provided for an additional phase to clause which read as follows: "Other meetings of the Institute may be held half yearly or quarterly, at such places and at such times as the Council may deem wise. Notice of such meetings and the business proposed to be transacted at the same to be sent to all members at least one month before such meetings are held."

The various sub-sections, under the heading "General Annual Assembly," were adopted, with the exception of Section A., which was amended to read as follows: "Minutes of the preceding General Assembly and Emergency Meetings to be read, and, if approved of, to be signed by the chairman and secretary."

Clause 46 was amended and adopted to read as follows: "Copies of all lectures and addresses must be forwarded to the secretary of the Institute, when they will be examined by the Council, and, if deemed of sufficient interest, shall be published and sent to every Chapter and member of the Institute. Such papers shall be read and presented for discussion at all Chapters. A report of the discussion at the Chapters shall be forwarded to the secretary of the Institute as soon as possible after its occurrence."

Clause 47 was amended to read as follows: "All papers shall be the property of the Institute, and no publication of any discussion of the papers shall be made except by the Institute, or with the permission of the Council."

NEW BY-LAWS, ALTERATIONS AND REPEALS.

Clause 48 was amended to read as follows: "New by-laws or alterations or repeal of existing by-laws may be made in the following manner: Notification of proposed new by-laws or alteration or repeal of existing by-laws shall be given to the Council, signed by at least two voting members, not later than three months before the date of the General Annual Assembly."

Clause No. 49, as amended by motion of Mr. Gordon, was adopted, to read as follows: "The Council shall issue notice of the proposition specifying the particular new by-law, alterations or repeal of any existing by-law, which may be thus recommended, and submit same to vote by letter ballot, not less than two months before the General Annual Assembly, the ballots to be taken on or before the date of the General Annual Assembly, and not less than two-thirds of the votes shall be required to effect any change. The Council may also propose new by-laws, alterations or repeals of existing by-laws, and may submit the same to vote by letter ballot as above."

Clause 50, respecting local Chapters, was amended upon motion of Mr. Alexander, and was declared adopted to read as follows: "Local Chapters of the Institute may be established under authority of the Council at the request of not fewer than four members and not less than twenty-five miles from any existing Chapter. The establishment of a Chapter shall not release the members from

any of their obligations to the Institute, whether as regards fees or membership in any class."

Clauses Nos. 51, 52, 53, 54, 55, 56 and 57 were all adopted as read, without discussion.

Upon motion of the secretary, with Mr. Mahoney as seconder, the by-laws were adopted en bloc.

CODE OF ETHICS.

Clauses Nos. 1, 2, 3, 4, 5, 6, 7 of the Code of Professional Ethics, were adopted as read.

Clause No. 8 was amended to read as follows: "No member shall criticise in the public print the professional conduct or work of another architect, except over his own name, the phrase "or under the authority of a professional journal" being eliminated.

Clause No. 9 was amended to read as follows: "No member shall furnish designs in competition for private or public work, unless an advisor previously appointed, satisfactory to the competitors is employed to draw up the conditions and assist in the awards."

Clause No. 10 was adopted as read.

Upon motion of Mr. Baker, with Mr. Watts as seconder, Clause No. 11, which read as follows, was struck out of the Code of Ethics: "If a contractor or his employee makes plans or specifications in competition with or in the capacity of an architect, no member shall permit such contractor to estimate or contract for work in or through his office."

Clause No. 12 was also eliminated, upon motion of Mr. Baker, with Mr. Mahoney as seconder. It read as follows: "No member shall secure plans and specifications from a contractor, firm of contractors, or their employees, if said contractors are estimating on work for which such plans and specifications above mentioned are made." It seemed to be the general consensus of opinion that these clauses were unnecessary and undignified, and, if put into effect, would tend to operate against the better interests of the profession. It might be said that there was not a member present who approved of retaining these clauses.

Clause 13 was adopted as read.

The schedule of charges of the Ontario Association of Architects was adopted en bloc.

MEMBERS ENJOY DRIVE ABOUT THE CITY.

On Tuesday afternoon, Sept. 29, members attending the Assembly, were given a very enjoyable drive about the city of Ottawa, and viewed the scheme of public improvement being carried out by the Ottawa Improvement Commission. The drive was exceptionally well arranged, and gave the members a very excellent idea of the Ottawa "that is to be," as planned by its ambitious citizens and the country's representatives, that are broad enough to realize the importance of making Ottawa the most beautiful city in Canada, and one which every Canadian can visit with a feeling of national pride. If the plans of improvement are worked out as anticipated, Ottawa will prove to be one of the most beautiful cities in America, and will be the Mecca for wealthy, retired Canadians, and a worthy home of the seat of our Government..

ANNUAL BANQUET.

In the evening a banquet was held at the Hotel Victoria, Aylmer, P.Q., which is about nine miles distant from the city of Ottawa. A private electric suburban car was chartered for the occasion, and the several guests were in happy spirits when they arrived at the end of the ride.

The toast list was a good one, and included the following: "The King."

"Sister Institutes," proposed by J. W. H. Watts, of Ottawa, and replied to by Mr. F. S. Baker, Toronto, on behalf of the R. I. B. A.

"Provincial Societies," proposed by E. L. Horwood, Ottawa, and replied to by Mr. H. B. Gordon, Toronto, president of the Ontario Association of Architects, also Mr. Sam Hooper, president of the Manitoba Association.

"Our Civic Guests," proposed by Mr. A. F. Dunlop, president, and replied to by Mayor D'Arcy Scott, and Controller Hopewell, Ottawa.

"The Ottawa Improvement Commission," proposed by F. J. Alexander, and replied to by Senator Frost.

"Our Guests," proposed by Mr. C. P. Meredith, Ottawa; replied to by Mr. J. H. Lauer, secretary of the Montreal Builders Exchange, and Mr. O'Dell, secretary of the Ottawa Builders Exchange.

Mr. F. S. Baker, of Toronto, gave an excellent address in his reply to the toast, "Sister Institutes," in which he extended an official message of congratulation on behalf of the R. I. B. A. He believed that one of the great factors in the success of such Institutes, was scholarships and studentships, which had produced some splendid men, especially in draughtsmanship. He spoke to some extent upon the manner in which these scholarships were held, and the nature of their success. He believed that the Architectural Institute of Canada should have at least one scholarship. He spoke of the monthly meetings of the R. I. B. A., which had been the means of developing the social side of life among architects. He stated, in connection with some suggestions that had been made with regard to the proposed affiliation between the Architectural Institute of Canada, and the R. I. B. A., that he believed such a connection would be welcomed by the Royal Institute, and stated that the matter was now before the R. I. B. A. informally.

Mr. H. B. Gordon, of Toronto, gave an excellent address in his reply to the toast to "Provincial Societies." He wished it understood that the A. I. C. had the heartiest good wishes of the Ontario Association. He did not see any possibility of friction, and believed that the two Associations should be mutually helpful to each other in exercising a great, lasting and upward influence for the advancement of architecture in Canada. He believed that the profession in Canada generally, had attained a high ethical and professional standard, and believed that such Associations should affect a great deal in this direction, by mutual interchange of thought. He spoke of the result of the efforts of the Ontario Association and its influence upon the products of architecture in the Province of Ontario, and pointed out the results of the work done by the Ontario Association with regard to establishing a legally accepted standard of fees. The raising of ideals and standards in architecture was not only a matter that tended to benefit the architect, but it tended to make him a benefactor to the public. He hoped that the Association would lead to a greater feeling of brotherhood between architects from one end of Canada to the other, and believed that this would best be accomplished by architects meeting together in a general assembly, where they could interchange ideas and come to know one another better. This would entirely eradicate all unpleasant, local jealousies. The Ontario Association was very anxious to co-operate with this parent organization of Canadian architects, in the great and serious and patriotic desire to elevate the architecture of Canada, and to bring about a condition that would make possible an adequate education and training for young men who wished to enter the profession.

Mr. Sam Hooper also replied to this toast on behalf of the Manitoba Association of Architects. He was glad to be in Ottawa to attend this General Assembly of Architects from the various parts of Canada, and realized that Ottawa was a great city, and that the improvements that were being carried on, such as had come to his notice during the most enjoyable drive he had been given about the city in the afternoon, was something that every Canadian should be proud of, but he wanted to say that they, in Winnipeg, had also something to be proud of, and they believed they would have in Winnipeg one of the most beautiful cities in Canada in the near future. He pointed out some of the difficulties encountered in paving the streets and beautifying this western city, and hoped that

the Institute would decide to come to Winnipeg for the next General Assembly. He felt satisfied that they would be accorded an excellent welcome.

Mayor D'Arcy Scott gave a very interesting address in reply to the toast "Our Civic Guests." He reviewed, to some extent, the efforts that had been made by the municipal council of Ottawa, toward the beautifying of Canada's Capital city, and created considerable laughter by his statement that Ottawa felt very much gratified to the Grand Trunk Pacific Railway for a beautiful station and hotel they had given them. He stated that some discussion had arisen over the originality of the plans, but he thought that, if two great architects, such as Mr. Gilbert, of New York, and Messrs. Ross & McFarlane, Montreal, had conceived exactly the same design, the people of Ottawa ought to realize that this design must be the right one. He stated, further, that he believed Mr. Gilbert had already erected a station and hotel, and he hoped that his commissions for his work would not be based upon the buildings he had completed, for these structures, which are about ten feet long and four feet high, are made of plaster-paris and would cost approximately \$100, so, if the architect, Mr. Gilbert's fees are based upon these, the only buildings we have erected, we feel that he will be rather underpaid for his work.

Senator Frost spoke at some length in reply to the toast to the "Ottawa Improvement Commission," in which he outlined the work being done by this Commission, the source of its funds, its method of procedure, and the success it had thus far met with. He attributed the effective connection established between the city of Ottawa and the Government of Canada in this work to the existence of the Improvement Commission, and believed that a permanent Commission of this character is much more effective than one which was dependent upon the vote of the people.

At the conclusion of the official toast Mr. J. W. H. Watts proposed the health of the president, Mr. A. F. Dunlop, and Secretary Chausse, to whom the Institute was indebted for the launching and promotion of the Architectural Institute of Canada. Both Mr. Dunlop and Mr. Chausse made brief replies.

The secretary read letters of regret, at their inability to be present at the banquet, from the following: Sir Wilfrid Laurier, Hon. Wm. Pugsley, H. M. Bates, Chairman of the Ottawa Improvement Commission; David Brown, president of the P. Q. A. A.; J. Galbraith, president of the Canadian Society of Civil Engineers; Chas. Gilbert, president of the American Institute of Architects; Senator J. P. B. Casgrain, Montreal, member of the Ottawa Improvement Commission, and Prof. Nobbs, Prof. of Architecture of McGill University, Montreal.

FOURTH SESSION.

The Fourth Session of the Convention was called to order on Wednesday morning, Sept. 30, at 10.30, with President Dunlop in the chair.

The President announced that the first item of business was the considering of the regulations for architectural competition. The secretary stated that the conditions set forth in the regulations suggested by the council were an exact copy of the regulations of the Royal Institute of British Architects. Mr. Baker suggested that these regulations should be read and considered, clause by clause, in so far as there might be some conditions in them that would not apply to the A. I. C.

Sections 1, 2, 3, 4, 5, 6, 7, and 8 were adopted as read.

Section 9, upon motion of Mr. Gordon, was struck out. It read as follows: "Where a deposit is required for supplying the instructions, it should be returned on receipt of a bona fide design, or if the applicant declines to compete and returns the said instructions within a month after receipt of replies to competitor's questions. The deposit required should not exceed the sum of five dollars."

Section 10, upon motion of Mr. Gordon, was amended to read as follows: "Each design should be accompanied by a declaration, stating that the drawings have been prepared under his own supervision."

A considerable amount of discussion arose over Subsections D and E of Clause No. 11, with regard to the competitor's freedom with regard to cost estimate. It was believed by some that, if the assessors believed a design submitted called for a cost in excess of that laid down in the programme of the competition, the design should be thrown out, while others believed that the 10 p.c. allowance, provided for in this clause, was placed there merely as an allowance for the difference of opinion that might arise among the assessors. Clause D, however, was adopted as read, and Clause E was amended to read as follows: "If the assessor or assessors be of opinion that the outlay in the instructions is inadequate, he or they shall not be bound in the selection of a design by the amount named in such instructions, but the question of cost shall, nevertheless, be a material element in the consideration of the award."

Clause 12, after some discussion, relative to the rights of each competitor with regard to having a report from the assessors as to the reason why his plan was accepted or rejected, and also as to the advisability of the publication of the various designs submitted in the technical journals, was amended, upon motion of Mr. Gordon, to read as follows: "It is desirable that all designs and reports submitted in a competition, except any excluded under Clause 11, should, with the consent of their authors, be publicly exhibited after the award has been made, which award should be published at the time of such exhibitions. All competitors shall be entitled to receive a copy of the assessors' report upon their drawings."

Clause 13 was adopted as read.

Clause 14, brought about much discussion, over the question of whether it was advisable to adopt a usual price to be paid the assessor or whether the assessor should be left to make his price with the promoter in accordance with the size, nature and the cost of the building. Upon motion of Mr. Gordon it, however, was adopted. It read as follows: "In the case of works of considerable magnitude it is desirable that three assessors should be appointed. As stated above, the President of the Institute is always ready to advise on this and other points." Mr. Gordon moved that the regulations as read and amended, be adopted en bloc. The motion was seconded by Mr. Eddy, and carried.

The question of adopting the standard code of symbols for electric wiring, as suggested by the National Electrical Association of the United States, and as adopted and used by the members of the American Institute of Architects, brought forth some lively discussion. Mr. Gordon seemed to be in favor of having the matter referred to a committee but Mr. Baker objected very strongly to having matters of this nature, which he believed the General Assembly was perfectly capable of taking care of, laid aside to be dealt with by committees. After several strong protestations Mr. Baker was finally successful in having this code of symbols adopted. Mr. Gordon's amendment was lost. It provided that the matter of the standardization of electrical symbols brought to the attention of the A. I. C. at this meeting, while approving of the idea of uniform symbols, the Institute prefers that each member make his own selections in the matter.

QUESTION OF AFFILIATION.

The next question discussed was that of relations between the Institute and the Provincial Societies. Mr. Baker stated that he, as representative of the Royal Institute of British Architects, could say that they would heartily welcome an affiliation with the Architectural Institute of Canada, and that he would be happy to see it consummated at a very early date. The secretary

made a motion to the effect that the Institute take steps toward an affiliation with the Royal Institute of British Architects. This motion was seconded by Mr. Meredith, and declared carried. Mr. Horwood made a motion to the effect that the Secretary should communicate with the several Provincial Associations, looking toward affiliation. This motion was seconded by Mr. Meredith and duly carried. Mr. Horwood believed that affiliation and closer relationship with the Provincial societies was essential to the better interests of the Institute. He believed that the Provincial bodies should be affiliated with the Institute rather than the Institute should be affiliated with the Provincial bodies.

ELECTION OF OFFICERS.

The officers for the ensuing year were then elected. Mr. Watts acted as secretary pro tem, and the election resulted as mentioned earlier in this report of the proceedings.

The president-elect, Mr. Dunlop, after his election, was escorted to the chair by Mr. Watts, amid applause. He thanked the members for the confidence they had reposed in him, and stated that he had intended to send in his resignation, had it not been for Mr. Chausse. He had been ill for four months and had relied a good deal upon Mr. Perrault, but he was also ill and had not responded. He wanted to state that Mr. Watts deserved a great share of the credit for the work which had been done in forming the Institute. He wanted it distinctly understood that the next President would be elected from the place of meeting. He thought there should be an unwritten law, which would be a courtesy to the place at which the Assembly met that the president should be elected from that community. He then spoke of the opposition the promoters of the A. I. C. had met with from the P. Q. A. A., stating that he believed the reason for this was that their minds had been poisoned into believing that the A. I. C. was started to kill the P. Q. A. A. This he showed to be an entirely erroneous idea. His heart and soul was with the Institute and he believed in the larger and stronger body which embraced architects from every part of the Dominion.

Election of the other officers and members of the council followed.

TORONTO SELECTED FOR NEXT ASSEMBLY.

The next business to be disposed of was the selection of the city at which the next General Annual Assembly was to be held. Mr. Baker issued an invitation on behalf of the city of Toronto, and Mr. Hooper on behalf of the city of Winnipeg. Both Mr. Baker and Mr. Gordon believed that, insofar as the Institute was still in its infancy, it was best to hold the next Annual Assembly at some centre where the architects were most thickly located. Mr. Hooper stated that, while he quite appreciated the importance of what Mr. Gordon had said, he wished to assure the Assembly that they would be given an excellent reception by the city of Winnipeg. Mr. Horwood, of Ottawa, and Mr. Watts were of the opinion that Ontario and Quebec architects had had a good opportunity to visit the Ottawa Assembly and that, insofar as that they had not shown enthusiasm in the project, the next convention should go west to Winnipeg, where it was thought some co-operation and some enthusiasm could be aroused for the promotion and future welfare of the Association. However, in the vote that followed, Toronto was chosen as the place for the next General Assembly. This motion was afterwards made unanimous.

The next matter taken up was a letter received from the American Institute of Architects, which read as follows: "The American Institute of Architects will hold an exhibition of sculptural work of August St. Godins, during the afternoons of December 15, 16 and 17, 1908.

and on December 15 the Institute, as a tribute of respect, will hold a memorial.

"We think his genius entitled his name to receive an international tribute, therefore we shall be very much pleased if the different societies of the world, painters, sculptors, and architects, will send us their tribute showing their appreciation of his work.

"As a correspondent of the Institute I take the liberty of asking you to communicate with such societies in your country as you think best, asking them to send a tribute to his memory, so that we may receive it on or before December 1.

Yours faithfully,
GLENN BROWN."

No action, however, was taken with regard to this letter.

Mr. Meredith wished to know what action would be taken by the Institute in a case such as that between Messrs. Ross & McFarlane and Mr. Bradford Lee Gilbert, in regard to the Terminal Station and Chateau Laurier, at Ottawa. Mr. Meredith had some difficulty in getting this matter before the Institute, insofar as it did not seem to be the pleasure of some of the officers to give the matter consideration. However, the secretary, Mr. Chausse, suggested that Mr. Meredith's remarks were in order. Mr. Meredith wanted to know if the A. I. C. could not take the matter up with the Quebec Association of Architects, of which Messrs. Ross and McFarlane were members. The president did not seem inclined to encourage any further discussion on the matter, and stated that, as the members of the Institute did not know anything with regard to the case officially, except what they had read in the papers, he did not see what could be done in the matter. It was finally suggested by Mr. Baker that Mr. Meredith write a letter to the secretary of the Architectural Institute of Canada, to bring the matter up before the council officially.

Mr. Baker had some suggestions to make with regard to the selection of one architect each year to be awarded a Canadian medal, on account of good work executed; that the Council should consider the formation of a travelling scholarship, with a money contribution; that the Council should also consider the establishment of studentships, with prices of books. He also had some recommendations to make with regard to study clubs, publications of the proceedings in a new form, and a proposal to grant a diploma indicating the class of each member.

After a vote of thanks to the various individuals and agencies that had contributed toward the success of the Assembly, the Assembly was declared closed.

NEW YORK IS EVIDENTLY BENT on making the most of her limited area. When it is difficult to expand, she solves the problem by concentration and building upwards. Her most recent compound of a residential nature is a 175 suite apartment building designed to cover the entire block, bounded by Amsterdam avenue, Broadway, Eighty-sixth and Eighty-seventh streets. Plans for the structure were recently filed by the architects, Hiss and Weeks, and it is to be erected for a company in which Mr. Henry R. Thompson, Henry R. Hoyt and Sherman Hoyt are heavily interested. The building will be 35 feet long, 200 feet wide and 150 feet high, and each apartment will contain from nine to twelve rooms. The first two storeys are to be of gray limestone, while the upper portion is to be finished in buff brick, trimmed with terra cotta. The courtyard will be 250 feet long by 100 feet wide.

OTTAWA'S PROPOSED BUILDING BY-LAW, which has been before the City Council for the past two years, is scheduled to come up for further consideration in the near future. The measure, which has so far been amended several times, is said to be very comprehensive in its scope.



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CORRESPONDENCE.—The Editor will be pleased to receive communications upon subjects of interest to the readers of this journal.

Vol. 1 October, 1908 No. 12

Current Topics

A SETTLEMENT HAS BEEN EFFECTED between the Phoenix Bridge Company and the survivors of the victims of the Quebec Bridge disaster, by which \$42,000 will be divided among the latter. According to the terms of settlement, each widow will receive \$900 and each orphan \$500.

CHARLES A. WALTON, one of Toronto's oldest architects, recently passed away at the Western Hospital, as a result of a stroke of paralysis. Mr. Walton was a member of the late firm of Walton and Storm, for many years well known practitioners in the Queen City. Among his principal works are the Yonge street Arcade, Toronto, and the Michigan Central Building, Detroit.

WINNIPEG'S RECENT BUILDER'S SHOW is said to have been a big success in every particular. Large crowds of visitors were in daily attendance to view the exhibits, which included the most complete array of materials, building devices and contractors' appliances ever displayed in the Western metropolis. A feature of the show was the "Made in Winnipeg" signs, which were much in evidence at a number of the booths.

THAT IT IS WITHIN THE POSSIBILITY of engineering skill to double the altitude of what has already been attained in high building construction, is the theory advanced by the Scientific American. Furthermore, such a building would be permissible under the present building code of New York City. Basing the calculation on the maximum foundation pressure of fifteen tons per square foot, it would be possible to erect, according to this authority, a 2,000-foot structure on a lot 200 feet square, without exceeding the pressure limitation.

THERE IS SOME TALK to the effect that Canadian cement manufacturers have in contemplation a merger similar to the one recently formed at Detroit by United States firms for the purpose of fixing the price of cement. It is said that a scheme has been hit upon by which this can be legally done. So far, however, all reports regarding the proposition, lack confirmation.

THE LATE C. W. MULLIGAN whose death recently occurred at Salt Lake City, Utah, and who for some time had been a resident of Chicago, was the designer of Hamilton's Court House. The deceased resided in Hamilton for many years, where he enjoyed a large practice as an architect. He was a thirty-second degree member of the Masonic order.

THE TASK OF DEEPENING the Manchester ship canal to a uniform depth of 28 feet from Eastham to No. 9 dock at Manchester, involving over three years' continuous work and a heavy expenditure, has been completed. As a result of this improvement shipping through this passage can be carried on with safety and expedition, and almost any steamer afloat in the merchant service can now come up to that port.

SAN FRANCISCO'S PROPOSED STADIUM is to be the largest in the world—that is unless some other ambitious city should decide to wrest the honor from the California metropolis. Concrete is the material specified, and when completed, trees are to be placed around the exterior of the amphitheatre, in order to conceal to a degree the plain walls. The stadium will surround a three-quarter mile oval, containing a horse-racing track, cinder paths, swimming pool, and turfed field. The seats will be arranged in tier, but only carried up ten rows, so as to avoid any great height.

