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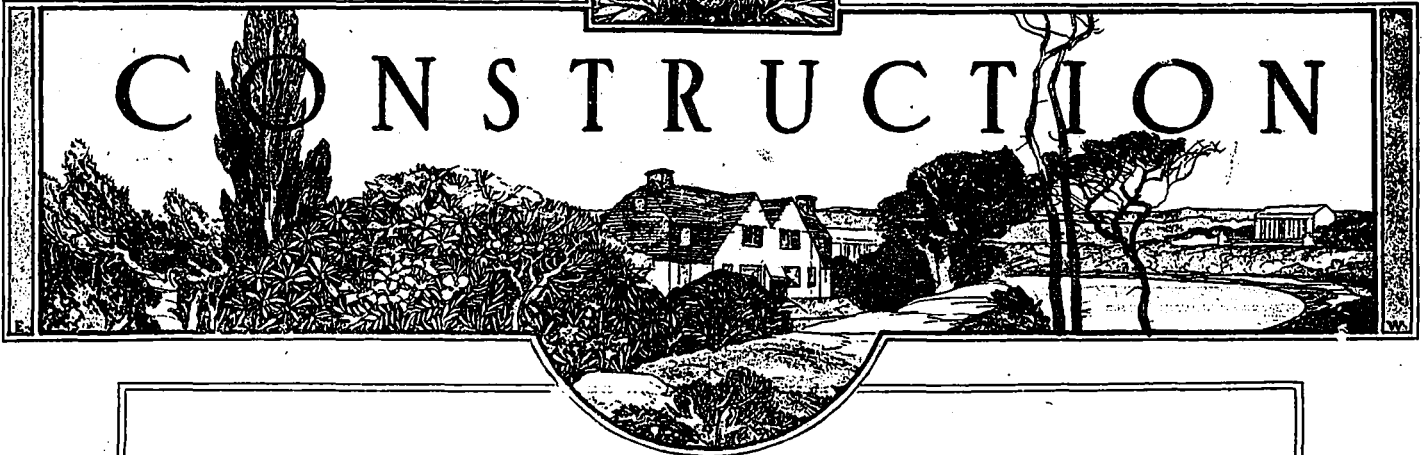


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CONSTRUCTION



January, 1916

Vol. 9, No. 1

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H. GAGNIER, Limited, Publishers