THE RECENT REPORT of the archaeological survey in India relates in part to an interesting discovery of terra cotta reliefs with Pali inscriptions, dating back to the eleventh century, A. D., at Petleik pagoda. These reliefs illustrate scenes in the life of Buddha, and, unlike most others of a similar kind, are vigorously modelled and almost as clear and sharp as the day they left the kiln, about the time England was being conquered by the Normans. Each piece of terra cotta bears a number corresponding to the number of the story depicted in the Jataka book, and the whole forms an authentic record of the orthodox Buddhist iconography of the eleventh century, besides being specimens of an art which is described as of no mean order.

EIGHT REGINA ARCHITECTS have brought suit against the City Council of Regina for commission on plans for the proposed hospital building, and it is stated that the architects are determined to push the issue to a final judgment. At a meeting recently held by the architects, it was decided that owing to the failure of the council to take any action with regard to their claims, it was necessary in order to force the hand of the city that each one of the eight architects who submitted plans in the competition should sue individually for one thousand dollars' commission. The architects base their claim on the facts that they were invited to submit plans for a city building, and, that in accordance with the city's instructions, these plans were prepared and presented in good faith, and that the city, because of its failure to proceed with the construction of the building, has failed to accept any of the plans submitted, and thus has broken faith with the architects.

PERHAPS THE MOST SIGNIFICANT single effort toward the substitution of other materials for wood is the proposal to extend the fire limits of New York to include the entire city. If the aldermen pass such an ordinance it will mean that no more frame houses of any kind will be built in the metropolis. Ten years ago this plan would have been promptly shelved, now it has a good chance of success, simply because the public is beginning to recognize the value of a higher building standard, and also because the high price of lumber has made the cost of a fireproof house relatively small, and has, therefore removed or weakened the desire of builders to use wood.

* * *

WORK IS ACTIVELY PROGRESSING on the extension of the Esquimalt-Nanaimo Railway from Wellington, via Nanoose, to Alberni, at the east end of the Alberni Canal, Vancouver Island. It is now confidently expected that the new line will be in running order to Alberni during 1909. The completion of this line will mean the exploitation of large sections of timber land. A large number of tracts on which mill sites have already been selected, were purchased some time ago in anticipation of this development. A route has also been surveyed from Duncan, a station 30 miles from Victoria to Cowichan Lake, but it is not likely that any work on this extension will be carried out until next year. In addition, the survey of another line from the Great Central Lake on the Island, which lies to the northwestern end of Alberni, 11 miles from the terminus of the new line, has been finished.

* * *

ONE OF THE LARGEST PRIVATE DRAINS in New York has recently been completed for the New York Central Railroad, to drain the suburban and express yards of the new terminal station at Forty-second street. The yard for the suburban trains covers twenty-four acres and is about forty feet below the surface of the street, while that for the express trains is twenty feet above the suburban, and has an area of forty-two acres. The drain has an elliptical section forty-eight inches high by thirty-two inches wide, as it crosses the yards to the Lexington avenue wall at Forty-sixth street. There it changes to a circular section six feet in diameter. This runs to the bulkhead line on the East river, where it divides into two branches, each three feet in diameter. The entire drain is built of concrete, with a minimum thickness of twelve inches, reinforced by steel rods, and the invert lined with a single course of hard-burned red brick.—Cement Age.

* * *

AUTOMATIC WATER LOCKS are being installed on a dam at Hemelinger, near Bremen, which it was found necessary to build owing to the damage caused to the adjoining farming country upstream through the constant deepening of the Weser on its lower course. The dam will be provided with two locks, measuring 350 by 12.5 meters (1,148.3 by 41 feet), and 70 by 12.5 meters (228 by 41 feet). These locks will be opened and closed automatically by an ingenious device which utilizes directly the fall of the river without the aid of power machines. The locks will not be completed before next year, but a working model reveals the simplicity and usefulness of the system, which can be used wherever there is a natural or artificial fall of water. The great advantage of this system is that one man, who need not even be a machinist, can easily attend to the opening and closing of the lock gates; only one cock is turned, the rest is the self-action of the system. Those who have been watching the progress of the work claim that it is destined to revolutionize the workings of all locks on rivers, dams and canals.

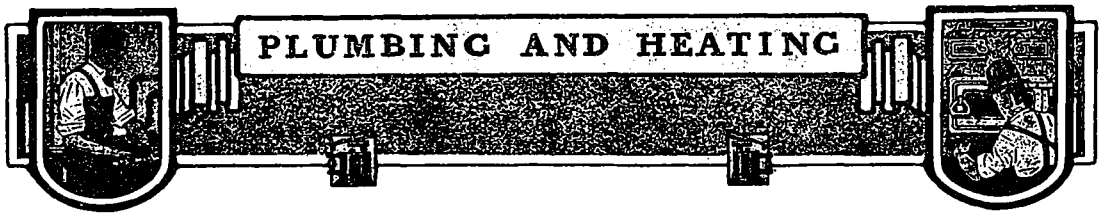
ARMORED FIRE DOORS, which are said to be a most effective substitute for iron or steel doors owing to their greater power to resist extreme heat, are rapidly being adopted in England in the equipment of buildings designed for factory and warehouse purposes. This type of fire door is constructed of several thicknesses of well-seasoned pine doors, planed, tongued and grooved, and nailed together with wrought-iron nails driven flush and clinched on the other side. The wood is then completely covered with tinned-steel sheets of not less than No. 26 standard wire gauge, each sheet being of a limited size, lock jointed, and fitting close to the wood, so that while free to expand, they exclude the air and can not become detached. By this means combustion is prevented, and it is found that an exposure of several hours to the fiercest heat results only in the surface of the outer boards becoming slightly carbonized to the depth of a fraction of an inch.

* * *

THE ABILITY OF CONCRETE TO WITHSTAND severe shock was recently demonstrated at Indianapolis, when two acetylene gas storage drums on the roof of the Prest-O-Lite Company's factory exploded, tearing a hole in the roof the size of the base of the drums, and shattering a number of windows and doors throughout the plant. Aside from this the building, which is of concrete construction, remained uninjured, and thirty minutes after the accident nothing deterred the employees from returning to their work. The roof was of tile and concrete construction, with 12-in. tile and 4-in. concrete joints, each being reinforced with a Kahn bar, the whole being surfaced with 1-in. of concrete. According to the statement of the contractors of the building, the structure was not damaged outside the area of the hole blown through the roof, at which point the concrete seemed to be shattered, breaking away from the bars. The roof was restored to its original condition by using the same bars, merely bending them back into place. The force of the explosion was sufficient to wreck the timber gable roof of the city fire hall 25 feet away, and also a portion of the cornice of a building 100 feet from the drums.

* * *

GEOGRAPHICALLY AND NATURALLY, the whole of the Asiatic lumber market belongs to Canada. This is the opinion of Mr. W. T. R. Preston, Canadian Trade Commissioner at Yokohama. However, Canada, notwithstanding the advantages possessed in being the nearest available source of supply, and the enormous forestry resources of British Columbia, has not been able so far to secure even a decent footing in that part of the world. This is explained by the fact that there are a number of conditions in the East which have not been properly understood in the Dominion, and which could be overcome if the lumber interest of Canada would carefully inquire into the situation. In a recent report, Mr. Preston states that in Japan alone the Imperial Government, through its public works, railways and naval yards, requires a very large quantity of the best qualities of pine and fir, and that the demand is likely to be considerably increased from year to year. Japan's great exhibition to be held in a few years hence will also give a tremendous impetus to the demands for foreign lumber. It is estimated that no less than 72,000,000 ft. of various kinds of lumber will be necessary for the construction of the buildings. In Tokio, the old-fashioned one-story Japanese houses are being replaced by two and three-story structures of foreign styles, for which Japanese lumber is quite unsuitable. China also offers a good market, and will within the next twelve months require 125,000,000 of pine and fir to be used in the erection of houses, railway work, and dockyard improvements.



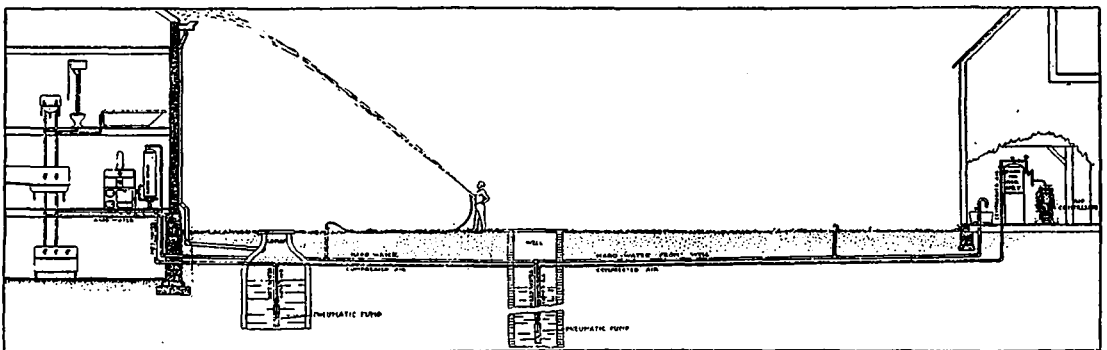
WATER SUPPLY SYSTEM FOR COUNTRY HOMES.--- Advantages of New Pneumatic Service.---Simple in Character and Reliable and Economic in Operation.---Capable of Being Operated with Any Motive Power.---Can Supply More than One House in the Same Vicinity.

A SIMPLE and reliable water supply service, which bids fair to come into popular use in country and suburban homes, is a new pneumatic system, which has, since being placed in actual service two years ago, fully demonstrated its practicability and economy. It is the result of a number of years' experiment, and has many strong points to recommend its adoption.

Any motive power, no matter where the motor may be located, can be utilized to pump water from a well or other source of supply, however distant the well may be from the motor. The motor, which may be a windmill on a barn or hill, a gasoline engine under a shed, or an electric motor in a basement, is used to compress air, which is conveyed through a small pipe to the pump in the well near the house or elsewhere, or the pump

of any kind. Fresh water is forced directly from the well to the faucets. This feature especially distinguishes this system from other pneumatic systems, in which both water and air are stored in a tank under pressure. As the tank in this system stores air only frost can not affect it, and it may be placed out of doors, or anywhere to suit convenience.

In the facility which this system affords for economical application of motive power, great advantage is claimed in many cases, especially where the power required is small, as is generally the case in pumping water for country places. For example: Where ordinary hand pumps are used, the pistons seldom exceed three inches in diameter, with a stroke of about six inches. This would give a discharge of 42 cubic inches per stroke.



may be in a distant spring, lake or river. A motor already installed anywhere for other purposes can be used at the same time to compress air for raising water, without in any way interfering with other work to which the motor may be applied. Distance between motor and pump is no obstacle to the perfect working of the system.

Another advantage is that two or more pumps in widely different locations may be operated by one motor. One of the pumps may raise hard water and the other soft water. Neighbors with separate wells could divide the cost of one power plant, which would furnish compressed air to operate all of the pumps so as to supply each house from its own well. The pump itself, or apparatus which is placed in the well, is very small, weighing only from 15 to 20 pounds, for ordinary domestic use.

By using a storage tank for compressed air, water reservoirs may be entirely dispensed with. Water is forced into the upper stories of houses without the need of elevated tanks, and without storing water in tanks

At 40 strokes per minute the corresponding discharge would be 1,680 cubic inches, or about 7 1-4 gallons per minute, an amount which weighs approximately, 60 pounds. If water is elevated 50 feet we have 60 times 50, equals 3,000 foot pounds per minute to represent the useful work performed in operating such a pump as stated. Now, a horse power is 33,000 foot pounds per minute, so it would require to operate an ordinary hand pump, in case at hand, less than one-tenth of one horse power, provided such a pump could be operated without any waste of power.

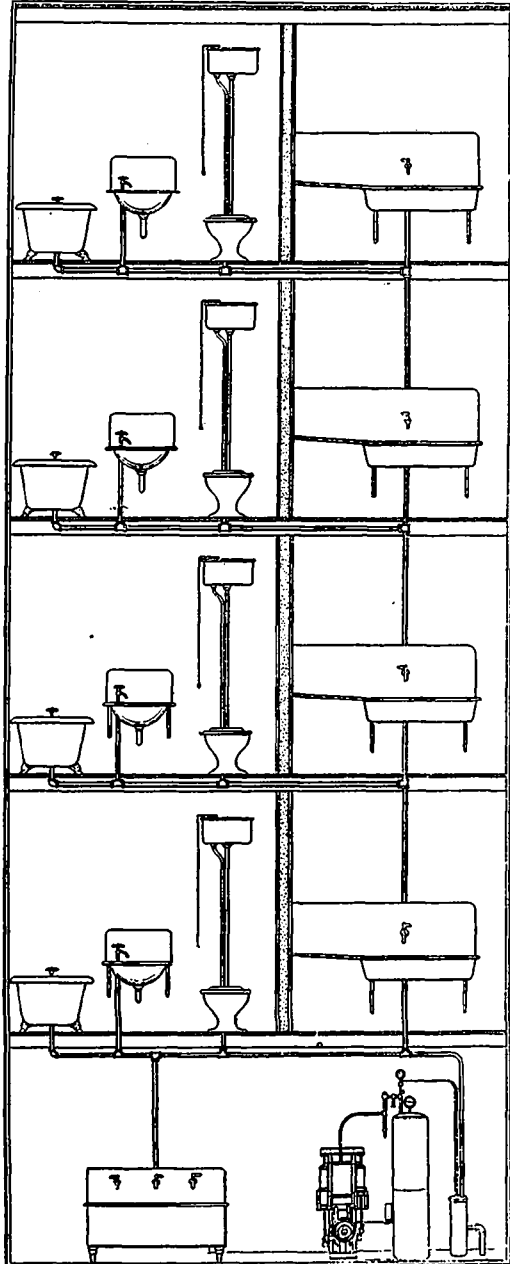
If water were raised 100 feet, instead of 50 feet, the power required would still be less than one-fifth of one horse power, not counting waste. But, how about the waste of power? It is often said that two or even three horse power engines are nearly stalled in operating such ordinary hand pumps? The truth is that almost any amount of power may be wasted in doing a very small amount of useful work on account of the conditions being unfavorable for applying power above a certain limit. Generally speaking, it is folly to attempt applying even

one horse power to an ordinary pump. Yet no other kind of pump is ordinarily available in country wells.

Furthermore, such a pump as described, at 40 strokes per minute would exhaust many wells, making it impossible to apply usefully even one-fifth of one horse power. In wells of small capacity, the pump must be

equals 1,669 foot pounds per minute, to represent the work required of a motor for operating the pump, not counting waste, 1,669 foot pounds per minute amounts to only one-twentieth of one horse power. But, as a large amount of waste work is unavoidable in the operation of any kind of pump, it is well to provide in all cases twice the amount of motive power called for by the actual useful work to be performed. With such liberal allowance provided for waste, the power applied to raise two gallons of water per minute, to an elevation of 100 feet, still needs to be only one-tenth of one horse power. But, if a common lift pump is used, the power must be applied every minute of the twenty-four hours to get the full capacity of the well. And if a one or two horse power motor is applied, as is usually done, the time of its operation can not be abridged, nor will the useful result be any greater. Only the waste work is multiplied by enlarging the motor. The desirable end to be attained is to be able to economically use the power of a one horse power engine only one-tenth of the whole time, instead of wastefully using such an engine all the time. This is what is accomplished by this type of pneumatic system. The engine may work one hour and rest two hours. In one hour a one horse power engine may store up enough compressed air to keep the pump in continuous operation for many hours. In this way the motor has plenty of time to cool off, recuperate and receive any attention of which it may be in need.

So far as the pneumatic pump is concerned, it can make no difference whether its need of compressed air is supplied by the motor in one hour or ten. The compressed air acts directly against the water in the chambers of the pump. There is no piston working in the well, consequently, the pump is proof against injury by abrasion or by grit in the water. It is impossible to overstrain the pump, or to subject it to violence. No especial fastening is necessary to hold it in place. Neither is any exact placement or aligning necessary. There is no pump rod to couple inside the water pipe and no packing box to leak, or make friction and trouble.



worked slowly, and much time is required. The power of most available engines can not be applied without enormous waste, to say nothing about the inconvenience attending the operation of a motor for so many hours.

Another illustration is the case of a well that will supply only two gallons, or 16.69 pounds of water per minute. Such a well is capable of yielding 1,440 gallons, or more than 45 barrels, in twenty-four hours, if a continuous flow of water can be maintained. If the water is elevated 100 feet, we have 16.69 times 100,

TERRA COTTA IS GROWING IN POPULARITY as a material in residential work. Especially is this to be observed in various sections of the United States where this type of construction is being extensively adopted. Last year for the first time in its history the building department of New York City received plans for a terra cotta house. Since then Amos L. Schaeffer, engineer of the public service commission has taken out a permit and built himself a substantial home of this material at a very modest cost, while in the suburbs around New York several terra cotta dwellings have recently been put up. The exterior surface of a house of this type is covered with a stucco of whatever color the owner chooses, and some very pleasing effects are brought out. In the walls and partitions the blocks are set end on end, so that the hollow spaces form continuous perpendicular pipes. These hollow spaces make the wall non-conductive of heat and cold, and thus tend to keep the house warm in winter and cool in summer. In the floors the blocks are laid between beams of steel or re-enforced concrete. With both walls and floors made of terra cotta each room is enclosed with fireproof material, and fire could not easily spread from one room to another. The original cost of a terra cotta house is perhaps 10 per cent. greater than that of a frame building of a similar size. The ultimate saving is effected through smaller maintenance charges and insurance premiums. Some architects are making a specialty of fireproof dwelling houses, planning homes that cost anywhere from \$5,000 to \$40,000. Only last year two handsome terra cotta residences were built at Englewood and Mount Kisco, suburbs of New York, at a cost of about \$40,000 each. At almost the same time a terra cotta "cottage" of nine rooms was put up at Briarcliff, another suburb, for \$6,500.

MARKED IMPROVEMENT IN BUILDING ACTIVITIES.---Statistics for September Show a General Revival Throughout the Dominion.---Big Gain Over Preceding Month.

THE upward trend of building activities, so manifest in the month of August, is rapidly gaining momentum as the season advances.

Returns for the month of September, from various cities scattered broadcast throughout the Dominion, indicate a decidedly improved tone, which gives promise of continuing unabated for some time to come. A number of these places show an unprecedented building growth, may bid fair to fully overcome the decline experienced earlier in the year, while others are gradually wiping out a large portion of the decrease which fell to their lot.

But by far the most significant phase of the situation is the fact that the reaction is by no means localized. Instead, it has reached almost every section of the country, and a review of available statistics show, without a doubt, a well balanced and healthy condition.

Of the seventeen cities reported in the accompanying table, fourteen submitted comparative figures, which place the aggregate cost of building in these centres for the month of September of this year, at \$3,293,875, as against \$2,424,075 for the corresponding month in 1907, thus showing a gain of 35.88 per cent., or 15.21 per cent. more than the splendid advance made in the preceding month.

Nine of these cities report substantial increases, and five show a falling off, though in most cases of moderate proportions. Halifax looms up with a tremendous gain of 937.78 per cent.; Fort William comes second, with 471 per cent., while Winnipeg records the smallest increase, which is 16.14 per cent. The biggest decrease reported is from Regina, at 25.40 per cent., and the smallest from London, which shows a slight loss of .05 per cent.

Despite of Regina's recession, which is evidently due to a temporarily settling down that often follows an unusually active month such as she experienced in August, the condition in the West is decidedly favorable. Edmonton's showing is exceptionally strong, Winnipeg is on the upturn, and Calgary reports the outlook as "fine." In the East, Halifax is moving forward with leaps and bounds, while St. John, Quebec and Montreal have registered material gains. Between these points the totals of Toronto, Fort William and Windsor tell their own story. St. Thomas, while not sending in figures for the corresponding month of last year, makes known a gain of \$50,000 so far this year, over the entire year of 1907. Thus it can be seen that the resumption in building operations is making itself felt in almost every direction.

Reports, regarding prospective work are: St. John, "improving"; Fort William, "very bright"; St. Thomas, "good, buildings well occupied"; Windsor, "steady growth"; London, "not very bright"; Vancouver, "for

the next three months the outlook is good"; Edmonton, "good"; Brandon, "cannot say, thing next spring will be brisk"; Regina, "from present indications the outlook for the future is fairly bright"; Portage La Prairie, "good"; Berlin, "fair";

Conditions in Toronto never pointed toward a busier fall, and Montreal's material increase over the corresponding period of last year gives every assurance of great activity for the remainder of the year.

IMPORTANCE OF FIRE EMERGENCY EXITS.---External and Internal Means of Egress Necessary in Average Building Over Two Storeys in Height.

EXTERNAL IRON fire escapes are necessary on nine-tenths of the present day structures of more than two stories in height. The plan and character of construction of most buildings make necessary some external means of egress in case of emergency. But fire-escapes even of the best approved type should not be depended upon to, too great a degree. The fact that a structure is properly equipped with fire-escapes does by no means eliminate the necessity of adequate precaution being taken in the plan and construction of building against the possibility of fire and the danger of the natural exits being rendered useless in case of fire.

To go down a large percentage of the ordinary external fire-escape ladders one has often to be more or less of an acrobat and possess unusually strong nerves and sinews; very often such fire-escapes are placed where, in a severe fire, they are liable to become red-hot and useless, and in nine cases out of ten are located so as to be more or less inaccessible. The International Society of Building Inspectors, through its executive officer, Architect Fitzpatrick, of Washington, is making an effort to have cities incorporated in their building requirements a rule that will give every structure a safe and positive fire-escape. The main stairs, it is argued, the ordinary means of access to a building that people use regularly day by day, is the most natural means of egress to which they will turn in a moment of need, therefore, it is contended, the main stairs of every building should be made absolutely incombustible, should be enclosed in fire-proof enclosures, either walls of brick or tile or concrete or screens of steel or wire glass, and having self-closing doors at every landing, and the said stairs to either abut directly upon the street or into a fire-proof corridor leading to the street and from which corridor there shall be none but absolutely fireproof communications, doors, etc., to any other portion of the building. It may be a very slight inconvenience to open and close a door every time one goes up or down a stairway, but this is counterbalanced by the absolute security and safety afforded by such a stairway. It is the sanest and safest fire and ordinary exit from any building, and there should be no time lost in making this suggested change in our ordinances operative, compelling new buildings to be so built and the old ones changed as speedily as possible.

Toronto school authorities who do not favor fire-escapes should find in this suggestion some valuable pointers that would let them out of their present unpleasant position. For years they have ruled against fire-escapes in the face of the experience and practice of the greatest authorities on the continent, and recently, when some big school fires demonstrated the practicability of the external fire-escape beyond all question, they found that they could not retrench, and have been forced to stand upon their unfounded contention that fire escapes were useless. Their minds could be relieved to some extent from the realization of their false position by the construction of fireproof hallways, staircases and exits that abut directly upon the streets.

	Total cost of buildings for Sept., 1907	Total cost of buildings for Sept., 1908	Increase per cent.	Decrease per cent.
Brandon.....	\$105,000	\$ 81,000		10.47
Calgary.....		86,900		
Edmonton.....	48,800	123,425	151.63	
Fort William.....	25,378	144,900	471.	
Halifax.....	16,660	172,885	937.78	
Kingston.....		20,000		
London.....	61,800	59,600		.05
Montreal.....	424,651	662,575	34.	
Quebec.....	14,865	38,480	110.	
Regina.....	58,760	40,175		25.40
St. John.....	18,800	16,550		
St. Thomas.....		17,500	81.42	
Toronto.....	768,340	1,110,040	45.41	
Windsor.....	10,800	20,200	87.71	
Winnipeg.....	896,000	447,400	16.2	
Vancouver.....	874,585	814,755		16.34
Victoria.....	69,925	52,630		10.5

* Comparative figures not supplied.

PROSPECTIVE CONSTRUCTION

The following information is obtained from our correspondents, from architects, and from local papers. These items appear in our Daily Advance Reports and are herein compiled for the use of subscribers to the monthly issue of "CONSTRUCTION." Should any of our readers desire this information oftener than once a month, upon receipt of request we will be pleased to submit prices for our Daily Service.

Mills and Factories

TORONTO.—Commissioner of Industries, Thompson, Toronto, states that a Pittsburg company has decided to erect a large factory in either Montreal or Toronto. If the company decides to locate here, they will erect a building to cost upwards of \$500,000 in the north-western section of the city. Mr. Thompson has also interviewed another company which purposes locating a branch factory in Canada; representatives of this firm will visit Toronto in the near future to look over available sites.

Toronto.—The Elliott Manufacturing Company, Ltd., 233 Richmond street W., has taken out a permit for the erection of a one-storey brick factory building at 233 Richmond street W., at cost of \$10,000.

Toronto.—Thompson Bros., 151 Russholme Road, have been awarded the contract for a \$12,000, one-storey, brick foundry to be built on Fraser avenue for the Canada Metal Company, Ltd., 31 William street. F. H. Herbert, 65 Adelaide street E., is the architect.

Toronto.—Architect J. A. Cowan, 65 Adelaide street E., has prepared plans for the erection of a two-storey 35 by 130 feet laundry building. The structure will be of mill construction with brick walls, concrete floors, felt and gravel roof, open plumbing, gas and electric lighting. Specifications include fireproof doors, metal lath and plate glass. Estimated cost of building, \$6,000.

Toronto.—The Monarch Brass Works, whose plant at Port Colborne was recently destroyed by fire, have decided to rebuild in Toronto. Mr. G. T. Clarkson, of the Monarch Brass Manufacturing Company, Ltd., Toronto, may be addressed.

Toronto.—The Sunbeam Incandescent Company, who recently erected a factory building on Dufferin street, have decided to duplicate their plant by the erection of a large addition to their present building.

Toronto.—The Harris Company, Ltd., Strachan avenue, Toronto, has taken out a permit for the erection of a six-storey addition to their abattoir on the east side of Strachan avenue, near Wellington avenue, at cost of \$38,000. Jas. L. Havill, 'Mall Building, is the architect.

Berkeley, Ont.—Mitchell Bros.' saw mill at this place, has been destroyed by fire. Loss estimated at \$8,000, partially insured.

Powassan, Ont.—Alex. McBeath's saw mills at this place have been destroyed by fire.

Marmora, Ont.—The Marmora Coopersage mill has been destroyed by fire. Loss approximately \$20,000, partly covered by insurance.

Peterboro, Ont.—A company is being promoted by Messrs. J. C. Smith, G. Walter Green, A. McFarlane and H. E. Collier, for the purpose of carrying on a manufacturing business at this place. The company, which will have a paid-up capital of \$100,000, proposes to erect

new buildings and install new machinery. The City Council has been asked to make a grant of \$10,000 to be used as working capital.

Belleville, Ont.—The Belleville Iron & Shoe Company's factory, including all the machinery, has been destroyed by fire. Loss estimated at \$15,000, partly covered by insurance.

Chatham, Ont.—The Chatham Mineral Water Company has taken out a permit for remodelling the two-storey brick building on lot 22, William street, at cost of \$7,000.

Annapolis, N.S.—John W. Lowe & Son's wood working factory, sawmill, and lumber sheds at this place, have been destroyed by fire. Loss not stated. Plant partly insured.

Niagara Falls, Ont.—W. S. Homan has been awarded the contract for the erection of the main buildings of the Corrugated Paper Company's plant at Niagara Falls Centre.

Callander, Ont.—Thos. Darling & Son's sawmill at this place, has been destroyed by fire.

Madoc, Ont.—The three-storey grist mill, owned and operated by Messrs. J. Whytock & Sons, has been destroyed by fire. Loss estimated at approximately \$3,000, partly covered by insurance.

Sandwich, Ont.—Major B. H. Rothwell, a Detroit real estate dealer, has secured an option on 78 acres of land near this place for New York parties. It is understood that the property will be used as a site for a large blast furnace.

Flesherton, Ont.—Boyd Bros. saw mill at Sauguen Jct., four miles from here, has been destroyed by fire.

Port Rowan, Ont.—The Lea Pickling Company of Simcoe, Ont., are contemplating the erection of a large salting house at this place.

South Bay, Ont.—The South Bay Canning Company's plant has been completely destroyed by fire. The buildings, which included the factory proper, a large storehouse and an engine house, were valued at approximately \$25,000 and insured for \$12,000. The machinery is practically a complete loss.

Windsor, Ont.—The Windsor Launch and Power Company, a new industry, has secured a site on the river front, on which they will erect a marine plant, a building for repairing automobiles, and a dock 140 feet in length. The promoters are: President, John Essex; secretary-treasurer, L. Essex; manager, L. H. Carley.

Bradford, Ont.—The John Hill Carriage Works, together with the adjoining dwellings, owned by Messrs. W. B. Scott, R. McKinry and H. Parler, have been destroyed by fire. Total loss estimated at \$10,500, partially covered by insurance.

Ottawa, Ont.—The Ottawa Paint Works have taken out a permit for the erection of a concrete factory building on Wellington street, Ottawa, at cost of \$3,000.

Teeswater, Ont.—The saw mill and dry kiln of the W. R. Thompson Company at this place have been destroyed by fire. The loss is estimated at between \$5,000 and \$6,000, with insurance of about \$4,000.

Montreal, Que.—The general contract for the erection of a building for the General Five Extinguisher Company, has been awarded to Chas. Thackeray Company, 217 St. James street, Montreal. Robt. Findlay, 10 Phillips Place, is the architect.

Montreal, Que.—The Tombyll Furniture Company, Lemoine street, has taken out a permit for the erection of a four-storey brick factory building to cost \$10,000.

Lachine, Que.—It is reported that the original plans for the Imperial Locomo-

tive and Machine Company's works, to be built here, may be changed, and a much larger plant erected. H. C. Stone, 34 St. Francois Xavier street, Montreal, is the architect.

Richmond, Que.—A company to be known as the Richmond Furniture Company, is being organized, with capital stock of \$75,000. The company will build a three-storey solid brick building, 70 by 300 ft., together with boiler house, dry kilns, etc., at this place. W. A. Catton, formerly with the Victoriaville Furniture Company, of Victoriaville, will be the manager.

Lepreaux, N.B.—J. A. Gregory's sawmill at this place, has been totally destroyed by fire. The mill was insured for \$20,000, which will not cover the loss.

Burt's Corner, N.B.—Elwood's sawmill at this place, has been destroyed by fire. Loss estimated at over \$20,000.

Winnipeg, Man.—The Empire Meter and Engine Company, recently incorporated with a capital of \$125,000, for the purpose of manufacturing water meters, waterworks, plumbing, steam, gas and electrical supplies of all kinds, also agricultural and other machinery, has purchased a site of one and three-quarter acres on Logan avenue west, on which they will erect a three-storey and basement factory building. Plans for the building have been prepared by Architect W. V. Blair, Northern Bank Building. The provisional directors are George L. Rice, Chicago, travelling master of the International Harvesting Company of America; Fred. J. Darch, senior partner of the firm of Darch & Hunter, London, Ont.; George Irving, Chicago, and George Goodham, president of the Needham Waterworks Company, Chicago.

Springfield, Man.—Tenders have recently been received for the erection of locomotive shops at Springfield, six miles from Winnipeg, for the National Transcontinental Railway. The construction of the shops will involve an expenditure of \$1,500,000. The main building will be three storeys in height, 800 by 130 ft., of cement and concrete construction.

Vancouver, B.C.—Hanbury, Evans & Company's bakery and stores, at Mount Pleasant, have been destroyed by fire. Loss approximately \$40,000.

Vancouver, B.C.—Mr. W. A. White, Boyne City, Mich., at present in Vancouver, states that the White Bros. Lumber Company, incorporated with a capital of \$2,000,000, has acquired timber limits on the Kallanch River, Vancouver Island, and will, in all probability erect, next year, a sawmill with capacity of 1,000,000 feet per day, near Alert Bay.

Vancouver, B.C.—The Algoma Lumber & Power Company, a five-million dollar Toronto corporation, has purchased the entire holdings of the Quatsino Pulp Company, on Quatsino Sound, Vancouver Island, where they purpose erecting a pulp mill. Machinery for the proposed plant has already been ordered. The deal was negotiated by Mr. Harry Hemlow, Vancouver, B.C.

Steveston, B.C.—Part of the town of Steveston, B.C., including the Beaver Salmon Cannery, has been destroyed by fire. The loss is estimated in the neighborhood of \$100,000.

Asquith, Sask.—J. G. McLean, of Winnipeg, has signed an agreement with the Town Council to build a 125-barrel mill here at once. The Council grants a bonus of \$3,000, a free site, and exemption from taxation for a period of ten years.

Calgary, Alta.—The plant of the Standard Soap Works at this place, has been damaged by fire to the extent of \$75,000.

Gas Plants, Elevators and Warehouses

Toronto.—The American Chicle Company, Login avenue, has taken out a permit for the erection of a one-storey brick addition to their warehouse on Logan avenue, near Gerrard street, at cost of \$4,000. Architect, J. W. Siddall, Builders, Crescent Concrete Company, 77 Victoria street, Toronto.

Fort William, Ont.—W. J. Ross is contemplating the erection of a large four-storey and basement warehouse on the vacant property in the rear of his present building.

Hamilton.—The Government proposes to construct a 50 by 420 ft. concrete dock extending out into the bay from the revetment wall, upon which the city will erect a large concrete warehouse. Ald. Sam Howard is chairman of the Harbor Committee.

Oakburn, Man.—The Western Canada Flour Mills Company's elevator at this place has been destroyed by fire.

Brandon, Man.—Plans have been completed for several buildings to be erected for the Brandon Gas and Power Company, Limited. Drawings and specifications are on file with Geo. H. Harper, Chief Engineer, 723 Louise avenue.

Regina, Sask.—J. G. Traub has been awarded the general contract for a three-storey 40 by 100 ft. warehouse to be erected for the New Hamburg Company. The building, which will cost \$10,000, will be of mill construction. Storey & VanEgmond are the architects.

Regina, Sask.—Architects Storey & VanEgmond have prepared plans for a three-storey warehouse to be erected here for the Provincial Government. The building will be of brick construction, with concrete foundation, and will cost \$12,000. A freight elevator will be installed.

Regina, Sask.—Contract has been awarded to the Saskatchewan Building Company, for a \$7,000 warehouse to be erected for the Provincial Government in accordance with plans prepared by architects Storey & VanEgmond. The building will be of brick construction, with concrete foundation.

Indian Head, Sask.—The Massey-Harris building, a two-storey brick structure at the corner of Grand avenue and Market street, has been damaged by fire to the extent of over \$10,000, the loss being fully covered by insurance.

Saskatoon, Sask.—Jas. Clinkskill purposes enlarging his warehouse on Twenty-first street. An addition of 25 ft. will be built to the rear, thus making the building 50 by 125 feet.

Electrical Construction

Orillia, Ont.—The Town Council has decided to heat the power house at the tagged Rapids by electricity. Electric heaters to cost about \$1,000 will be installed.

Brockville, Ont.—The building of the local electric light plant has been badly damaged by fire. Loss fully covered by insurance.

Niagara Falls, Ont.—The Ontario Power Company is preparing to add two additional units to their power house at this place.

Lethbridge, Alta.—Mr. Cecil B. Smith, of Toronto, has been engaged to prepare plans for the construction of the new electric lighting plant at this place.

Bridges, Wharves and Subways

Ottawa, Ont.—At a meeting of the Board of Control it was decided to instruct the City Solicitor to proceed before the Railway Commission with the application for lengthening the Preston street bridge, the G. T. R. and the Ottawa Electric Railway Companies to share the cost.

Ottawa.—The Public Works Department has awarded to Messrs. Reid & Archibald, Halifax, N.S., the contract for the construction of a wharf at MacPherson's Cove, Cape Breton, at contract price of \$3,973.

Ottawa.—Tenders addressed to the undersigned will be received up to 4 p.m., Oct. 20th, for the works connected with the construction of Section No. 7, Ontario-Rice Lake Division of the Trent Canal.

Plans, specifications and form of contract may be seen at the office of the Chief Engineer of the Department of Railways and Canals, Ottawa, and at the office of the Superintending Engineer, Trent Canal, Peterboro, Ont. L. K. Jones, Secretary, Department of Railways and Canals.

Welland, Ont.—Joseph Battle, Thorold, Ont., has been awarded the contract for the construction of the new government dock to be built at the Ontario Iron and Steel Company's plant, in Crowland township, just south of Welland. Estimated cost, \$50,000.

Dixie, Ont.—Tenders will be received at the office of the undersigned up to 7 p.m., Sept. 15, for the construction of concrete abutments and wing walls for highway bridge, also concrete floor for the above bridge, at the site of the present Watson bridge on the 3rd line east, adjoining the gravel pit, Dixie, Township of Toronto. Plans and specifications may be seen at the office of Chas. H. Gill, Clearford, Ont.

Brantford, Ont.—A. J. Cromar has been awarded the contract for the construction of a reinforced concrete arch bridge over the canal at Alfred street at cost of \$4,464.

Rondeau, Ont.—Tenders will be received up to 4.30 p.m., Oct. 30, for the construction of a breakwater, and dredging, at Rondeau, Kent County, Ont., according to plans and specifications on file at the offices of J. G. Sing, resident engineer, Confederation Life Building, Toronto; H. J. Lamb, resident engineer, London, Ont.; and at the Department of Public Works, Ottawa. Nap. Tessier, Secretary, Department of Public Works.

Port Stanley, Ont.—Tenders will be received up to 4.30 p.m., Nov. 5, for the construction of six groynes for shore protection at Port Stanley, Elgin County, Ont., according to plans and specifications on file at the offices of J. G. Sing, resident Engineer, Confederation Life Building, Toronto; H. J. Lamb, resident Engineer, London, Ont., the Postmaster at Port Stanley, and at the Department of Public Works, Ottawa. Nap. Tessier, Secretary, Department of Public Works.

Port Burwell, Ont.—Tenders will be received up to 4.30 p.m., Nov. 3, for the construction of an extension to the breakwater, and dredging at Port Burwell, Elgin County, Ont., according to plans and specifications on file at the offices of J. G. Sing, engineer in charge, Confederation Life Building, Toronto; H. J. Lamb, engineer in charge, London, Ont.; the Postmaster, Port Burwell, and at the Department of Public Works, Ottawa, Ont. Nap. Tessier, Secretary, Department of Public Works.

Montreal, Que.—Tenders will be received up to noon, Sept. 23, for the dismantling and re-erection of the overhead bridge at Victoria Pier. Specifications may be seen at the office of the secretary of the Parks and Ferries Committee, City Hall. L. O. David, City Clerk.

Montreal, Que.—The City Council has awarded the contract for the construction of a well, and about 500 feet of conduits in connection with the Water Works System, to Messrs. Rexford, Bishop, Ltd., 3 Beaver Hall Square. Contract price \$21-513.00.

Montreal.—The organization of the National Dry Dock and Shipbuilding Company, with a capital of \$50,000,000, by Montreal, New York and Chicago capitalists, has been announced. A new dock will be built in Montreal, to be used largely for repair work, while in St. John, N.B., it is proposed to build a second dock for the building of steel ships, and for the manufacture of the International Automatic Lifeboats. The Dominion Government has given definite assurance that a substantial subsidy will be granted, provided the company carries out the programme outlined for the establishment of this industry in Canada.

Matapedia, P.Q.—Tenders will be received up to 4 p.m., Sept. 30, for the construction of two abutments and additions to four piers of the Intercolonial Railway Bridge across the Restigouche River at Matapedia, County of Bonaventure, P.Q., according to a plan and specification on file at the offices of E. T. P. Shewen, Resident Engineer, St. John, N.B.; C.

E. W. Dodwell, Resident Engineer, Halifax, N.S.; J. L. Michaud, Resident Engineer, Merchants Bank Building, Montreal; the Chief Engineer of the Intercolonial Railway, Moncton, N.B.; and at the Department of Public Works, Ottawa, Nap. Tessier, Secretary, Department of Public Works.

Chipman, N.B.—Thomas A. Baird, of this place, has been awarded the contract for rebuilding Clark's bridge, in Queen's County, N.B.

St. John, N.B.—At a recent meeting to the Safety Board, it was decided to ask the Council to call tenders for repairs to the Marsh bridge.

St. John, N.B.—At a meeting of the Safety Board, it was decided to repair Wiggins' wharf at West St. John. It is estimated that the cost of this improvement will be about \$10,000.

Burt's Corners, N.B.—Tenders will be called for in the near future for the rebuilding of the Keswick bridge at this place, which was recently destroyed by fire.

Port Hastings, N.S.—The Public Works Department, Ottawa, has awarded to W. J. Landry, Antigonish, N.S., the contract for the construction of a wharf and warehouse at this place. Contract price, \$10-550.

Winnipeg, Man.—The contract for the movable dam, steel service and highway bridge and repair shop at St. Andrew's Rapids, has been awarded to The Canada Foundry Company, Toronto, at contract price of \$543,000.

Winnipeg, Man.—A by-law will be submitted to the City Council for the purpose of raising the sum of \$400,000, for building and renewing bridges in this city, viz.: Louise bridge, new superstructure, estimated cost, \$90,000; a new Main St. bridge, and a bridge from Brown St. to Brant St., over the Canadian Pacific Railway yards.

Winnipeg, Man.—The Board of Control has decided to recommend the purchase of the property of T. Stedman, for the purpose of widening the Salter Street viaduct.

New Westminster, B.C.—The Fraser River Saw Mills, Limited, applied October 12, for the approval of the plans and site of an existing wharf, and a proposed extension thereof in the Fraser River, District of New Westminster, British Columbia. Plans of the proposed works, together with description of site, have been deposited in the office of the Minister of Public Works, Ottawa, and in the office of the District Land Registrar, New Westminster, B.C.

New Westminster, B.C.—The Vancouver Power Company has decided to erect a new dam at Coquitlam Lake. The dam will be of clay and concrete, 500 feet at the base, 20 feet at the top, and will cost \$200,000. Mr. R. H. Spurling is general manager of the company.

Saskatoon, Sask.—A petition will be circulated among the business men of this place, asking The Canadian Northern Railway to build a footbridge over their local yards.

Waterworks, Sewers and Canals

Toronto.—Engineer Allen Hazen has completed plans for the city filtration scheme. The plans call for a \$750,000 plant, with capacity of 48,000,000 gallons per day.

Toronto.—The Works Committee has decided to purchase the block of land lying east of Marley Ave., running west to the Woodbine and south from Queen St. to Ashbridge's Bay, comprising an area of forty-nine acres, for the sewage disposal plant. The total cost of the plant is estimated by the City Engineer at \$2-361,456.

Oakville, Ont.—The following contracts have been awarded for the new waterworks system at this place: Construction of the pumping house, sedimentation basin, and laying of pipes, to Mookgh & Borgeman, Waterloo; standpipes, 80 feet high, 36 feet in diameter, to the Jencks Machinery Co., St. Catharines; pipes, to Canada Foundry Co., Toronto; pumping engines, to Allis, Chalmers & Bullock, Montreal and Toronto; hydrants and valves, to Kerr Engine Co., Walkerville, Ont.

Hamilton, Ont.—The Finance Committee, Hamilton, has decided to issue debentures to the extent of \$50,000 for pumps and motors for the local waterworks system.

Welland, Ont.—The Town Council has awarded to J. F. Connolly, of Toronto, the contract for the east end sewer system, which is to cost \$51,000. The work consists of the following: 5,600 feet trunk sewer on Queen, East Main, Ross and Major streets, and branch sewers leading to trunk as follows: Garner avenue, 1,970 feet; Burgar street, 2,076 feet; Welland street, 1,550 feet; and Patterson avenue, 1,600 feet.

Niagara Falls, Ont.—The contract for the erection of an extension to the Ontario Power Company's plant at this place has been awarded to H. D. Symmes, a local contractor.

Tecumseh, Ont.—Tenders were recently received for the construction of a plant that will supply this village and vicinity, with water from Lake St. Clair or Detroit river. John Dugal, Maurice Renaud, Denis Ducharme are members of the committee in charge of this improvement.

Montreal.—David R. Brown and Hugh Vallance, Architects and Engineers, Canada House Building, have prepared plans for a well and intake to be constructed in connection with the plant of the Canadian Spool Cotton Co., Montreal.

Montreal.—Messrs. Rexford, Bishop, Ltd., 3 Beaver Hall Square, have been awarded the contract for the construction of a concrete well and a 500 feet conduit, at the wheel house in Point St. Charles. Contract price, \$21,333.00.

Montreal.—F. Sauvageau, 106 St. Antoine street, has been awarded the contract for the construction of a building for the new twelve-million gallon pump. Contract price, \$4,865.00.

Saskatoon, Sask.—At the next council meeting a by-law will be introduced for the purpose of issuing debentures to extend the water and sewerage system at this place. The present contract with the Saskatoon Construction Company, for \$68,000, does not cover all the work required.

Halifax, N.S.—At a meeting of the City Council it was decided to borrow the sum of \$10,000 for the construction of a new sewer.

Public Buildings

West Toronto, Ont.—Contracts for the new Carnegie library building, to be erected at this place have been awarded as follows: Masonry, Peagle & Son; carpentering, Smith & McElroy; painting, Jas. Casey; roofing and sheet metal, A. Matthews; plastering, Colyer & Lewis; electric wiring, The Gas and Electric Power Company; steel structural work, McGregor & McIntyre; all of Toronto. The contract for the heating and plumbing has been awarded to R. Paterson, West Toronto. Aggregate amount of contracts, \$17,458.

Mitchell, Ont.—The Dominion Government will erect a new Post Office building at this place. Plans will be prepared immediately on the selection of a suitable site.

Dundas, Ont.—Mr. C. H. Hunter, of the Public Works Department, Ottawa, has been in Dundas, regarding the selection of a suitable site upon which a new public building is to be erected.