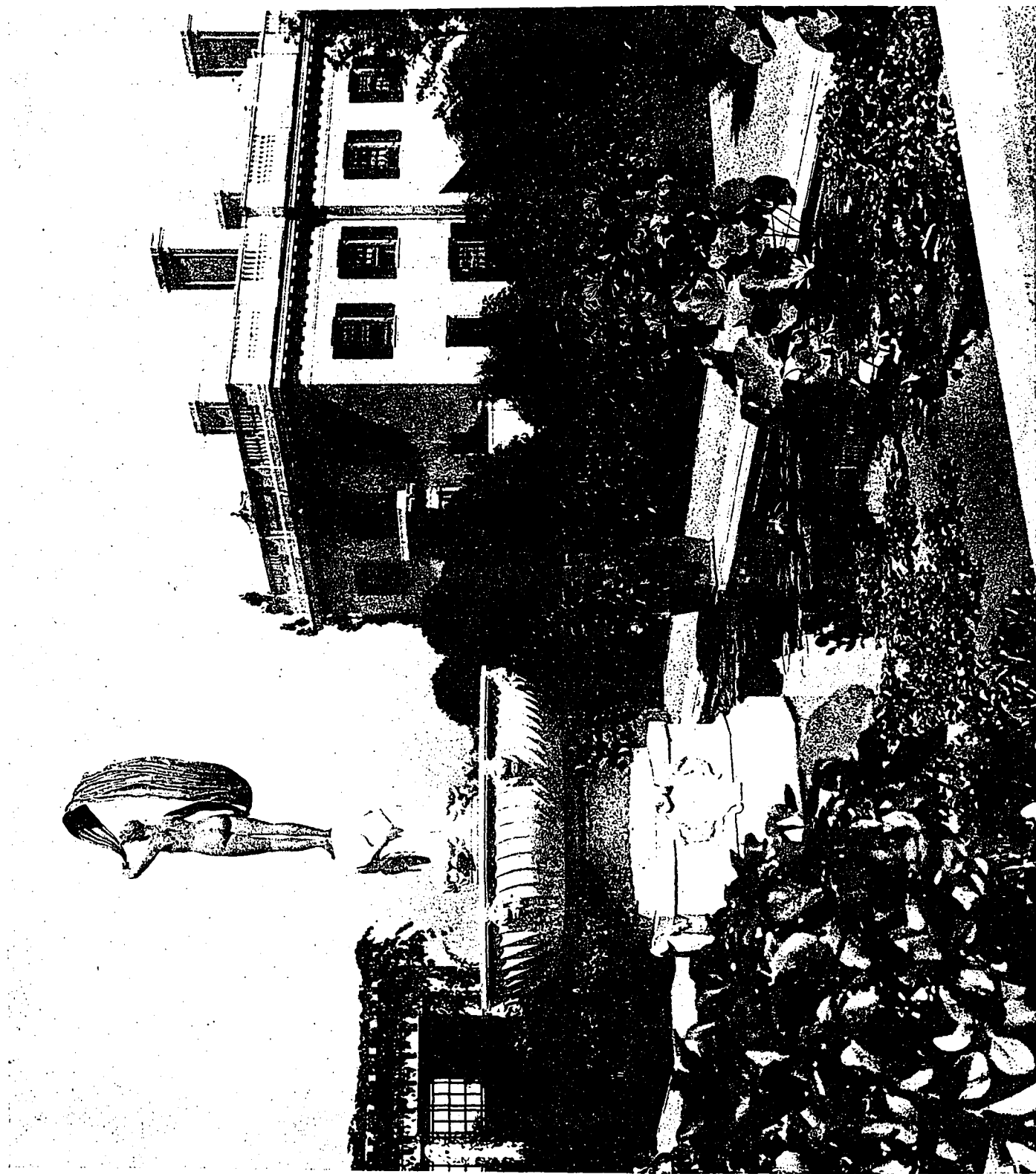
GRAPHIC ARTS BLDG., TORONTO, CANADA

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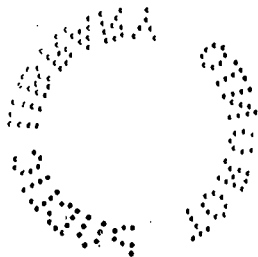
BRANCH OFFICES

NEW YORK





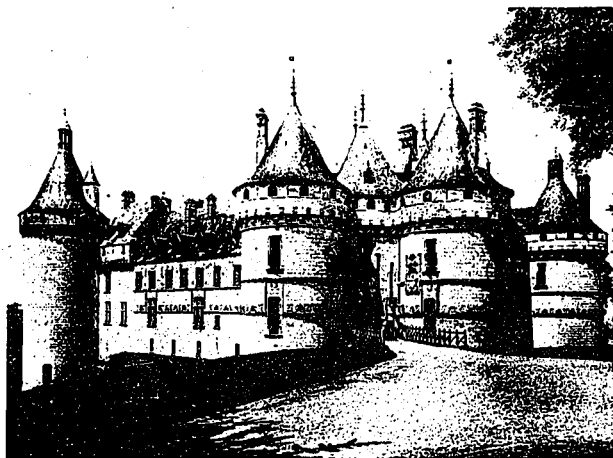
A LILY POOL, WITH ITS SYMMETRICAL FOUNTAIN, A CHARMING UNIT IN A LANDSCAPE DEVELOPMENT.



Quebec Union Station

From The Great Monuments of Art and Architecture of the Old World, and Particularly
From The Noted Chateaux of France, Came the Architect's Inspiration
For The Design of This Building.

By HARRY EDWARD PRINDLE



*So the future seemed
To mingle with the past. For a short space
I saw revealed the double threads that bind
This little speck of time we call "To-day"
To the great cycle of unending life
That has been and that shall be evermore.*

UNEXAMPLED for picturesqueness and magnificence of position on this continent, and for the romance of her historic associations, Quebec sits on her impregnable heights, a queen among the cities of the world. (Charles Marshall). The history of the city is intimately interwoven with that of old France, and this spirit is admirably expressed in its narrow, winding, ascending streets, its groups of high-pitched roofs, its churches, monuments and people.