Niagara Falls, Ont.—Plans have been received by Major Hill, Commanding Officer of the 44th Regiment, for the proposed new armory to be erected here. The plans call for a building 79 by 53 feet, with basement floor to be used for bowling alley, shooting gallery, store rooms, furnace rooms and wash rooms; ground floor for 3 company rooms, one band room, measuring 14 by 23 feet, with quarter-master and regimental store rooms; second floor for lecture room, 23 by 44 feet, sergeants' mess, 12 by 28 feet, officers' mess, bath rooms, etc.

Waterloo, Ont.—The Dominion Government will erect a new post office building at this place as soon as a suitable site is decided upon.

Sudbury, Ont.—Tenders will be received up to noon, Oct. 16, for the plumbing required in the Court House and Registry Office, Sudbury. Plans and specifications on file at the office of the Clerk of Works,

Sudbury, Public Works Department, Toronto. H. F. McNaughten, Secretary.

Tillsonburg, Ont.—A new public building will be erected at Tillsonburg, Ont., on selection of a suitable site.

Fort William, Ont.—The City Council has decided to ask Mr. Andrew Carnegie for a grant of \$50,000 for the erection of a public library at this place.

Fort William, Ont.—Tenders were received up to Oct. 12, by the Department of Public Works, Ottawa, for additions and alterations to the local post office building.

Kingston, Ont.—Revised plans and estimates have been submitted to the City Property Committee for the erection of a new home on the City Hill.

Montreal, Que.—It is reported that an enlargement will be made to the City Hall.

Joliette, Que.—Tenders will be received up to 4.30 p.m., Oct. 16, for the construction of an armory at Joliette, Que. Plans and specifications on file with caretaker of local Post Office, and at Department of Public Works, Ottawa. Nap. Tessier, secretary.

Fairville, N.E.—A site opposite the present post office has been purchased for the erection of a new post office building, which it is expected will cost approximately \$15,000.

Moncton, N.B.—Major Anderson has received from Major G. C. E. Elliot, of Halifax, preliminary plans, subject to local suggestions, for the new armory to be erected at this place. The building will be two storeys and basement in height, the first floor to be used as gun shed, harness rooms, cleaning room, shooting gallery, bowling alley, and rooms for the officers; the second floor will be used as mess rooms, lecture room, 60 by 40 feet, baths, etc.

Saskatoon, Sask.—The contract for the construction of a public building at Saskatoon, to cost \$13,300, has been awarded to Messrs. Dion & Simuneau, Cookshire, Quebec.

Regina, Sask.—The Smith Murble and Construction Company, 290 Bleury St., Montreal, who have been awarded the contract for the interior marble, tile and mosaic work in the Provincial Legislature Buildings, now in process of erection here, state that they will receive prices on Canadian marble, Canadian cement, plaster, and marble hardware.

Edmonton, Alta.—Arrangements are being completed for the erection of a \$100,000 brick and stone armory at this place. The city has made a grant of a site, 25 by 150 feet, on the north-east corner of Edmonton Exhibition grounds.

Business Buildings

Toronto.—The Burgess & Powell Company, Limited, druggists, Yonge and Alice streets, purchased from the Globe Printing Company, the building at Nos. 8 and 10 Queen street east, which they will remodel and extend the whole depth of the lot. Estimated cost of improvements \$10,000.

Toronto.—It is stated that an English firm has taken an option on the present site of Knox College, on the Spadina ave. circle, for the purpose of erecting a twelve-storey departmental store, and that plans for the structure have been prepared.

Toronto.—A site has been purchased by John Walker, on the north side of College street, between Palmerston ave. and Markham street, for the purpose of erecting a store building. The lot is 16 by 180 feet.

Toronto.—A. Clark & Son have the contract for the erection of a three-storey brick store and dwelling, and detached stable on the north side of Bloor street, near Brunswick avenue, for Wm. Unser, 404 Spadina avenue. Plans for the structures, which will cost \$5,000, were prepared by the Designing and Drafting Company.

Toronto.—The McLaughlin Carriage Company, of Oshawa, Ont., has purchased the property on the north-west corner of Church and Richmond streets, on which they will erect a large garage. The site has a frontage of 95 feet on Church street, and 110 feet on Richmond.

London, Ont.—R. A. Y. Stinchcombe

will erect a block of eight stores on the west side of Richmond street, north of Maple street.

Brantford, Ont.—A permit has been issued to Charles Whitney for the rebuilding of the business buildings at 49 and 51 Colborne street, recently damaged by the explosion.

Montreal, Que.—E. Doran, 650 St. Denis street, has awarded to A. Chenert & Co., 108 Deloraine avenue, the contract for the erection of a brick veneer office building on St. Catherine street, at estimated cost of \$4,150. The building will have felt and gravel roof, and will be equipped with hot water heating.

Montreal.—Alf. Binet, 639 Ontario St. east, has taken out a permit for the erection of three buildings, containing nine storeys, on Aberville St., at cost of \$9,000.

Vancouver, B.C.—Hon. Carter Cotton will erect a seven-storey fireproof building to cost \$200,000 on the corner of Cambie and Hastings streets. Plans for the building have been prepared by Architect A. Arthur Cox, Montreal, Que.

Vancouver, B.C.—A permit has been issued for a three-storey store and office building to be erected on Hastings street, between Carrall street and Columbia avenue, for Mr. Joseph Dodson. The building will have a frontage of 50 feet on Hastings street. Estimated cost, \$46,000.

Edmonton, Alta.—John Cobb has been awarded the contract for the erection of an addition to the rear of meat shop of Messrs. E. Burns & Company, Ltd., on Jasper avenue. The addition will cost \$10,000.

Winnipeg, Man.—Negotiations are pending between the Dominion Government and the City of Winnipeg, whereby the Government will take over the market property in Elmwood, to be used as a site for the new post office, which is to be erected at a cost of \$40,000.

Banks

Hamilton, Ont.—The Imperial Bank has purchased the property at 39 South James street for the purpose of erecting a new bank building.

Bolton, Ont.—Tenders were recently received for the erecting of a bank building for the Imperial Bank at this place. Darling & Pearson, of Toronto, are the architects.

Winnipeg, Man.—The Bank of Montreal has purchased a site on the south-east corner of Portage avenue and Main street for the purpose of erecting a bank building to cost in the neighborhood of half a million dollars. The property has a frontage of 125 feet on Main street and 238 feet on Portage avenue.

Saskatoon, Sask.—The Union Bank of Canada has purchased a site having 50 feet frontage on Second avenue, where the present bank is located, and will proceed with the erection of a new structure early next year.

Battleford, Sask.—The Bank of British North America has purchased a site on 22nd street for the purpose of erecting a new bank building, plans for which have just been completed.

Railway Construction

Ottawa.—The National Transcontinental Railway has awarded to Messrs. O'Brien & McDonald, Renfrew, the contract for the construction of two sections of the National Transcontinental Railway. Contracts have also been awarded to a construction syndicate, of which Mr. O'Brien is the head, for the building of two other sections.

Ottawa, Ont.—A permit has been issued to the Grand Trunk Railway for the erection of a frame yard-master's office on Isabella street, to cost \$11,000.

Ottawa, Ont.—The old stone and brick dwellings behind the Central Station are being razed preparatory to the erection of the new freight sheds. Superintendent Donaldson, G. T. R., can be addressed.

Ottawa, Ont.—Holbrook & Sutherland have the contract for the erection of the new solid brick car sheds on Augusta street for the Ottawa Electric Railway Company, at a cost of \$30,000. Plans for the structure were prepared by Architect J. A. Ewart.

Webbwood, Ont.—The C. P. R. round-

house at Webbwood, Ont., has been destroyed by fire, entailing a loss of about \$12,000.

Allandale, Ont.—The Grand Trunk Railway will, in the near future, erect new car shops at this place. Estimated cost of improvements, \$150,000.

Fort William, Ont.—Tenders, addressed to J. Oakley, chairman of the Street Railway Committee, will be received at the City Clerk's office up to 6 p.m., Oct. 16, for the erection of a car barn and machine shop at the junction of Walsh and Franklin streets. Plans and specifications on file at the office of H. S. Hancock, City Engineer.

Montreal.—The C. P. R. roundhouse at Mile End, a suburb of Montreal, has been damaged by fire to the extent of \$20,000.

Valois, Que.—The C. P. R. station at this place has been completely destroyed by fire.

Winnipeg, Man.—Tenders were received up to Oct. 8, for the construction of locomotive shops east of Winnipeg. P. E. Ryan, Secretary, The Commissioners of the Transcontinental Railway, Ottawa, Ont., can be addressed.

Edmonton, Alta.—A permit has been issued for the new car barns to be erected on Syndicate avenue for the local street railway at cost of \$2,700.

Vancouver, B.C.—It is reported that the Canadian Pacific Railway is contemplating the erection of a \$200,000 addition to the station at this place.

Sutherland, Sask.—The Canadian Pacific Railway has awarded to Duncan McArthur, of Winnipeg, the contract for the erection of the new station at Sutherland, a suburb of Saskatoon. Contract price, \$7,000.

Sutherland, Sask.—The Canadian Pacific Railway has purchased 960 acres at this place for the purpose of constructing extensive shops and roundhouses.

Clubs and Societies

Toronto.—The York Masonic Hall Company has decided to build a new hall on Yonge street, just south of Eglinton ave. North oronto.

Winnipeg, Man.—A permit has been issued for the Y. W. C. A. building to be erected on Ellice avenue, at cost of \$85,000.

Asylums and Hospitals

Owen Sound, Ont.—A by-law will be submitted to the ratepayers of Owen Sound regarding the purchase of a site and the erection of a hospital building at this place.

Peterboro, Ont.—Hon. Senator Cox will provide for a three story 21 by 43 feet addition to the buildings of the Hazel Brae branch of the Barnardo Homes, which was originally donated by himself. The basement floor will contain lavatories, laundry and furnace rooms; the first floor will be used for dining rooms, and associated apartments; and the second floor will be devoted to sleeping rooms. New verandahs will be built, new hot water heating system will be installed, and the entire building will be thoroughly renovated. It is estimated that the cost of these improvements will be from \$12,000 to \$15,000.

St. Catharines, Ont.—Architect A. E. Nicholson has completed plans for a Tuberculosis Hospital building, to be erected at this place. The building will be two stories in height, of frame construction, with stone foundation, single roof, pine interior finish, steam heating, electric lighting, and plumbing. Specifications include metallic lath, and refrigerator.

Prescott, Ont.—The Town Council is contemplating the erection of a new hospital building.

Verdun, Que.—The contract for the erection of the Verdun Hospital has been awarded to Geo. W. Nicholson, Merchants Bank Building, Montreal. Plans for the building were prepared by Architects Brown and Vallance, Canada Life Building, Montreal, Que. Other contracts awarded are: painting, R. E. Jones, 6 McNeil College avenue; ornamental iron, Dynamic Machine Works, 63 Dalhousie street.

Calgary, Alta.—It is proposed to submit a new by-law to the local ratepayers

for the purpose of authorizing the expenditure of \$95,000 for the construction and equipment of a new hospital building at this place.

Churches

Toronto.—A permit has been issued for the erection of a two-story brick Sunday school, and for alterations to the church building at the south-east corner of Queen street and Carlaw avenue, at estimated cost of \$15,000. J. L. Havill, Mail Building, is the architect.

Ottawa, Ont.—The Quarterly Board of the Dominion Methodist Church, has approved the sale of the present church building to the C. Ross Company, for the sum of \$25,000. A new church will be erected on a site to be selected farther south on Metcalf street.

Ottawa, Ont.—A Slack has been awarded the contract for the new Ottawa South Methodist church to be erected at the corner of Aylmer avenue and Bank street. The building will be of solid brick construction, 64 by 43 feet, with seating capacity of 400, and will have choir room, minister's study, and basement the full length of the church.

Peterborough, Ont.—The trustees of the St. James Methodist Church have taken out a permit for the Sunday school building, to be erected at the corner of Romains and Aylmer streets. The building will be 66 by 42 feet, with brick walls with stone trimmings, and stone foundation. Estimated cost, \$11,000. H. G. Stabler can be addressed.

Peterboro, Ont.—The Board of Managers of the Park Street Baptist Church has taken out a permit for a new church building to be erected at cost of \$7,000. The building will be of brick construction with cement and stone foundation. T. G. Gillespie can be addressed.

Hamilton, Ont.—The congregation of St. Mary's Cathedral have decided to spend the sum of \$10,000 in improvements to their church.

Hespeler, Ont.—The contract for the new Presbyterian Church to be erected here has been awarded to Jacob Baetz, of Berlin, Ont., the contract price being in the neighborhood of \$18,000. The building, which it is expected will be completed by August next, will be 62 by 122 feet, with spire 115 feet in height, of cut stone construction, with slate roof.

East Mountain, P.O. N.S.—The Methodist Church at this place has been destroyed by fire.

Saskatoon, Sask.—The contract for the erection of the new Baptist Church has been awarded to Messrs. F. Wood & Company at a contract price of \$4,500. Architects Webster & Noel prepared the plans.

Saskatoon, Sask.—The congregation of the Church of England intends building a new church in the near future.

Winnipeg, Man.—The congregation of St. Matthew's Anglican Church has taken out a permit for a new church building to be erected on the south-east corner of Sherbrooke street and Ellice avenue, at cost of \$13,000.

Residences and Flats

Toronto.—H. Hutson, 43 Victoria street, has been granted a permit for the erection of five pairs of two-story and attic semi-detached brick dwellings on the west side of Manning avenue, near Bloor street, at cost of \$25,000. Architect, J. H. Stanford, 34 Yonge Street Arcade. Builder, owner.

Toronto.—Mrs. Charles May, Traders Bank Building, will erect a two and a half story brick dwelling and detached garage, on Binscarth road, near Glen road, in accordance with plans prepared by Architects Wickson & Gregg, 59 Yonge street. The contract for the work, which will cost \$12,000, has been let to Gratton Bros.

Toronto.—Architects Simpson & Young, 17 Toronto street, have awarded the mason contract on the proposed \$7,000 residence to be erected at the corner of Markham and Ulster streets, for Mr. R. I. Henderson, to H. T. Love, Logan ave. Messrs. Ainley & Son have secured the carpentry contract. The building will be of brick construction, with stone trimmings, cement floor in basement, slate

roof, hardwood interior finish, four brick and the mantels, combination lighting, and hot water heating.

Toronto.—C. Bulley has the contract for the erection of two pairs two-story and attic, semi-detached brick dwellings on the north side of Riverdale avenue, near Logan avenue, at cost of \$10,000, for W. G. Robinson, 351 Broadview avenue.

Toronto.—H. N. Dancy & Son, 184 Howland avenue, have the contract for a two-story brick dwelling to be erected on MacKenzie avenue, near Hawthorne avenue, at cost of \$11,200, Mrs. F. R. Street, 31 Rose avenue. Architect, W. A. Langton, 43 Victoria street prepared the plans.

Toronto.—Architect J. A. Cowan, 65 Adelaide street east, has prepared plans for three attached residences to be erected on Berkeley street, near Wilton ave., for Mr. M. J. Sullivan. The buildings will be two storeys and attic in height, of brick construction with slate roof, open plumbing, hot air heating and gas and electric lighting. Specifications include asbestos materials, lead art glass and electric bells. Estimated cost, \$7,000.

Toronto.—Architects Simpson & Young, 17 Toronto street, have prepared plans for a \$4,000 brick store and dwelling, to be erected at the corner of Carlaw and Withrow avenues, for Mr. Jas. Paterson, Glen road. The building will have stone trimmings, composition roof, cement floor in basement, sidewalk lights, pine interior finish, electric lighting and hot air heating.

Toronto.—A. N. Garrett, of the Toronto World Publishing Company, has taken out a permit for the erection of a pair of two-story and attic semi-detached brick dwellings on Nanton crescent, near Dale avenue, at cost of \$9,000. Architect, J. A. Harvey, Manning Chambers. Builder, L. A. Peacock.

Toronto.—Architect A. J. Rattray has prepared plans for a two and a half story brick dwelling and a stable to be built on the south-west corner of Dunvegan road and Heath street, at cost of \$9,000, for W. L. Del Sreilber, 84 Spadina road. The contract for the work has been let to Geo. I. Loughheed, 149 Morse street.

Toronto.—F. Courtenmanche, 28 Howard Park avenue, has taken out a permit for the erection of two pairs of two-story and attic semi-detached brick dwellings on the south side of College street, near Roncesvalles avenue, at cost of \$12,000. Also two detached, two story and attic brick dwellings to be built in the same vicinity at a cost of \$7,000. Builder, owner.

Toronto.—C. R. S. Dinnick, 43 Victoria street, has taken out a permit for the erection of three pairs of two and a half story, semi-detached brick dwellings on Howland avenue, near Wells street, at cost of \$20,000. Builder, owner.

Toronto.—Architects Burke, Horwood & White, 25 Toronto street, have taken out a permit for the erection of a two and a half story brick apartment building on Glen road, near Harvard street, at cost of \$18,000. Elgie & Page, 21 Havelock street, have the contract for the work.

Toronto.—Architects A. Miller & Company, have prepared plans for a two-story brick dwelling on the west side of Forest Hill road, near Heath avenue, at cost of \$10,000. S. H. Chapman, President Ontario Wind and Engine Company, Elgie & Page, 21 Havelock street, have the general contract.

Toronto.—W. G. Robinson, 351 Broadview avenue, has taken out a permit for the erection of two pairs of two-story and attic brick dwellings on the north side of Riverdale avenue, near Logan avenue, at cost of \$10,000. C. Bulley, 18 Withrow avenue, is the contractor.

Toronto.—A permit has been granted Architect J. H. Stanford, 34 Yonge Street Arcade (in trust), for the erection of ten pairs of two-story semi-detached brick dwellings on the east side of Silver avenue, near Golden avenue, at cost of \$20,000.

Ottawa, Ont.—J. W. Nelson, Ottawa, has taken out a permit for the erection of a brick veneer row of dwellings on Second avenue, at cost of \$8,000. A permit has also been issued to Robert S. Elliott for the erection of a brick veneer dwelling on the south side of Mutchmor street, at cost of \$3,500.

London, Ont.—A permit has been issued

to Mr. John Hayman for a four-story apartment house to be erected on the corner of Queen's avenue and Wellington street.

London, Ont.—Recent permits have been issued for a cement block residence to be erected on West avenue for W. G. Howlett; a brick dwelling to be built on Edward street for H. Wilson; seven two-story brick dwellings and eleven frame cottages to be located on Duchesne avenue, for R. Wilson; and a two-story brick residence and barn to be constructed on Waterloo street for G. G. Steele.

Kingston, Ont.—F. M. Campbell has taken out a permit for the erection of a double brick dwelling on Bagot street, near Earl street. A permit has also been granted to J. W. Litton for the erection of a concrete dwelling on Alfred street, near the Street Railway Junction.

Chatham, Ont.—Messrs. J. Pigott & Sons have been awarded the contract for the erection of the new Charteris apartment house.

Hamilton, Ont.—Architect Herbert H. New, 608 Spectator Building, has prepared plans for a two and a half story, 44 by 28 feet residence to be erected on Glenfern avenue, for Miss Kate Smith, at cost of \$5,000. The building will be of pressed brick and shingle construction, hardwood interior finish, electric lighting, mantels, open plumbing and hot water heating.

Peterboro, Ont.—W. C. Ackerman will erect a brick dwelling on Park street, south of Simcoe street, at cost of \$4,600.

Montreal, Que.—The following contracts have been awarded for the erection of an apartment building containing thirty-five suites, for Dr. E. Dunbeau, 305 Sherbrooke street east; Masonry, Alf. Filion, 2435 Labelle street; steel, Dominion Bridge Company; plumbing and roofing, Blouin, Desforges & Latouraille, 6 Craig street west; heating, E. S. Manny & Co., Power Building. Plans for the structure were prepared by Architect G. A. Monette, 97 St. James street.

Montreal, Que.—L. Kellert, 77 MacKay street, has taken out a permit for the erection of a dwelling at 16 Sherbrooke street west, at cost of \$10,000. Architects, Hutchinson & Wood. Contractor, James Morison.

Montreal, Que.—A permit has been issued to the estate of the Hon. J. O. Villeneuve, 1506 St. Lawrence street, for the erection of two houses containing six dwellings, on Drolet street, at cost of \$8,000. Architect, J. A. Godin, 120a Park LaFontaine.

Montreal, Que.—Martal Dagenais, 82 Bienville street, has been awarded the contract for a dwelling to be erected on Boulevard street, St. Joseph Annex, for Mr. F. X. Decarie, 124 Villeneuve street, at estimated cost of \$6,000. Architect, G. A. Monette, 97 St. James street, Montreal.

Montreal, Que.—A. Vieux, 787 Cowan street, has taken out a permit for the erection of seven buildings, containing three stores and eighteen dwellings, on Ontario street, at estimated cost of \$20,000. A permit has also been granted to A. Wilson, Charron street, for the erection of three dwellings on Ash avenue, at cost of \$13,950.

North Ontario, Ont.—The residence of Albert R. Dewdney, on the second concession of East York and Victoria avenue, near North Toronto, has been completely destroyed by fire. Loss estimated at \$10,000 to \$12,000, partly covered by insurance.

Winnipeg.—H. T. Swart, manager of the Zenith Grain Company, is having plans prepared for the erection of a residence on Academy road, in Crescentwood.

Winnipeg, Man.—W. S. Ronald has taken out a permit for the erection of a residence at the corner of Stradbrooke and Nassau streets, at cost of \$8,000. A permit has also been granted L. A. Smart for the erection of a residence on Wardlow avenue, at cost of \$7,800.

Vancouver, B.C.—Mr. R. J. Geddes has taken out a permit for the erection of a \$4,900 residence on the north side of Nelson street, between Burrard and Thurlow streets.

Vancouver, B.C.—Mr. P. N. Smith will erect several frame dwellings on Bute street, at cost of \$13,000.

Vancouver, B.C.—Mr. W. J. Harrington has taken out a permit for the erection of two frame dwellings on Davie street, at cost of \$6,000. A permit has also been taken out by J. E. Guinet for the erection of a frame dwelling on Odium street, at cost of \$8,000.

Calgary, Alta.—A residence to cost \$5,600 will be erected on Fourth avenue, between Second and Fourth streets west, for G. C. King.

Edmonton, Alta.—Messrs. Simpson & McIvor have taken out permits for the erection of three pairs of semi-detached houses on Victoria avenue, at cost of over \$21,000.

Hotels

Toronto.—Architects Simpson & Young, 17 Toronto street, are preparing plans for an eight-story steel and concrete hotel building to be erected at the corner of King and Simcoe streets, for Mr. Lawrence Solman, at estimated cost of \$150,000. Tenders will be called for within thirty days.

Ottawa.—The plans and specifications for the new Chateau Gatineau, Limited, have been completed by Architect Warner E. Norfolk. Estimated cost of structure \$30,000. The contracts will be awarded as soon as a suitable site has been selected. The board of directors is composed of Messrs. Walter E. Walby, chairman; W. W. Nolke, Dr. Noel Chevler, Dr. Arcand, and W. R. Smith.

Kingston, Ont.—Mr. W. Telfer, proprietor of the British American Hotel at this place, proposes to erect a new \$150,000 hotel, providing the city will guarantee bonds for \$75,000, and give a fixed assessment for ten years.

Lakefield, Ont.—The Viamede, a summer resort on Ony Lake, recently destroyed by fire, will be rebuilt early next spring, so as to be opened for the summer trade.

Port Stanley, Ont.—Plans have been prepared for a fifty-room addition to Hotel Inverness, at this place.

Westboro, Ont.—The Barry Hotel at this place has been destroyed by fire, entailing a loss estimated at over \$15,000.

Edmonton, Alta.—Mr. Robert McDonald, proprietor of the Senate Hotel, has had plans prepared for the erection of a new \$20,000 brick and stone hotel on the corner of Fraser and Clara streets, north of the present hotel. The site has a frontage of 66 feet on Fraser street, and 100 feet on Clara street.

Fire Stations and Jails

Toronto.—Tenders, addressed to the undersigned, will be received by registered post only, up to 12 o'clock noon, Oct. 20 for the complete supply and installation of a tower striking clock in the tower of Fire Hall No. 12, Bolton avenue. Specifications and full information may be obtained at the offices of the Property Department, City Hall, Joseph Oliver (Mayor), Chairman Board of Control.

Cobalt, Ont.—The contract for the hose tower and police station to be erected at this place has been awarded to David Hood.

Brandon, Man.—At a meeting of the Civic Committee it was decided to erect a brick fire hall, in accordance with plans and specifications prepared by City Engineer Shillinglaw. Estimated cost of structure \$5,150.

Opera Houses and Rinks

Toronto.—The Dominion Contract Company, 15 1-2 King street west, have been awarded the contract for a two-story brick and stone theatre building to be erected on the east side of Yonge street, near Bloor street, for M. E. Curtis (in trust), 39 Cecil street. The building was designed by Architects Penticost & Halliday, Traders Bank Building, and will cost \$60,000.

Toronto.—The Lakeview Curling Club's rink at 143 Harrison street, has been destroyed by fire. Loss, approximately, \$10,000, partly covered by insurance.

Cobalt, Ont.—Architect W. R. Graham has prepared plans for a skating and curling rink to be erected here for a stock company. The building will be

90 by 180 feet, 45-foot elevation, and will be of oval truss construction, with timber foundation and galvanized iron roof.

Peterboro, Ont.—M. Pappas has taken out a permit for alterations to building on George street, to be used as a moving picture theatre. The improvements to the building will amount to \$3,250.

Keewatin, Ont.—The Keewatin Rink Company, Limited, will erect a curling rink, 32 by 160 feet.

Schools and Colleges

Toronto.—Upper Canada College has decided to expend the sum of \$8,000 on additional equipment to their buildings. New dressing rooms will be provided; two new classrooms will be built opposite classrooms A and B; an additional classroom will also be built to the preparatory school and an extra house accommodation will be added to the south-west corner of the building. Symons & Rae, 15 Toronto street, are the architects.

Toronto.—The Management Committee of the Board of Education has decided to purchase the old Yorkville waterworks property on Avenue road, near Lynwood avenue, on which to erect a school building, to relieve the overcrowding at Cottingham street school. The site is 208 feet square.

Toronto.—The Management Committee of the Board of Education has decided to call for tenders for Science rooms at the North-West High School and at Harbord Street Collegiate Institute.

Toronto.—The School Board has decided to erect a four-room annex to the Eglinton school and a two room annex to the Davisville school, in place of the school building it was proposed to erect at Bedford Park. The Board will ask the Council to appropriate \$18,000 for this purpose.

Ottawa, Ont.—The Separate School Board has taken out a permit for the erection of a brick addition to the Catholic Lycium on Nepean street, at cost of \$16,500.

Dundas, Ont.—The Building Committee of the Board of Education has awarded contracts as follows for the new High School building to be erected at this place: Masonry, Frid Bros., \$8,960; carpentering, John Poag & Co., \$1,576; heating, Rogers, Gibson & Co., \$1,946; roofing, John E. Riddell, \$906; all of Hamilton. The plastering was awarded to Wm. Scott, at \$756, and the painting was let to S. C. Patterson at \$650, both of Dundas.

Bedford Park, Ont.—The Community of the Sisters of Loretto, who have charge of Loretto Academy on Wellington Place, Toronto, have obtained options on ten or twelve large pieces of property at this place, where they intend to erect an academy for young women.

Brantford, Ont.—A by-law will be submitted to the local ratepayers next January for the purpose of authorizing the expenditure of \$60,000 for the erection of a new Collegiate building. The building will in all probability be erected on the present site on George street.

Notre Dame de Grace, Que.—D. M. Long, 39 Windsor street, Montreal, who has the general contract for the erection of the St. John's School at this place, has sub-let the stone and brickwork to G. W. T. Nicholson, 300 St. James street, Montreal. Plans for the building were prepared by Architects Finley & Spence, Guardian Building, of that city.

Cote St. Paul, Que.—Contracts have been awarded as follows for the new school building to be erected here for the Protestant School Board at an estimated cost of \$11,000: Masonry, etc., F. Touchy, Cote St. Paul, and J. Wilson, 99 Inspector street, Montreal; carpentry, roofing, plumbing, heating, painting, electric wiring, plastering, etc., Jacob & Co., 27 Agnes street, St. Henry; Jas. E. Adams, Christine, Building, Montreal, is the architect.

Winnipeg, Man.—Messrs. Jas. Bannalyne Company, Limited, has been awarded the contract for the installation of heating and ventilating system in the Cecil Rhodes School.

Shanawan, Man.—Tenders were received up to Oct. 10, for the construction of a public school building for the school

district of Shanawan No. 1472. A. S. Yarwood is the secretary treasurer of this school district.

Fernie, B.C.—The Provincial Government has made the following grants to the town of Fernie, B.C., viz.: New school building, \$26,000; municipal buildings, \$6,000; sidewalks and repairs to streets, \$5,000. The Government will also rebuild the bridges over the Elk river and Coal creek.

Moose Jaw, Sask.—The Moose Jaw Hardware Company has been awarded the contract for the heating, ventilating and plumbing to be installed in the new collegiate institute. The Pease-Walton system of heating and ventilating will be used.

Lethbridge, Alta.—The School Board has decided to erect a new school building in the North Ward.

Civic Improvements

Toronto.—The City Engineer has recommended the construction of the following pavements and sewers, viz.: Asphalt pavements—Lucas street, from Sorareuen to Roncesvalles, \$7,811; Riverside avenue, from Logan to Carlaw ave., \$3,680; Humbert street, from Dundas to Dovercourt road, \$6,460; Harbord street from Spadina to Bathurst, \$19,143. Bitulithic pavements—Alhambra avenue, from Bunshead to Thorold, \$5,532; Brighton ave., from Pape avenue to east end, \$2,188; Hewitt avenue, from Roncesvalles to Indian road, \$7,758. Vitrified block pavements—Sudbury street, from Abel to Dovercourt road, \$5,858; Lisgar street, from Queen to Sudbury street, \$6,930. Sewers—Fairview avenue, from Broadview to Bowden, \$2,270; St. Claren's ave., from Lappin avenue to Royce, \$2,230; Newsham street, from Brock avenue to east end, \$650.

Toronto.—The City Engineer has recommended the laying of the following new pavements, viz.: Asphalt Badgerow avenue, from Pape avenue to a point 583 feet east, \$3,050; Lucas street, from Sorareuen avenue to Roncesvalles, \$7,811; Arlier avenue, from Perth to Franklin, \$2,672. Bitulithic—Scarth road, from Chestnut Park road to the north-westerly limit of Lot No. 23, \$6,388.

Dundas, Ont.—The Board of Works has awarded the contract for building approximately 23,000 feet of cement sidewalks on various streets to John W. Wickson.

Niagara Falls, Ont.—The Queen Victoria Niagara Falls Park Commission has awarded to Messrs. Upper & Lobb, of St. Catharines, the contract for the construction of a section of Niagara boulevard, which is two and three-quarter miles long. Contract price, \$22,500.

Brantford, Ont.—At a meeting of the Board of Works by-laws were passed consummating agreements with the Bitulithic Paving Company, for the paving of King street; with Westrumite Company for the paving of Dufferin avenue; and with Messrs. Reid & McGrath for the construction of the Eagle Place drain, at estimated cost of \$2,500.

Brantford, Ont.—The City Council has decided on the following improvements: Permanent pavement on a six-inch concrete foundation, with concrete curbs and gutters, on Market st., from Erie ave. to West street, exclusive of Colborne street intersection, \$56,000; permanent pavement on a five-inch concrete foundation, with concrete curbs and gutters, on King street, from Colborne street to Dalhousie street, \$3,698; permanent pavement on a five-inch concrete foundation, with concrete curbs and gutters, on Queen street, from Colborne street to Dalhousie street, \$2,508; permanent pavement on a five-inch concrete foundation, with concrete curbs and gutters, on George street, from Wellington street to Durham street, \$24,382; permanent pavement on a five-inch concrete foundation, with concrete curbs and gutters, on Charlotte street, from Colborne street to Dalhousie street, \$3,168.

Winnipeg, Man.—The city of Winnipeg has decided to construct the following local improvements, viz.: Asphalt pave-

ment on Inksater avenue, from Main street to Scotia street, estimated cost, \$28,432; asphalt pavement on Agnes street, from Wellington avenue to Ellice avenue, \$25,795; asphalt pavement on Toronto street, from Portage avenue to Ellice avenue, \$22,546; granolithic walks on sections of the following streets: Inksater avenue, Buell avenue, Fountain street, Notre Dame avenue, Main street and Princess street; sewers on sections of the following streets: Fleet avenue, Ingersoll street and Ellice avenue.

Pincher Creek, Alta.—The by-law to raise \$20,000 for local improvements at Pincher Creek, Alta., has been given its third reading and passed in council. Tenders for the debentures are being advertised for.

Miscellaneous

Toronto.—Charters have been granted to the following companies: Canadian Flux Mills, \$1,000,000, directors, David Forbes Keith, A. R. Campbell, A. F. White, W. E. L. Hunter and E. B. Ross; United Oil Fields, \$1,000,000, directors, W. H. Cooper, L. K. Cameron, C. Brown, G. P. Sylvester, J. F. Lennox, W. Alfred, and C. W. Selton; Holt Timmer Co., \$1,000,000, directors, E. B. Ryckman, C. S. MacInnes and C. C. Robinson; American Card Paper Ware Company \$300,000; Canadian Barrel Handle and Vener Company, \$50,000, directors, M. Armstrong, H. J. Armstrong, J. B. McKinnon, J. G. Caimo and W. E. Lount; The Hoop-spring Cushion Tire Company, \$150,000; the American Multigrain Sales Company, \$40,000. The headquarters of all these companies is given as Toronto.

Toronto.—Charters have been granted to the following companies: Algoma Development Company, capital, \$150,000, Toronto; Dominion Contract Company, capital, \$40,000, Toronto; Pratt, Limited, \$40,000, Sault Ste. Marie; Universal Pure Water Company of Canada, capital, \$100,000, Toronto.

Toronto.—Mr. T. C. Bate, President of the Central Canada Exhibition Association states that in all probability a new fireproof grand stand will be erected at the Exhibition grounds this coming year.

Toronto.—The boat house at the foot of Bathurst street has been destroyed by fire. The building was owned by Mr. E. Housey, who used the upper storey as a gasolene engine machine shop. The loss on building and contents is estimated at, approximately, \$10,000, with insurance of about \$8,000.

Strathroy, Ont.—The Albert Block, occupied by Geddes Brothers, dealers in dry goods, millinery, etc., and Geo. Lamotte, groceries, china, etc., has been completely gutted by fire. Loss approximately \$50,000, partly covered by insurance.

Altona, Man.—The following buildings were recently destroyed by fire, viz.: L. P. Yoerger's hardware store, D. W. Fresen's confectionery store, post office, the office of the Manitoba, Western Canada Land Company, the Commercial Hotel and W. & I. Coblenz's general store. Total loss is approximately \$50,000, partly covered by insurance.

Greenwood, B.C.—The following buildings at this place were recently destroyed by a fire which broke out in the Greenwood Lyeing and Clothing Shop: The Victoria Hotel, proprietor, Hugh McGillivray; Jones' bakery, and Holmes & Kennedy's grocery store. The Palace Livery was also damaged. Loss, approximately \$30,000.

Vancouver, B.C.—The bakery plant of Hanbury & Evans and dry goods establishment of P. A. Bingham, have been destroyed by fire, entailing a joint loss of approximately \$50,000.

London, Ont.—Mr. R. A. Y. Stinchcombe has decided to build a store building at the corner of Kent and Richmond streets, and on the property adjoining, a modern apartment house. The apartment house will be three stories in height, and will contain twelve suites of rooms; it will, in all probability, not be built until spring. The work on the new store will be commenced at once.

St. Catharines, Ont.—Tenders, addressed to the Chairman of the Committee on Works, will be received at the office of the City Clerk, up to noon, Oct. 19, for the construction of an asphalt block pavement on Ann street. D. Benzle, C.E., City Engineer.

Toronto.—Tenders will be received by the undersigned, by registered post only, up to noon, Oct. 20, for the construction of asphalt pavement, macadam pavement, asphalt block pavement, vitrified block pavement, concrete curbs, concrete walks and sewers on various streets throughout the city, as per plans and specifications on file at the office of the City Engineer.

Quebec, Que.—Architects Ouellet & Levesque, 115 St. John street, are preparing plans for an apartment building to be erected on St. Cyrille street, for Mr. Edgar Felleter, Notre Dame des Agnes street. The building will be three stories in height, of brick construction, with stone foundation, and hot water heating, and will cost \$7,000.

Toronto.—A. L. East, 116 Lansdowne avenue, has taken out a permit for the erection of three detached two-storey brick dwellings, at the corner of Harward and Cullendar streets, at a cost of \$3,000. Architect and builder, owner.

London, Ont.—W. S. Davidson, contractor, has taken out a permit for the erection of a double brick residence at the corner of Moutout street and Windsor avenue.

Listowel, Ont.—The Morris Piano Company's main factory, at this place, has been completely destroyed by fire. The building used for tuning and readjusting, and the general offices have been but slightly damaged. No accurate estimate of the loss has been made, but it will, in all probability, amount to about \$75,000, mostly covered by insurance.

Montreal, Que.—Permit has been issued to the St. Aloysius congregation, 1-1/2 Notre Dame St. West, for the erection of a church building at the corner of Nicholet and Sadacona Sts., at estimated cost of \$36,000. Architect, J. A. Karch, 17 Place d'Armes Hill. Contractors, Sparrow & McNeil, Coristine Building.

Toronto.—Dr. F. L. M. Grasset, 208 Simcoe St., has taken out a permit for the erection of a two-storey and attic brick dwelling on the east side of Forest Hill Road near St. Clair Ave., at cost of \$12,000. Architects, Darling & Carson, 2 Leader Lane. Builder, John McMurren.

Winnipeg, Man.—Messrs. F. W. Heubach, Limited, have decided to build forty residences on Monk Ave., St. Mary's Road, Lisgar Ave., Dufferin Ave., and Lorn Ave., Norwood, suburb of Winnipeg. The houses will cost \$150,000. The basements will be completed this fall, and the superstructures are to be completed early next season.

St. Thomas, Ont.—The St. Thomas Horse Show Association is contemplating the erection of a building for their exhibitions at this place.

Vancouver, B.C.—D. E. Harris, Vancouver, has taken out a permit for the erection of a brick apartment house on Seymour St., at cost of \$10,000.

North Sydney, N.S.—Tenders will be called for in the course of a few days for the new church to be erected here for the congregation of St. Joseph's church. The foundation will be of concrete and stone, and will be built heavy enough to maintain a stone structure should the parish decide to erect same.

Vancouver, B.C.—Messrs. P. Burn's & Company have taken out a permit for the erection of a brick store and office on Hastings St., at cost of \$17,000.

Toronto.—The residence of Mr. A. R. Gilmore on the Lake Shore Road, near Mimico Ave., has been completely destroyed by fire. The building was valued at \$8,600, with insurance of \$7,500.

Toronto.—Geo. Birdsal, 147 Garden Ave., has taken out a permit for the erection of four detached two-storey and attic brick dwellings on the south side of Garden Ave., near Roncesvalles Ave.; estimated cost, \$12,000.



DESIGN NO. 1.—A TWIN HOUSE IN CONCRETE BLOCKS, TO COST \$9,000. EXTERIOR IS FRANK AND ITS PROPORTIONS GOOD. THE PLAN IS SIMPLE AND DIRECT. EXCELLENT PRESENTATION. DESIGNS ALSO WELL ADAPTED TO MONOLITHIC OR CEMENT PLASTERED CONSTRUCTION.—BENJAMIN PROCTOR, ARCHITECT.

THREE CONCRETE DWELLINGS.—Competitive Designs for Dwellings Adapted for Either Concrete Block, Monolithic or Cement Plastered Construction.—Possibilities of Cement in Residence Architecture, Both in Design and Cost Demonstrated.

LAST MONTH we illustrated a colonial dwelling in concrete blocks, in which the designer demonstrated very credibly his knowledge of his material. His design was distinctly adapted to concrete blocks. But we illustrate this month three designs, two of which are intended to be constructed of concrete blocks and which are not so admirably adapted to this material.

The third design is intended to be of monolithic construction, but its large chimneys and heavy porch columns really adapts it better to concrete blocks than the other two designs.

The first two designs are possibly more suited in general style and detail to monolithic or cement plastered construction. The Spanish mission effect produced in the gables, porches and hoods suggest to the mind that grey cement plastered effect so prevalent in this style of house. However, with care in the selection of good blocks, with a well finished plain or bush hammered face, and with carefully executed special mould work for the porches, columns, door ways and gables, concrete blocks would produce an effect considerably more pleasing and appropriate than the first glance at the designs would suggest.

DESIGN NO. 1

This design provides for a twin house, to cost \$9,000, each side of which contains eight rooms. It may be constructed of plain or bush-hammered blocks and it is well adapted to monolithic or cement plastered construction. If built of concrete blocks, great care must be exercised in the molding of the specially shaped blocks to carry out the desired effect in the porches, entrances and copings.

The exterior expresses, unmistakably, a twin house, is frank in design, good in proportions and is an excellent rendition of the Spanish mission in modern dwelling construction. The presentation is excellent and the plan is simple and direct.

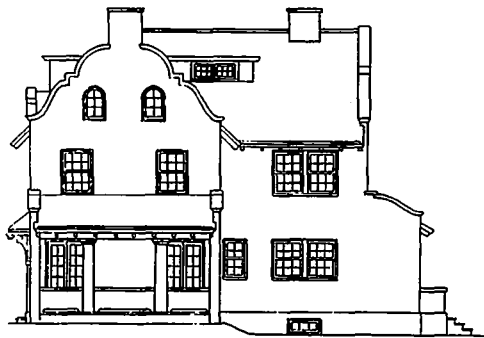
SPECIFICATIONS OF DESIGNER.

The exterior walls and foundations are of hollow concrete blocks.

The first storey partitions are also of concrete blocks.

The piazza columns, balustrades, copings, copings on gables, and the chimneys above roof are to be of concrete.

NOTE.—These designs were submitted in concrete dwelling architectural competition conducted by the Association of American Portland Cement Manufacturers in which many highly creditable designs were submitted.—EDITOR.



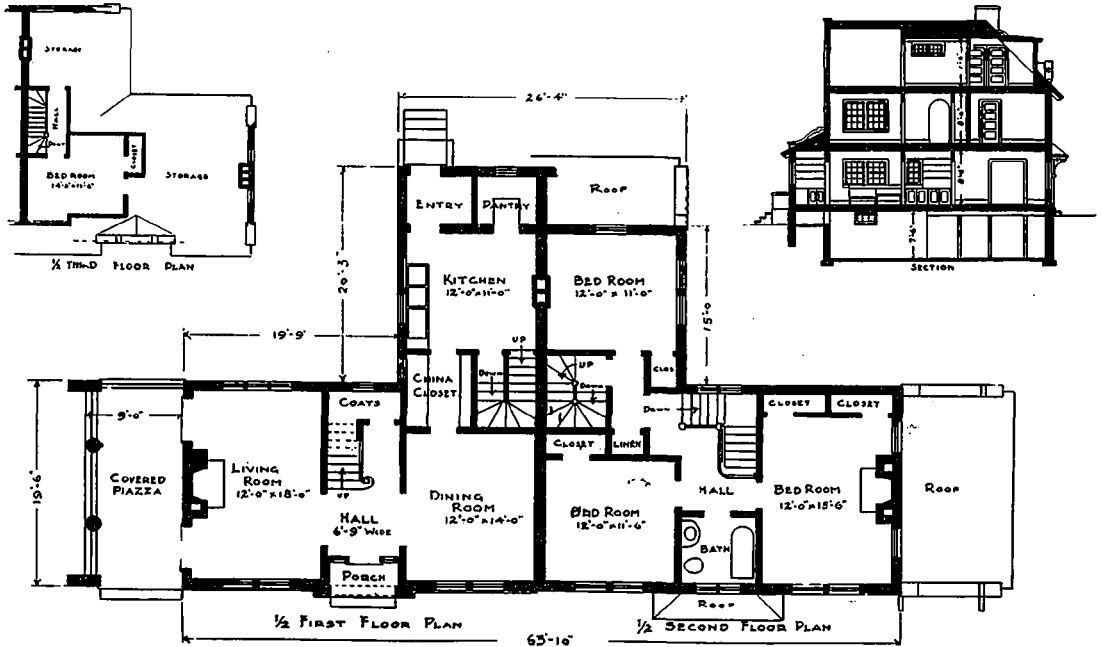
END ELEVATION OF DESIGN NO. 1.

C O N S T R U C T I O N

The walls are plastered inside, directly on the concrete, without furring.

Wood floor joists and rafters are to be used. The floors are of hard pine and the standing finish white-

Concrete and mason work	3,200.00
Plastering	400.00
Rough lumber	1,000.00
Finish floors, doors, windows, etc.	2,200.00



FLOOR PLANS AND SECTIONAL ELEVATION OF DESIGN NO. 1.