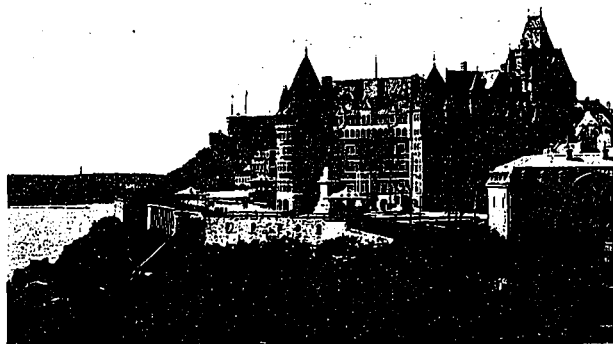
The mind of the observer contemplating its natural beauties inevitably turns to the old world, with its great monuments of art and architecture, and perhaps more particularly to the Chateaux of Chinon, Loches, Langlais, Chaumont, Chenonceaux, Ambroise, Blois, Chambord, and Azeay-le-Rideau which was the moving impulse from which has grown the design of the new Union Station Building.

The building is located on the property bounded by St. Paul, Henderson and St. Roche street, which has been entirely re-arranged, with new tracks, coach storage yard, express yard, freight sheds and freight office building. The station is approached from St. Paul street by an open paved plaza, approximately 300 ft. x 300 ft., enclosed by broad curving sidewalks reaching the entrances, with a driveway into the express yard. The concourse opens directly into Henderson street, which leads to the new freight offices. The plaza will be encircled with orna-

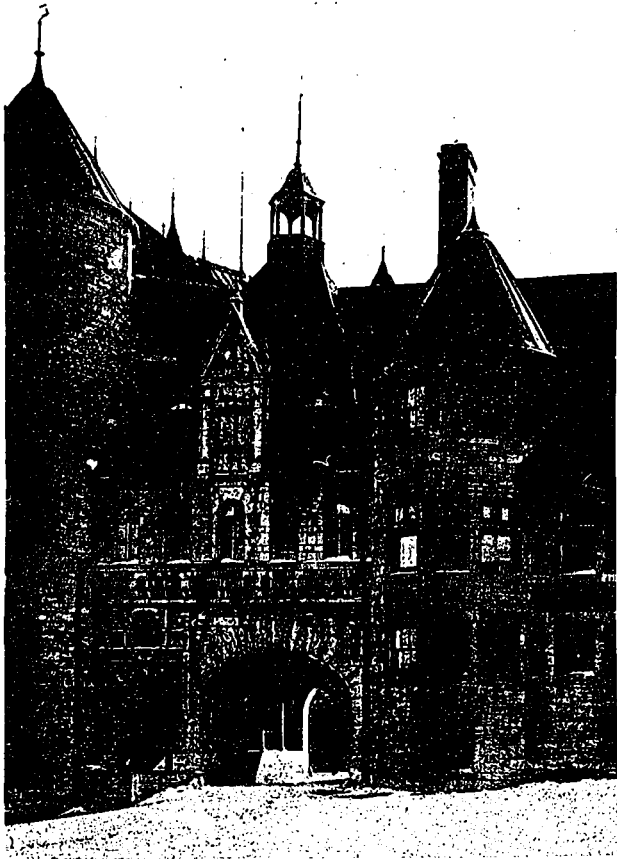
mental lamp standards and the central section flanked by tall steel flag poles. The planting spaces around plaza and on Henderson street will be filled with Lombardy poplars and the spaces at building occupied by harmonious masses of blue spruce and shrubs. The building is L shaped in plan, with the express wing approximately 46 ft. x 150 ft. parallel to St. Paul street, with power house 46 ft. x 75 ft. with a boiler stack 100 ft. high on the end toward St. Roche street. The concourse wing on Henderson street is approximately 65 ft. x 150 ft. and is practically on the diagonal axis of plan.

The roof of the central block rises about 90 ft., the roofs of the wings being roughly 50 ft. high. The exterior walls are faced with a dark wire cut brick, laid Flemish bond in white mortar with deep raked joints with stone facings and granite base. The roofs are of copper. The main entrance is 25 ft. wide, providing seven door openings, over which is a large window opening lighting the ticket lobby. The outer angles of central block carry brick and stone tourelles between which, at the roof level, is a large ornamental illuminated clock dial. At the base of the tourelles are carved stone shields bearing the Fleur-de-Lys, Rose, Shamrock, Thistle and Maple Leaf; the pediment over clock is ornamented with the coat of arms of the city of Quebec.