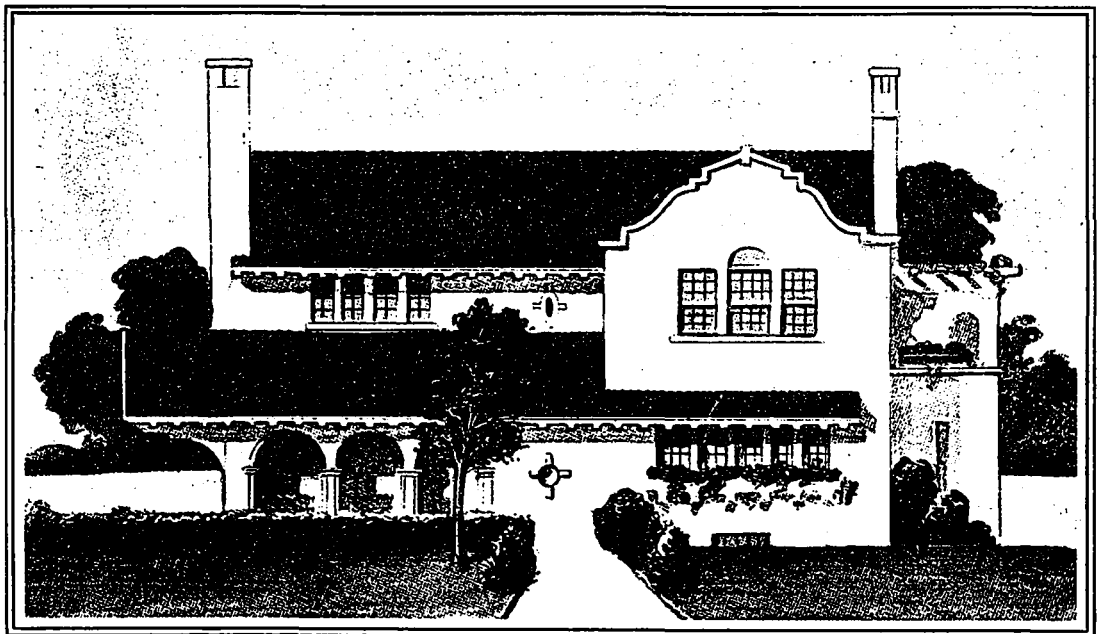
wood and cypress in principal rooms and white pine in service parts. The roofs are to be covered with shingles, stained red.

ESTIMATE OF COST.

Excavations, drains, etc. \$ 200.00

Painting	350.00
Hardware	150.00
Labor	1,500.00

Cubic contents, 62,567 cubic feet. \$9,000.00

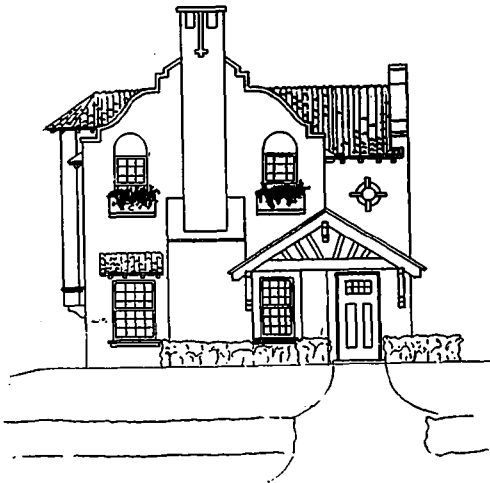


DESIGN NO. 2.—A MOST INTERESTING ADAPTION OF SPANISH-AMERICAN IN BUSH-HAMMERED CONCRETE BLOCKS. MONOLITHIC OR CEMENT PLASTERED WALLS COULD ALSO BE USED.—ALBERT C. WISER, ARCHITECT.

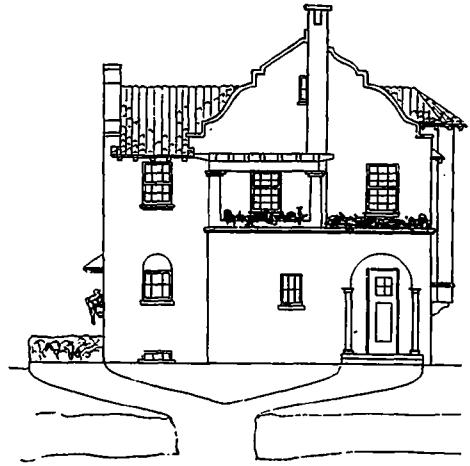
DESIGN NO. 2

This design is for a \$4,493 seven-room dwelling and

that is desired, and the idea is to keep the joints flush, so as to accent them as little as possible. Wood on exterior is dispensed with as much as pos-



END ELEVATION.—DESIGN NO. 2.



END ELEVATION.—DESIGN NO. 2.

is most interesting as a Spanish-American adaptation in bush-hammered blocks, monolithic or cement plaster construction.

The exterior looks more complicated than it really is upon analysis, as many of the cast architectural forms are, or could be, repeats. The plan might be simplified in several details, but on the whole is good.

DESIGNER'S DESCRIPTION.

This design employs the use of concrete and cement in a varied manner in the constructive and decorative parts of the building.

The intent is to use the hollow concrete blocks with preferably the bush-hammered face, though the plain facing would perhaps prove nearly as effective.

The bush-hammered blocks give an interesting texture

sible, being employed in the cornices only, the soffits of which are plastered in cement.

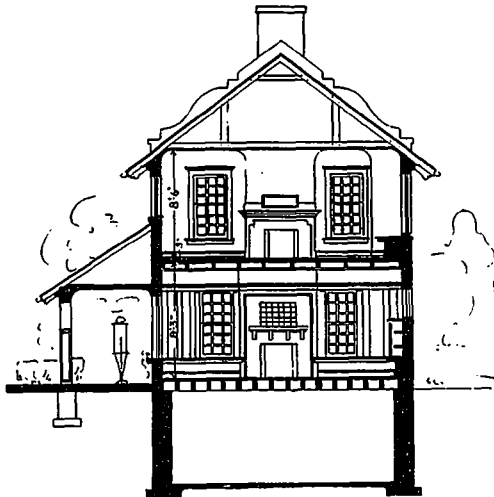
The gabled ends are coped parapets of cement, neatly shaped in the manner shown.

The chimneys are of concrete blocks with a tile flue lining. Porch floors and terrace pavement, as well as interior vestibule doors, are of cement mosaics to be arranged in some designated pattern.

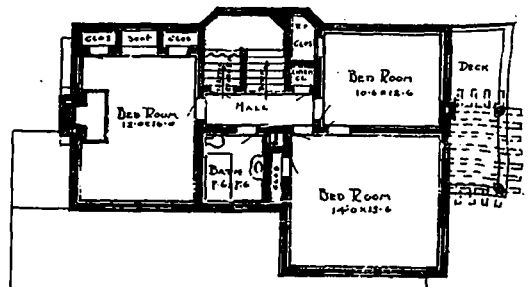
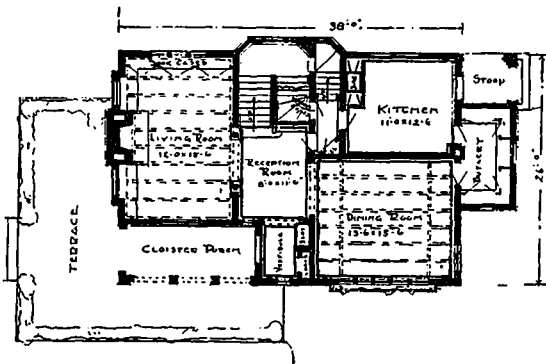
Interior partitions of basement and entire first floor are of concrete blocks.

The mantels are to be of cement with colored mosaics of cement, arranged in pattern.

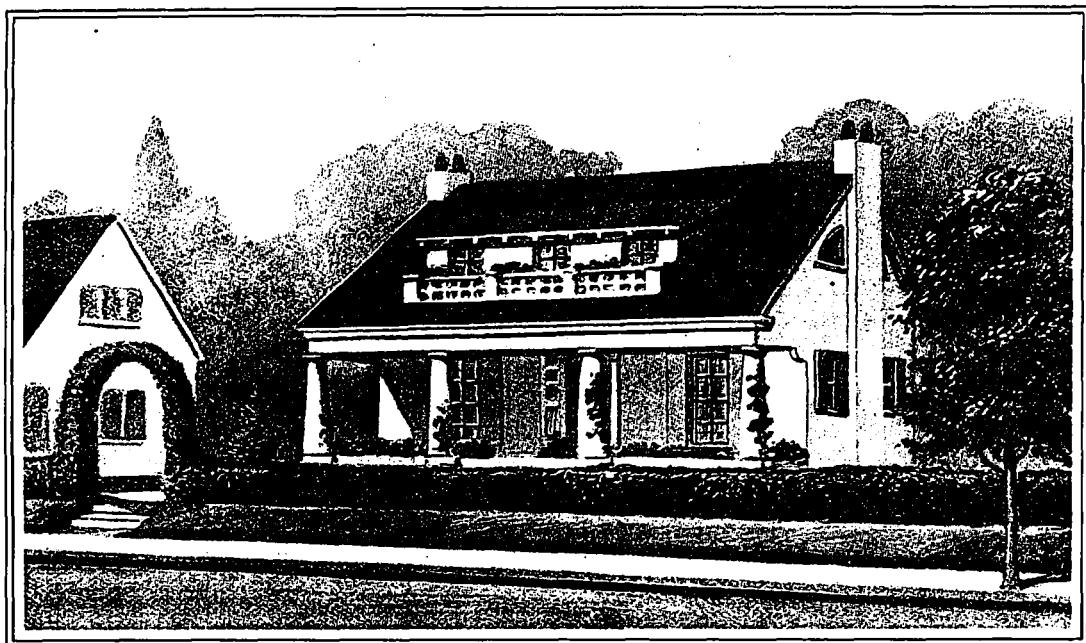
The house will have living rooms, reception rooms, dining room, kitchen and three large bed rooms, seven in all, with vestibule, bath and pantries, and a large open



SECTIONAL ELEVATION.—DESIGN NO. 2.



FLOOR PLANS.—DESIGN NO. 2.



DESIGN NO. 3.—A 4-ROOM CONCRETE COTTAGE TO COST \$2,000. THE DESIGNERS SPECIFICATIONS CALL FOR 12-INCH AND 6-INCH REINFORCED MONOLITHIC CONCRETE WALLS, BUT THE DESIGN IS WELL SUITED TO CONCRETE BLOCKS.—GEO. S. IDELL, ARCHITECT.

attic for store room purposes or possibly maid's room in addition.

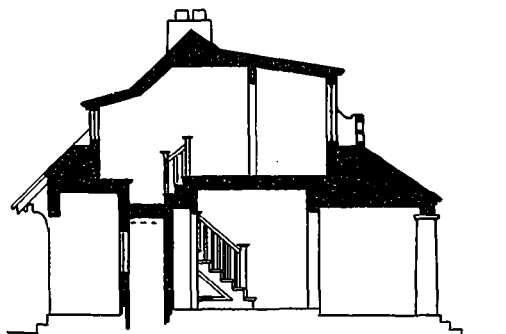
The interior trim below is treated with beams and

panels, while above the cement coves and cornices for bed room angles will make a most effective finish.

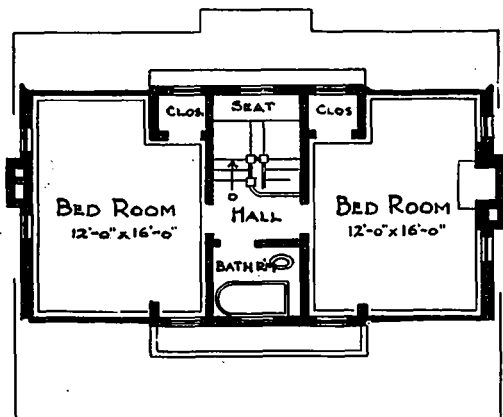
A tile roof of a Spanish pattern with a general color



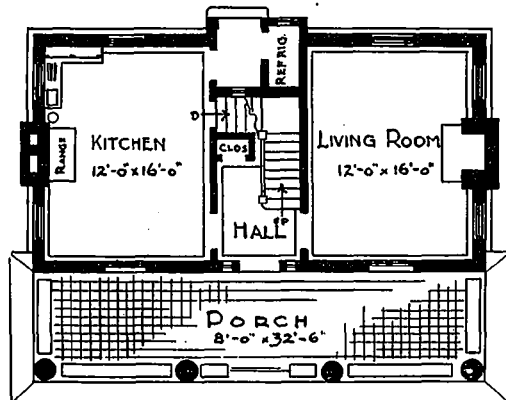
REAR ELEVATION.—DESIGN NO. 3.



SECTIONAL ELEVATION.—DESIGN NO. 3.



GROUND FLOOR PLAN.—DESIGN NO. 3.



FIRST FLOOR PLAN.—DESIGN NO. 3.

of a deep brownish red, with occasional greens and yellows to give interest and variety, forms a fitting color climax to surmount the gray white of the walls.

The use of evergreen boxwood hedges around porches and terraces, and window boxes filled with similar evergreen growth at points indicated on the elevations, give a touch of continual color, both summer and winter, that forms a fitting and a most necessary adjunct to the general scheme.

The itemized cost, as scheduled below, is compiled upon figures based on local prices for materials and labor in larger cities.

ESTIMATES OF COST.

Concrete foundations, house walls, partitions and porch floors	\$1,562.00
Carpenter labor, lumber, hardware	896.00
Mill work	983.00
Cement, plaster, mantels, etc.	255.00
Painting, staining, etc.	237.00
Tile roof, etc.	416.00
Copper metal work	114.00
Wrought iron balconies, grilles, etc.	30.00

Cubic contents, 29.046 cubic feet. \$4,493.00

DESIGN NO. 3

This design provided for a \$2,000 four-room concrete cottage, and while the designer suggests monolithic walls it is a fact that the design is exceptionally well adapted to concrete blocks. Two chimneys are hardly required on a house of this size and the use of round columns is to be criticized. Square or tapered piers, properly proportioned, would be less expensive and could be made almost, if not quite, as graceful.

The reinforced walls specified for the lower storey are thicker than required. The bush-hammered treatment of the exterior walls, while somewhat expensive, produces one of the most satisfactory and attractive textures obtainable.

DESIGNER'S DESCRIPTION.

It is proposed to construct a detached house, accompanied herewith, for the sum of two thousand dollars (\$2,000.00).

The outside walls, from footings to roof, shall be built of twelve-inch and six-inch reinforced monolithic concrete.

Concrete.—The outside walls above grade shall be furred and plastered, and on the outside face shall be bush-hammered.

Inside partitions, throughout, shall be of three-inch concrete blocks, on which the plaster shall be directly applied.

Plastering.—Two (2) coat work.

Lumber.—2 x 10 inch hemlock joist, 16 inches O.C.: 2 x 8 inch hemlock rafters, 2 feet O. C.

—White pine.

Floors.—Oak for first floor, hard rift pine for second.

Painting.—Floors stained and mill work painted white.

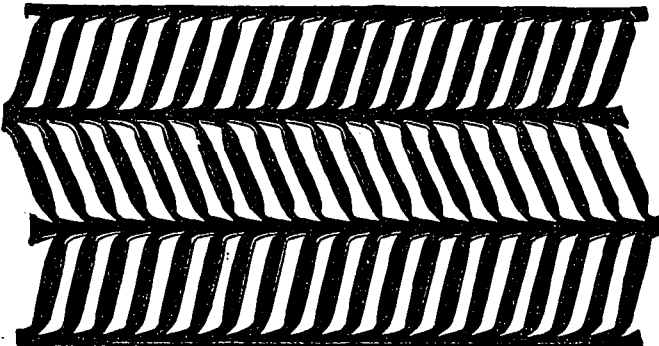
Brick work.—Porch to be paved with brick, laid flat: fireplaces to have brick faces and hearths.

ESTIMATE OF COST.

Excavations, concrete walls and partitions \$	560.30
Brick, pavement	34.84
Stairs	31.00
Lumber, carpenter, roofing and mill work	1,084.00
Finished fireplaces	100.00
Painting and glazing	25.00
Plastering	90.00
Gas piping	20.00
Miscellaneous, hardware and lighting fixtures	57.86

Cubic contents, 36.890 cubic feet. \$2,000.00

"HERRINGBONE" EXPANDED STEEL LATH



This is positively the most rigid expanded metal lath on the market. It is the easiest to apply on the studding and the easiest to plaster. It takes fewer studs and less plaster than any other expanded metal lath in the world. Its edges are absolutely uniform, and there is no waste from overlapping.

Contractors save money and make a far better job by using **HERRINGBONE**. Write for our literature and free samples.

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The METAL SHINGLE & SIDING CO., Limited
PRESTON, ONT.

Branch Office and Factory, Montreal, Que.

A SCORE AND TWO GOOD POINTS.

OVER a score of excellent arguments are advanced in favor of the splendid character of the Herring-Hall-Marvin safes, for which the Canadian-Fairbanks Company, Limited, are the selling agents in the Dominion. In material, construction and mechanism, it is claimed that these safes have many pre-eminent points, twenty-two of which are herewith set forth:

1. They are absolutely burglarproof.
2. They are really fireproof.
3. They insure protection from injury in falling while in a heated condition.
4. The interlocking flanges insure perfect fitting doors through which heat cannot pass nor shock displace.
5. The solid steel hand-welded angle frames give the greatest strength and resist the warping effects of terrific heat.
6. They have the strength to prevent destruction, should timbers, iron girders and other heavy bodies fall upon them.
7. They are lined inside as well as out with high-grade Bessemer steel, which has a tensile strength of 80,000 pounds to the square inch.
8. Batten bars, not found in ordinary safes, are used to reinforce Herring-Hall-Marvin safes and provide adequate protection against the tremendous effect of heat.
9. The rolled steel used in the construction is stronger, withstands the heat much better and affords greater protection to rivets than the metal used in ordinary safes.
10. No holes are cut in either the frame or door.
11. The five-ply drill-proof lock plate protects the lock.
12. The double grooved lock spindle is designed to prevent the driving in or driving out of this vital portion of lock mechanism.
13. They are equipped with the finest combination locks it is possible to make.
14. The fire plug prevents the ingress of heat through the lock space and further beautifies the appearance of the interior.
15. The special locking device automatically locks the safe in case of shock by accident or design.
16. They are filled with a fireproof composition which after years of experimenting with the most practical tests, is acknowledged by all scientists and experts to be the best heat-resisting composition known.
17. The hand-mixed fireproof composition used in their construction combines all the fireproof qualities of so-called chemical mixtures and is entirely free from all the injurious properties which cause corrosion and ultimate destruction of the metal parts.
18. The hand-mixed fireproof composition used in their construction not only makes the safes fireproof, but greatly adds to its strength.
19. The ball-bearing hinges prevent sagging and grinding, so common in ordinary safes.
20. The malleable iron hinges resist the heat much better than cast iron and obviate the possibility of breakage and the door falling in opening.
21. The special compartment and filing system cabinet are interchangeable to meet the requirements of any profession.
22. The general excellence of construction.

Additional information regarding the merits of these safes, together with catalogues, showing the different sizes, etc., can be obtained by addressing the Canadian

Fairbanks Company, Limited, at Montreal, Toronto, Winnipeg, St. John, Vancouver or Calgary.

AN ANALOGY.

WITHOUT going into details regarding the manufacture of and the various methods employed in producing sand-lime brick, let it suffice to say the product of any plant, where good sand and lime are obtainable, depends solely for quality upon the proper machinery being used in its preparation.

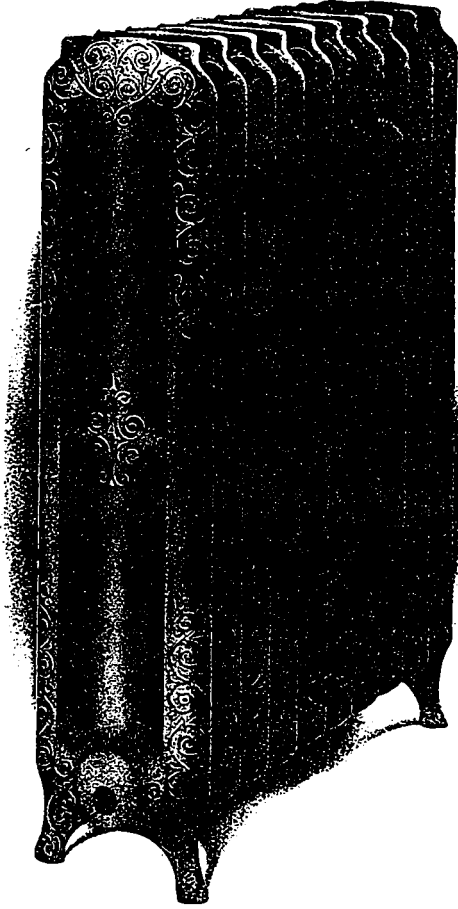
It is claimed that the introduction of the Schwarz System has done for sand-lime brick-making what the Bessemer process did for steel. The analogy is, indeed, remarkable. It is well known that the quality of steel is influenced in a very marked degree by the presence of the most infinitesimally small amount of carbon. Bessemer eliminated all the carbon and then put back in the charge the exact amount suitable for the kind of steel wanted. The vast importance of this simple improvement was soon recognized, and has resulted in the stupendous industry with which we are all familiar. It was the absolute uniformity and stability of the product which Bessemer's improvement insured, and that inspired the confidence of engineers in its use, and the confidence of capital in its development.

In the manufacture of sand-lime brick, a comparatively small amount of moisture over or under the specific amount suitable for the charge, has a very deteriorating effect on the ultimate quality of the brick. Irregularity in this part of the process has caused much trouble and loss to the manufacturer. The Schwarz process includes the elimination of all moisture and the putting back of the exact amount which experience has shown to be correct for perfect results. It is perfectly evident that however little lime is required to bind the sand together, that little must be made to permeate every portion of the mixture. Indeed, for the last degree of perfection each grain of sand should be coated over with lime to insure a binding film at all points of contact. This is insured by the use of the Schwarz preparing and mixing machine. Furthermore, by its use the amount of lime required is reduced from an average of 15 per cent. to from 2 to 6 per cent., besides the resultant product is a chemical combination in place of a merely mechanical mixture.

The purely mechanical portion of the Schwarz System consists of having the charge in a jacketed chamber containing revolving arms of peculiar shape. The chamber is sealed and a vacuum maintained until by stirring and agitating, the contents are thoroughly mixed. Then a definite predetermined amount of moisture is added, during further stirring, in the shape of spray or steam, resulting in a uniform quality of the product, which has been described as having the appearance of snow.

This chemically combined, snow-like material falls from the mixer directly into the brick press beneath, from which the moulded bricks are carried on tram-cars into a hardening cylinder, where they are treated to a bath of steam, at a pressure of 125 pounds for ten hours, at the end of which time they are ready for market. With ordinary care there need not be the loss of a single brick.

Full particulars regarding this system may be had by applying either in person or by letter to the Scientific System Brick Company, 79 Adelaide street east, Toronto, where the many samples of these brick on hand attests to their uniform, durable and excellent quality.



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SAFETY DEPOSIT VAULTS OF THE MERCANTILE TRUST COMPANY OF CANADA, HAMILTON.

THE illustration on this page shows the handsome and modern vault lately installed at the offices of the Mercantile Trust Company of Hamilton by the Goldie & McCulloch Co., Limited, of Galt, Ont.

The walls of vault are made of thicknesses of brick and concrete lined with five-ply welded chrome steel and iron. The interior of the vault is divided into two compartments, one for the reception of large articles such as silver plate, books, pictures, etc., and in the other is a steel cabinet containing small drawers, in which can be placed papers, jewelry, and other small articles. Between the

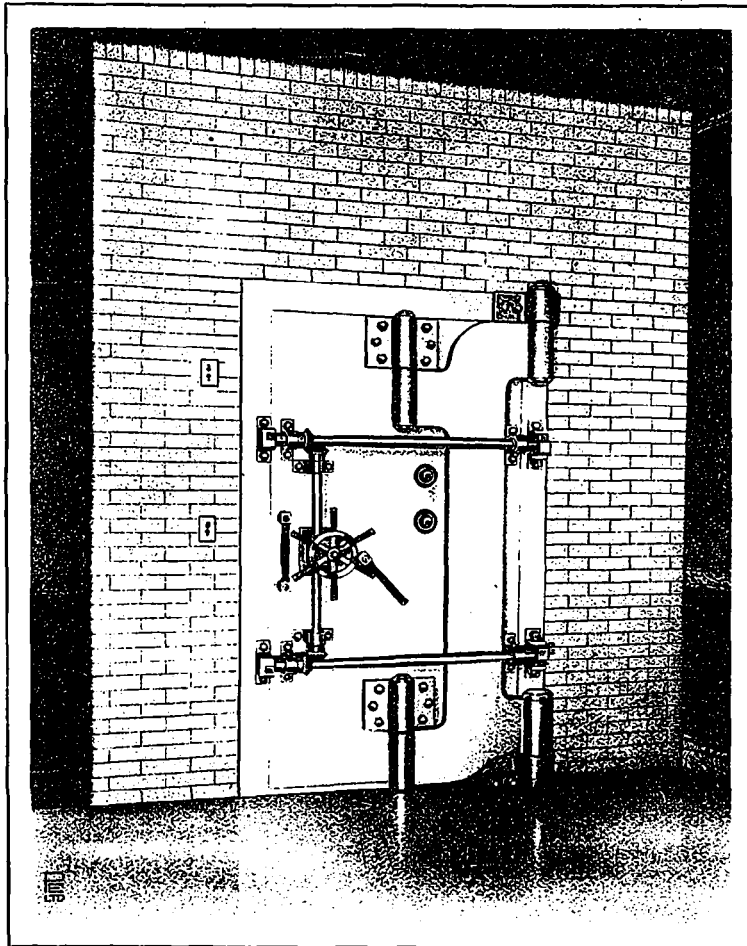
Goldie & McCulloch Co., Limited, have recently installed and which are being illustrated monthly in **CONSTRUCTION**.

The illustration in connection with our advertisement on page 13 of this issue shows this vault with doors open.

The above firm will be pleased to supply catalogues, estimates and any information to persons interested in the installation of safe and vault work of any kind.

TYPE OF FLOOR ARCH FOR NEW DENTAL COLLEGE.

AN INTERESTING engineering feature in the construction of the proposed Royal College of Dental Surgeons, designed by Messrs. Burke, Horwood & White, of Toronto, is the type of floor arch



MODERN VAULT RECENTLY INSTALLED AT THE OFFICES OF MERCANTILE TRUST COMPANY, HAMILTON.

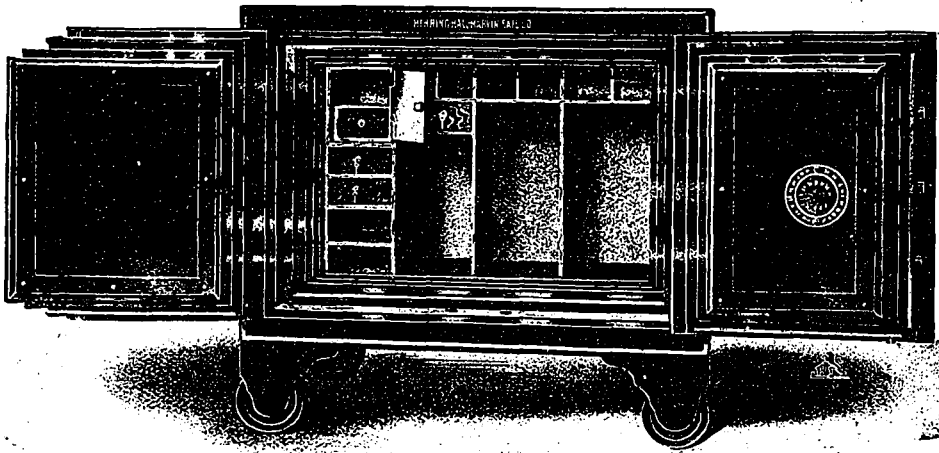
two is a massive and impregnable steel grid, a beautiful piece of workmanship. The outer and inner doors which give access to vault are made of five-ply welded chrome steel and iron, the outer door being operated by two double acting combination locks working in conjunction with a triple movement time lock. All lockwork and bolt work on the outer door is protected by a heavy plate glass door which is dust proof. The inner doors which are double are secured by two double acting combination locks.

The vault is also equipped with a strong and handsome folding day gate. This vault is one of a series which the

architects have specified. This type of floor arch is known as the "End Construction Flat Arch," and is claimed to be the lightest and strongest arch designed. It has been used, to a great extent, in the United States in steel construction, and it is specified by the leading architects and engineers in that country.

The contract for the fireproofing of this building, was awarded to the National Fire Proofing Company, with offices in the Traders Bank Building, Toronto.

We might say, with regard to this arch, that the strength is developed entirely by compression in spans of proper length. With careful workmanship and the



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FOR ALL PURPOSES

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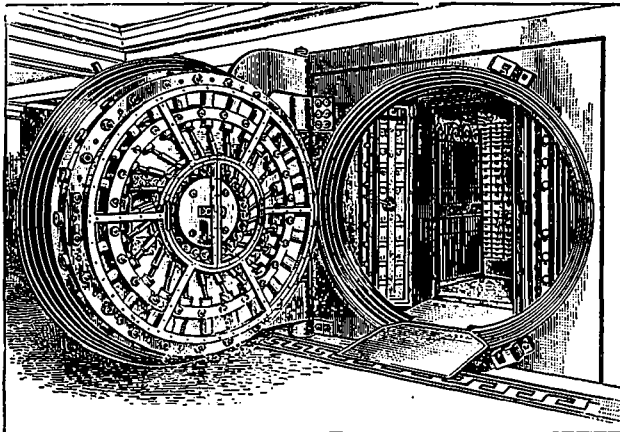
ST. JOHN, N.B.

TORONTO

WINNIPEG

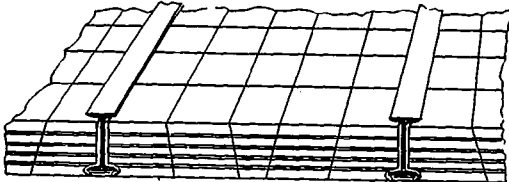
GALGARY

VANCOUVER



use of blocks the proper depth, this arch develops the full strength of steel beams. This feature is a highly important one in this type of architecture, and is so recognized by building ordinances in all the larger cities of the United States.

The National Fire Proofing Company have issued a very attractive booklet, which they are sending, upon request, to Canadian architects and engineers. The book is entitled "Long Span Fire Proof Construction in Reinforced Terra Cotta Hollow Tile." It is printed upon the finest quality of heavy, glazed paper, and is illustrated with a large number of handsomely printed two-color half-tones, in addition to two-color diagrams showing



PERSPECTIVE OF TYPICAL "END CONSTRUCTION" FLAT ARCH.

the several systems employed in the use of hollow terra cotta in fire-proof construction. Every architect and engineer should have a copy of this booklet, in so far as it deals with the most modern and approved systems of hollow terra cotta construction.

A number of half-tones are shown of structures in whose construction the various systems illustrated have been used. Other two-color half-tones show the actual application of hollow terra cotta in various buildings.

We might say for this booklet, that it is one of the most handsome, and, at the same time, instructive booklets that has been sent into this office for some time.

CANADIAN MADE VAULTS AND SAFES IN FOREIGN COUNTRIES.

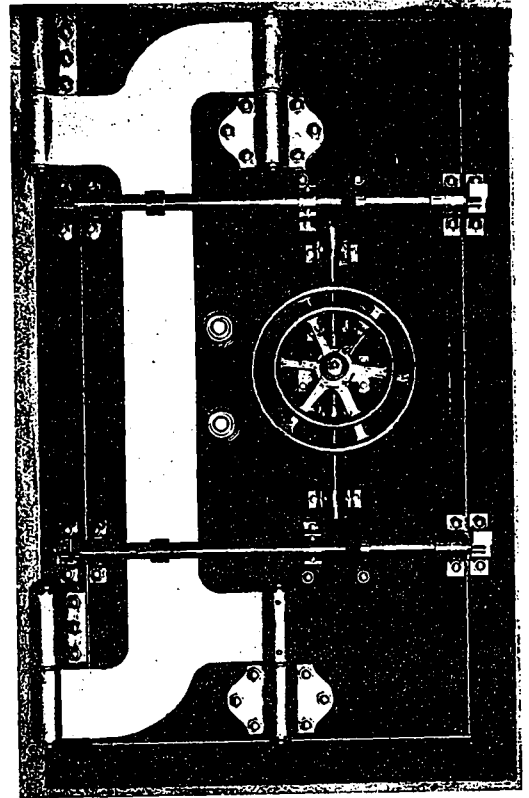
IT IS NOT ONLY gratifying to know that "Made in Canada" goods are reaching that standard of quality which is materially curtailing the importation of similar articles into the Dominion, but it is especially noteworthy that the high degree of excellence of many of these products has led to their adoption in foreign markets, in preference to the various makes from other countries.

There is possibly no greater satisfaction nor anything more complimentary that can come to any manufacturing concern than to receive an order for their product from a foreign country. It means in the present day strife for recognition in the world's markets, that in the article selected the buyer has discerned qualities superior to those found in other makes, and that in itself is an endorsement which brings fame, not only to the manufacturer but to the country from which the product came as well.

One of the most successful Canadian firms which, owing to the quality of their products, is meeting with success, both at home and abroad, is J. & J. Taylor, Toronto, manufacturers of safes, vaults, and safe and vault equipment. They are at present engaged in the manufacture of a large treasury vault and also modern fire-proof and burglar proof doors provided with time locks with which the building is to be equipped, for the China Inland Mutual Insurance Company of Shanghai. This is by no means the company's first advent into the Orient, as previous to the present order, they have sent several safes to the "Flowery Kingdom," where in each instance the purchase was based solely on the merits of the pro-

duct. They have also recently shipped to Nassau, Bahama Islands, a specially constructed safe equipped with double combination, for the largest chartered bank at that place.

One of the large contracts recently executed by this firm in the home field, was the entire safe and vault



ONE OF THE MODERN EQUIPPED VAULT DOORS OF THE NEW ROYAL BANK BUILDING, TORONTO.

equipment of the new home of the Royal Bank, Toronto, which is described and illustrated in this issue.

For catalogues, price list and additional information, address J. & J. Taylor, Toronto Safe Works, Toronto.

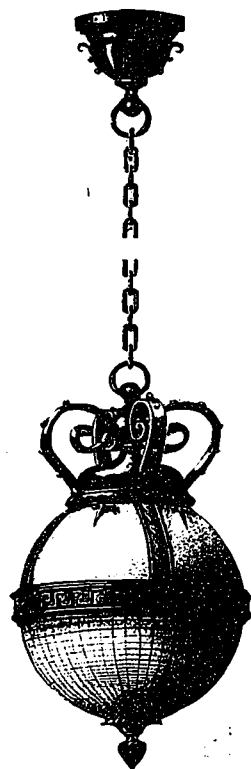
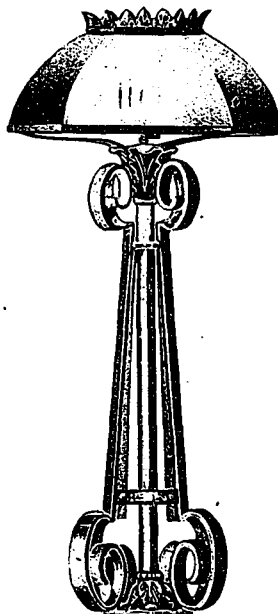
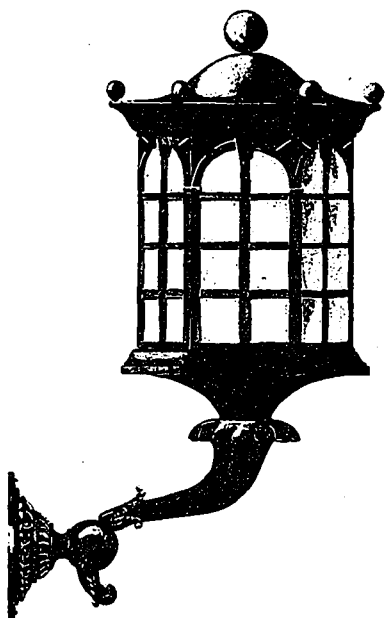
A WATER TANK OF CONCRETE which can successfully withstand the action caused by the formation of ice, has been built, says Cement Age, at Katonin, N.Y. It is designed to give a storage water supply of approximately 15,000 gallons. The tank is 22 feet outside diameter, with a circular wall 10 inches thick and 6 feet deep inside, sloping several inches toward the centre. It stands on eight concrete columns placed at the circumference, with concrete girders extending from four of these columns to a concrete column. The floor is 12 inches thick at circumference and about eight inches at centre. The tank was stipped with cement mortar on the outside and then one coat of cold water paint was applied. On the inside it received a coat of cement mortar, one cement to two sand, plastered on the wall and floor. The tank without a roof had four feet of water in it last winter, and ice formed ten inches thick on the sides down to the bottom. It showed no cracks and needed no repairs after the ice melted in the spring. It is absolutely water-tight, and shows no dampness on the outside of walls or floor.

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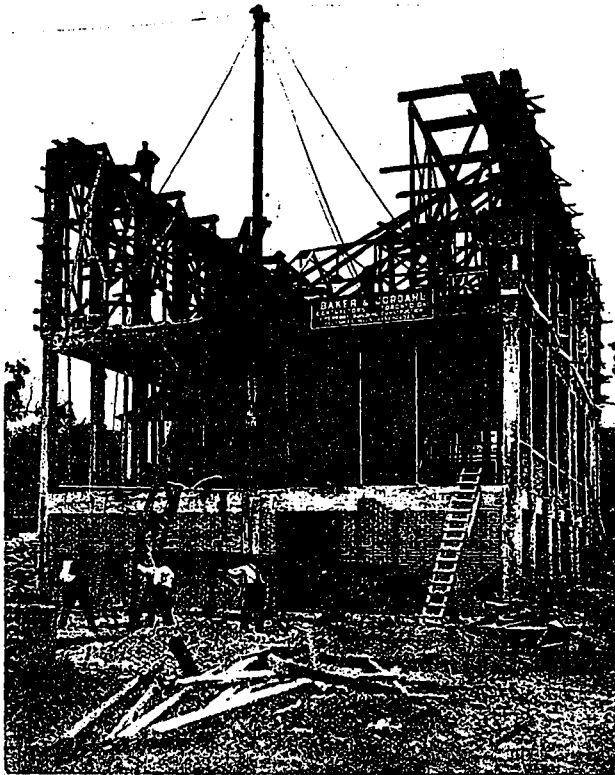
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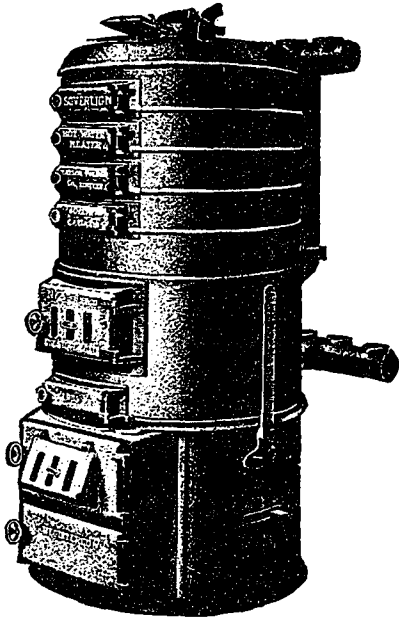
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☐ "THE SOVEREIGN" never grows old. It is made up of separate parts and sections, tightly joined but not welded inseparably together.

☐ It is a coal saver as well. It will save from one to three tons of coal out of the ten that any other system of heating would require.

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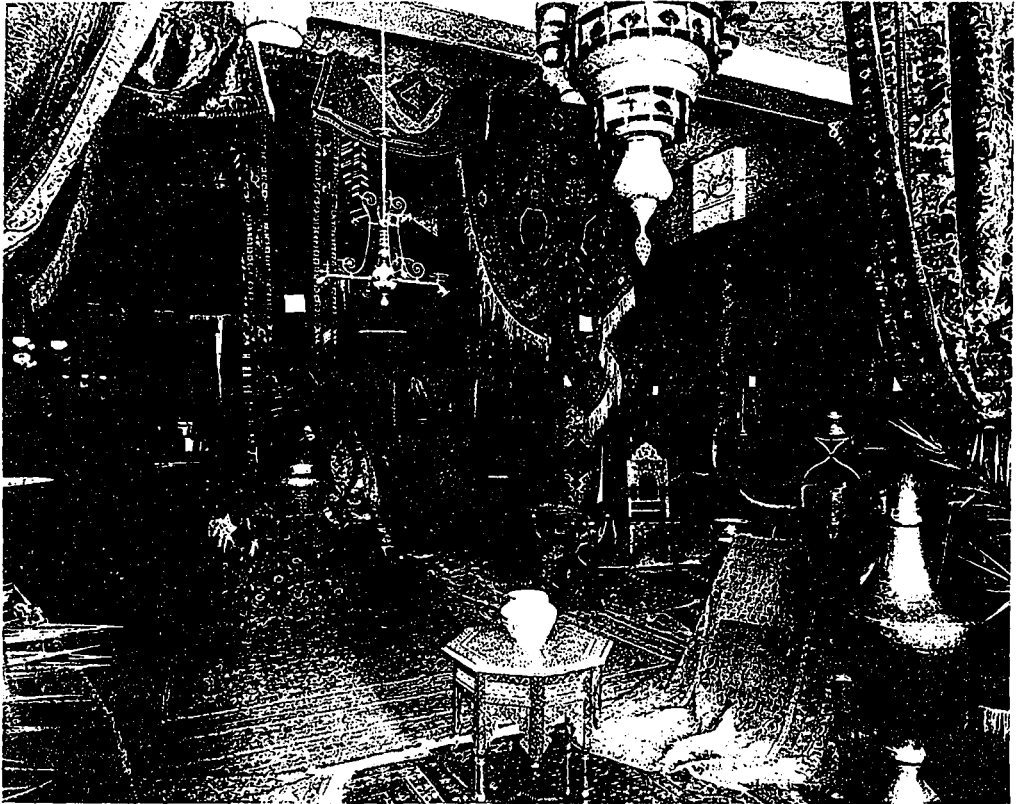
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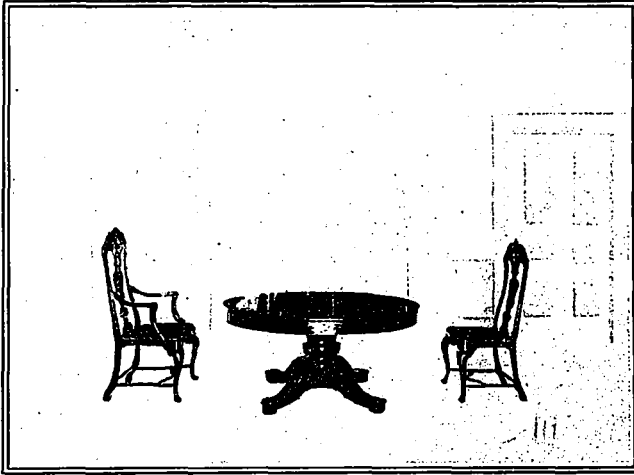
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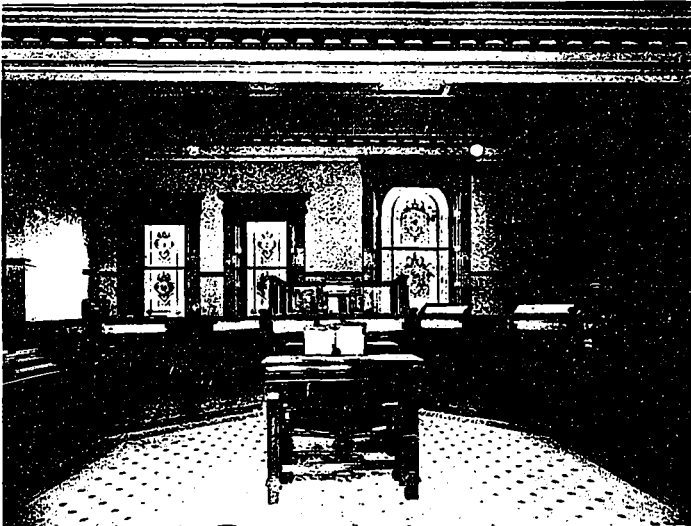


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36 and 38 King Street West
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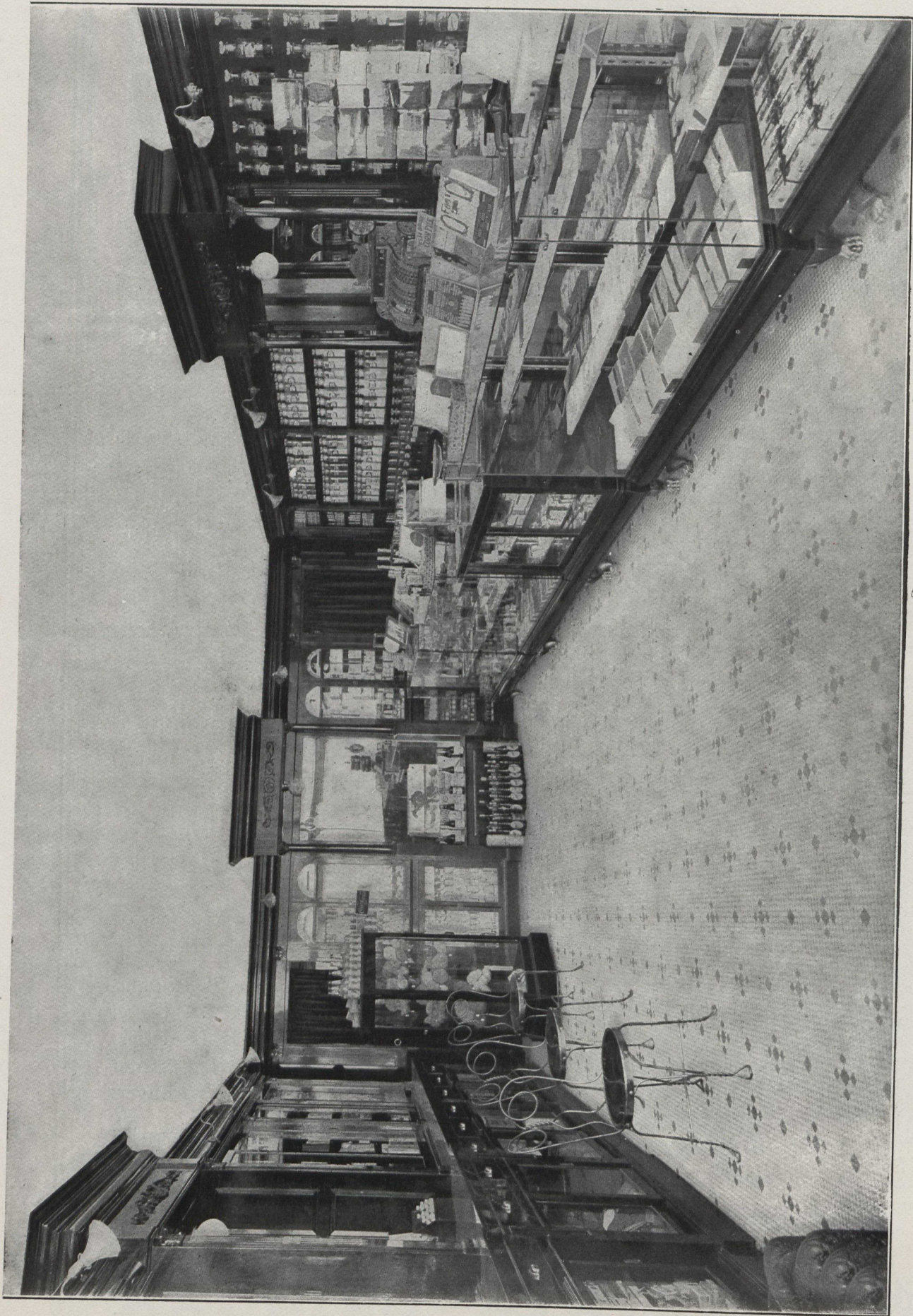
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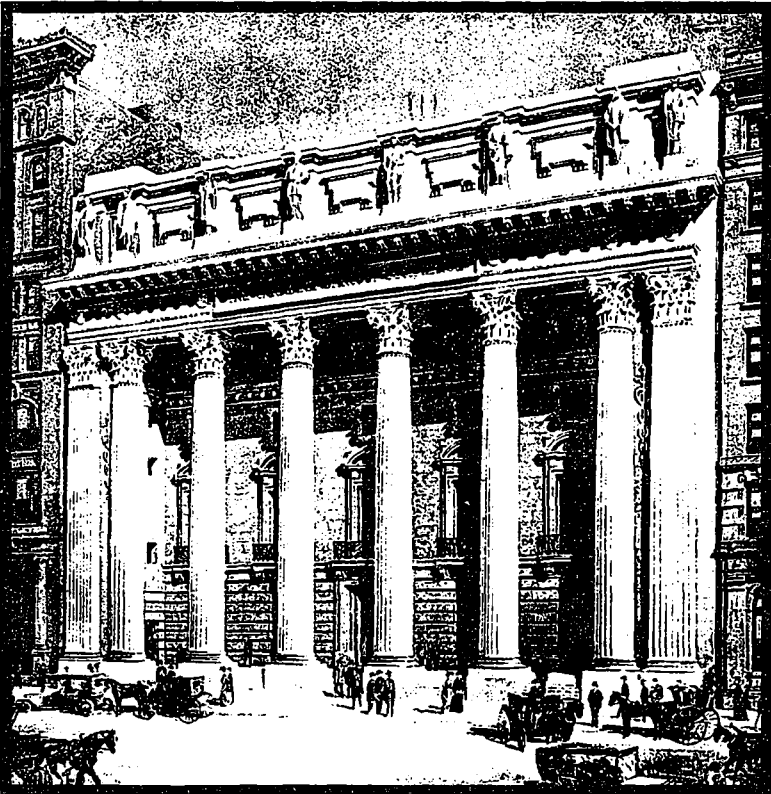
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HARRY CHINN,
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Was used throughout in the concrete work of this building, which is assuredly one of the finest examples of Modern Fireproof Construction in America.



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Strength Uniformly Distributed, Steel Dependable in Quality, Sectional Area Exact.

Gives Maximum Strength for Section, Gives Perfect Mechanical Bond.

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Expanded Metal Fireproofing Co., Ltd.

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TRADER'S BANK BUILDING, TORONTO.

Toronto, June 23rd, 1908.

ALL AGREEMENTS SUBJECT TO TERMS AGREENTS OR OTHER CAUSES BEING IN FULL FORCE.

The General Fire Equipment Co.,
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Toronto, Ont.

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Yours very truly,

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By

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General Manager

CHP/CH

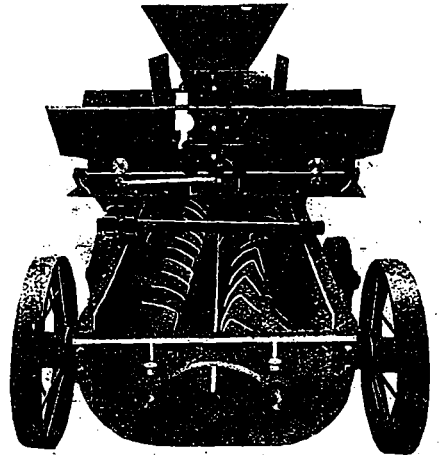
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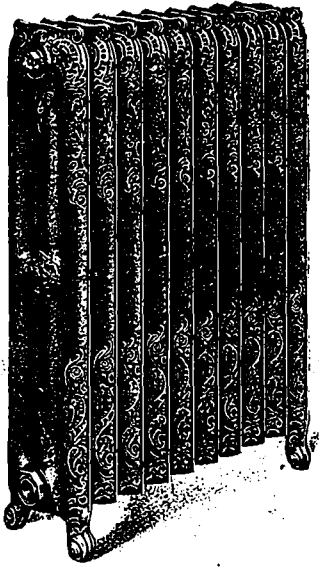
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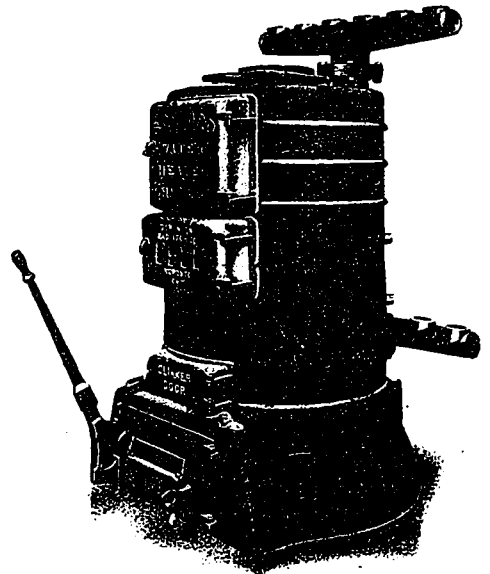
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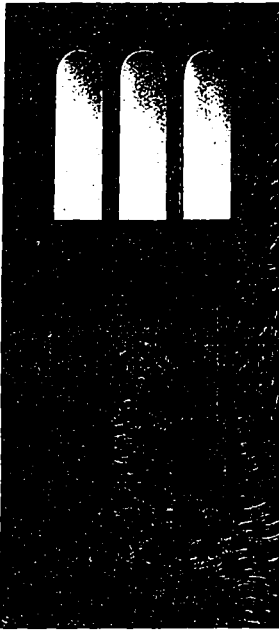
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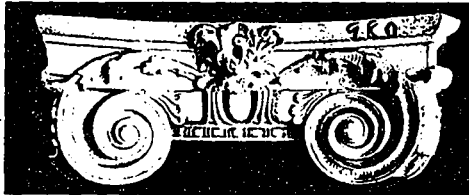
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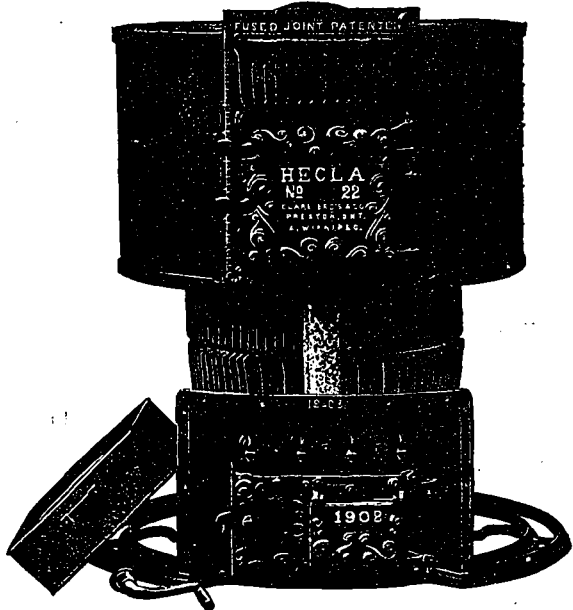
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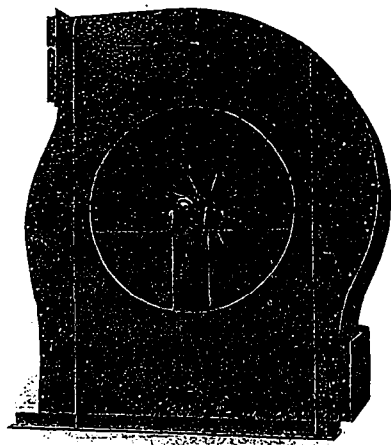


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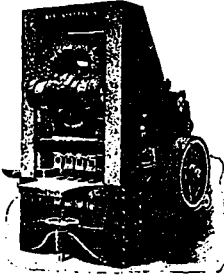
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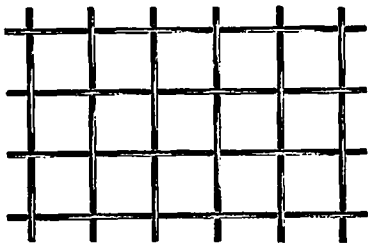
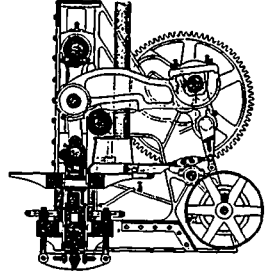
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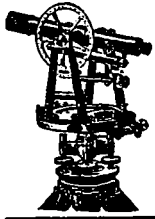
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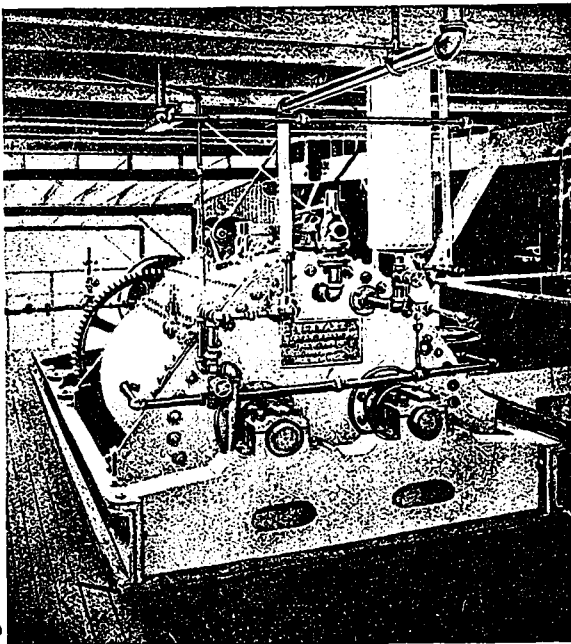
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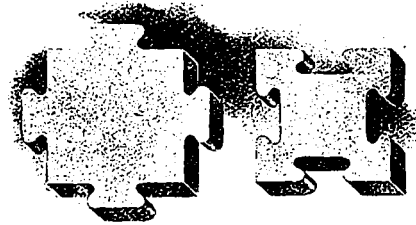
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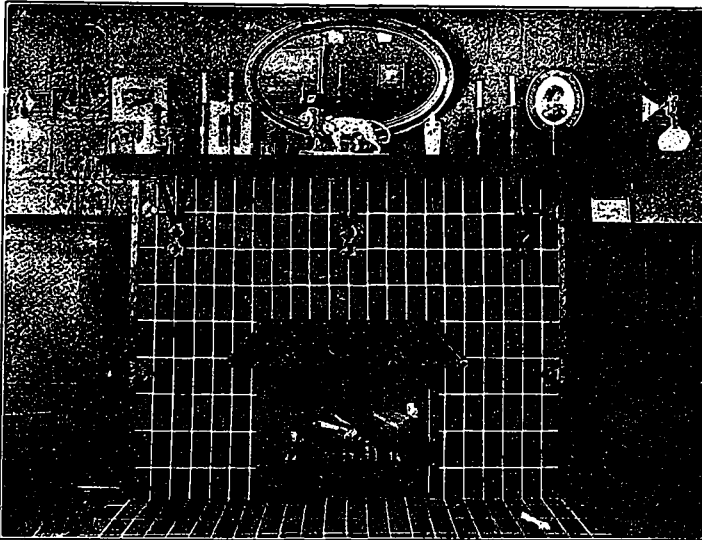
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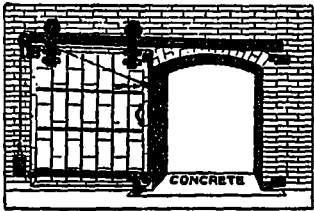
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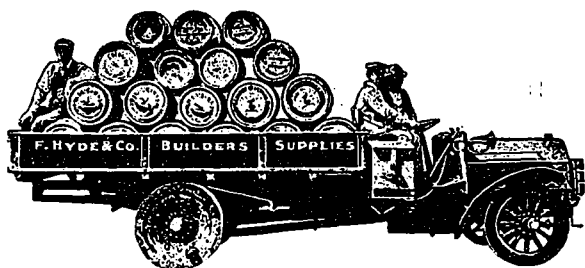
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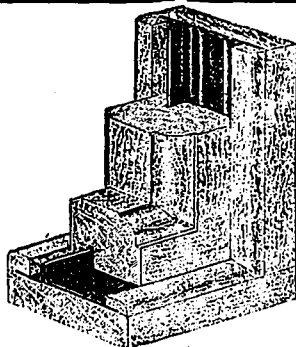
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Ideal Concrete Machinery Co., Limited, 221 King St., London, Ont.

Wettlaufer Bros., Stratford and Mitchell, Ont.

CEMENT BRICK MACHINERY.

Wettlaufer Bros., Stratford and Mitchell, Ont.

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CEMENT FLOOR PAINTS.

E. F. Dartnell, 157 St. James St., Montreal.

CEMENT TILE MACHINERY.

Wettlaufer Bros., Stratford and Mitchell, Ont.

CHIMNEY CONSTRUCTION.

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COMPO.

W. J. Hynes, 16 Gould St. Toronto.

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Metcalf Engineering, Limited, 80 St. Francois Xavier St., Montreal.

Pitt & Robinson, Manning Chambers, Toronto.

Trussed Concrete Steel Co., 23 Jordan St., Toronto.

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B. Greening Wire Co., Limited, Hamilton and Montreal.

Expanded Metal & Fireproofing Co., 100 King St. W., Toronto.

Pitt & Robinson, Manning Chambers, Toronto.

Trussed Concrete Steel Co., 23 Jordan St., Toronto.

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Drummond McCall & Co., Montreal and Toronto.

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Pitt & Robinson, Manning Chambers, Toronto.

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Canadian Fairbanks Co., Limited, Montreal, Toronto, Winnipeg and Vancouver.

Drummond McCall & Co., Montreal.

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Canadian Fairbanks Co., Limited, Montreal, Toronto, Winnipeg and Vancouver.

Eadie-Douglas Co., 22 St. John St., Montreal.

Drummond McCall & Co., Montreal and Toronto.

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David McGill, Merchants Bank Chambers, Montreal.

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Drummond McCall, & Co., Montreal.

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Metal Shingle & Siding Co., Preston, Ont.
Trussed Concrete Steel Co., 23 Jordan St., Toronto.

FIRE BRICK.

E. F. Dartnell, 157 St. James St., Montreal.
David McGill, Merchants Bank Chambers, Montreal.

FIREPROOFING.

Don Valley Brick Works, 36 Toronto St., Toronto.
E. F. Dartnell, 157 St. James St., Montreal.
Eadie-Douglas Co., 22 St. John St., Montreal.
Expanded Metal and Fireproofing Co., 100 King St. W., Toronto.
David McGill, Merchants Bank Chambers, Montreal.
The Milton Pressed Brick Co., Milton, Ont.; 75 Yonge St., Toronto; 204 St. James St., Montreal.
Pitt & Robinson, Manning Chambers, Toronto.
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Trussed Concrete Steel Co., 23 Jordan St., Toronto.

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Gaudry & Co., L. H., Coristine Building, Montreal; 76 Peter Street, Quebec; Roy Building, Halifax.

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Metal Shingle & Siding Co., Preston, Ont.
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Taylor-Forbes Co., Limited, Guelph Ont.
Sheldons, Limited, Galt, Ont.

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Geo. B. Meadows, Co., Limited, 479 Wellington St. West, Toronto.

IRON SUPPLIES.

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B. Greening Wire Co., Limited, Hamilton and Montreal.
Metal Shingle & Siding Co., Preston, Ont.
Trussed Concrete Steel Co., 23 Jordan St., Toronto.

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David McGill, Merchants Bank Chambers, Montreal.

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Hodge Marble Co., Toronto.
Missisquoi Marble Co., Montreal.

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Somerville, Limited, 59 Richmond St. E., Toronto.

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Gutta Percha & Rubber Mfg. Co., Limited, 47 Yonge St., Toronto.

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Canadian Fairbanks Co., Montreal, Toronto, St. John, Winnipeg, Calgary, Vancouver.
Drummond McCall & Co., Montreal, Toronto.
Gaudry & Co., L. H., Coristine Building, Montreal; 76 Peter Street, Quebec; Roy Building, Halifax.

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Warden King, Limited, Montreal.
Taylor-Forbes Co., Limited, Guelph, Ont.

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Kerr Engine Co., Walkerville.

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Expanded Metal & Fireproofing Co., 100 King St. W., Toronto.
Pitt & Robinson, Manning Chambers, Toronto.
Trussed Concrete Steel Co., Limited, 23 Jordan St., Toronto.

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Linde British Refrigeration Co., Limited, Coristine Building, Montreal.

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Gutta Percha & Rubber Mfg. Co., Limited, 47 Yonge St., Toronto.

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Expanded Metal & Fireproofing Co., 100 King St. W., Toronto.
Metcalf Engineering, Limited, 80 St. Francois Xavier St., Montreal.
Pitt & Robinson, Manning Chambers, Toronto.
Trussed Concrete Steel Co., 23 Jordan St. Toronto.

CONSTRUCTION

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L. H. Gaudry & Co., Limited, Coristine Building, Montreal.
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Reid & Brown, 63 Esplanade E., Toronto.

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Hamilton Bridge Co., Hamilton.

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Eadie-Douglas Co., 22 St. John St., Montreal.
Don Valley Brick Works, 36 Toronto St., Toronto.
E. F. Dartnell, 157 St. James St., Montreal.

Francis Hyde & Co., 31 Wellington St., Montreal.

The Milton Pressed Brick Co., Milton, Ont.; 76 Yonge St., Toronto; 204 St. James St., Montreal.

David McGill, Merchants Bank Chambers, Montreal.

National Fireproofing Co., Traders Bank, Toronto.

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Canada Plate & Window Glass Co., Limited, 49 Richmond St., East, Toronto.

VALVES.
Kerr Engine Co., Walkerville.

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Wm. Stewart & Co., Saturday Night Building, Toronto, Board of Trade, Montreal.
Sheldons, Limited, Galt, Ont.

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Canadian Fairbanks Co., Montreal, Toronto, Winnipeg and Vancouver.
Kerr Engine Co., Walkerville.

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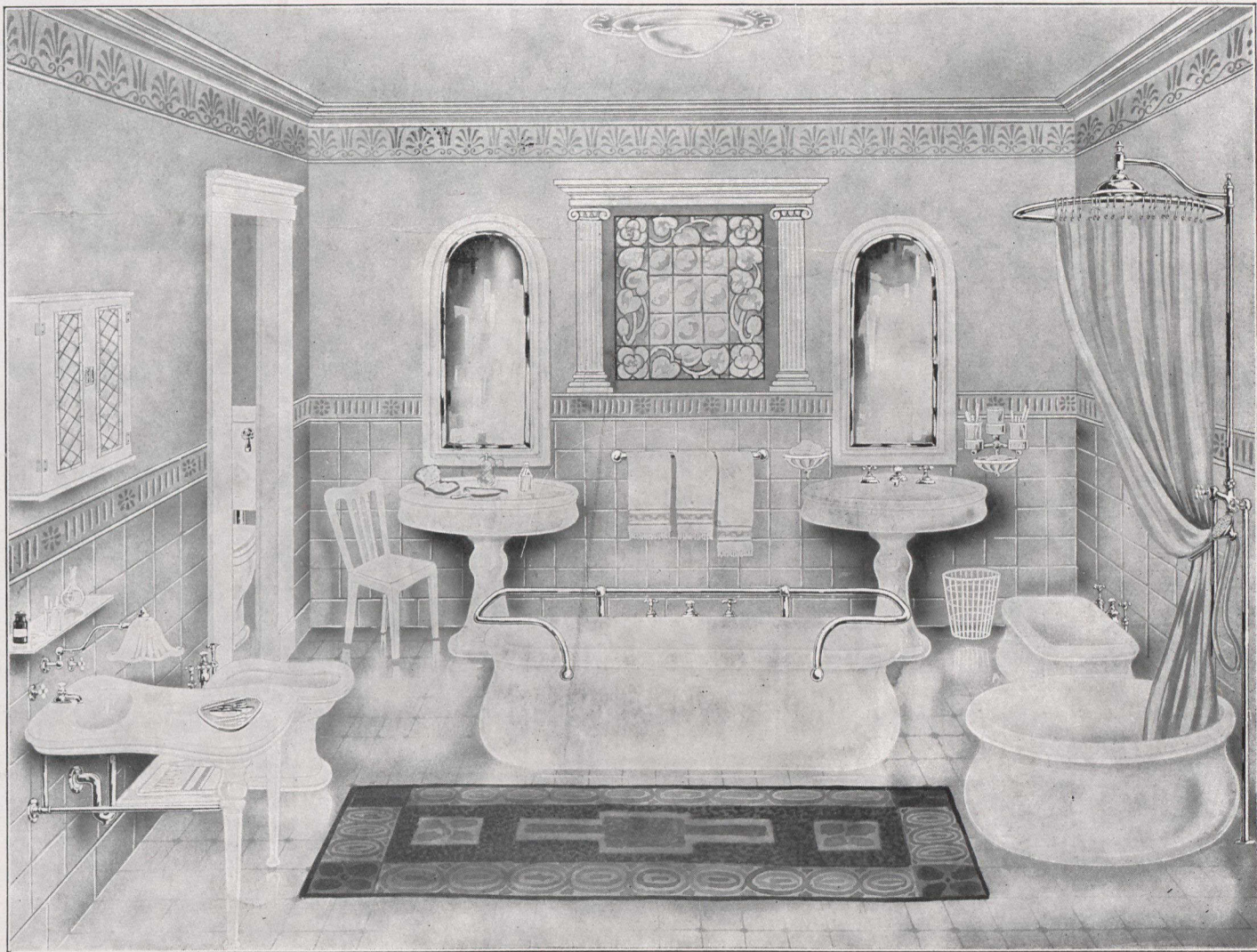
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