High up over the entrance executed in leaded glass are the armorial bearings of seven of the men famous in Canadian history, to wit: Montmagny, Governor of Canada, 1636 to 1647; De Tracy, Viceroy of Canada, 1665; Beauharnois, Governor of Canada, 1726 to 1747; Montcalm, Military Commander in Canada, 1756 to 1759;



A MONUMENT OF ART AND ARCHITECTURE.



THE OLD WORLD REPRODUCED IN THE NEW.

General James Wolfe, 1726 to 1759; Frontenac, Governor of Canada, 1672; Talon, first Intendant of New France, 1665 to 1672.

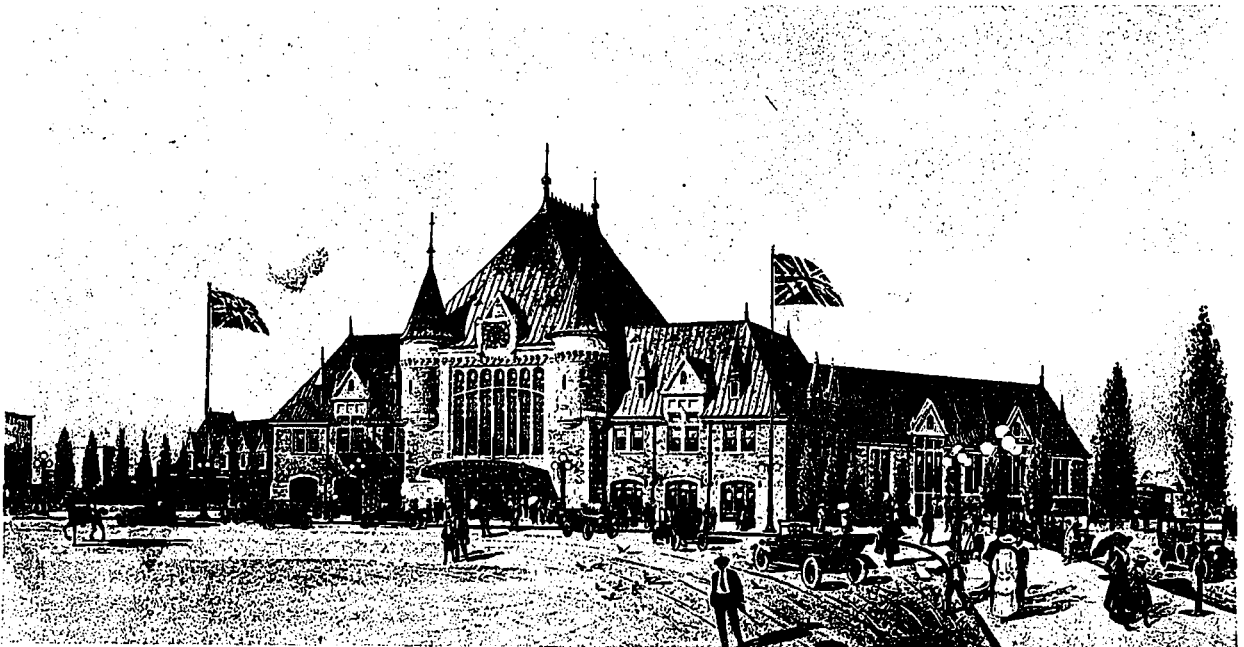
The walls of the entrance vestibule are of brick, with marble base, marble and terrazzo floors and vaulted tile ceiling. On either side of the vestibule are the office staircase and the transfer company's office. The ticket lobby is 46 x 65 ft. x 60 ft. high, with a marble floor, the

walls being of a light tapestry brick, laid up white mortar with recessed joints. The high pitched ceiling is finished in Mosaic tile, shaded in color, with inlay patterns. Around the lobby are the ticket offices of the Canadian Pacific Railway and Transcontinental Railway, lobby and women's room, men's room, telegraph and telephone offices, customs offices and parcel rooms and baggage space, with an entrance to baggage room and concourse.

At the level of the offices on the floor above is arcade opening into the upper portion of the ticket lobby. The cornice, balustrades, clocks, wall decoration, etc., are all of faience tile in several colors. The cartouches in the cornice bear armorial devices in color, symbolic of railroads, steamships and hotel. The design of the leaded glass in ticket lobby ceiling will express the world-wide development of the Canadian Pacific Railway.

Off the line of traffic in a convenient location is a comfortable women's room finished in oak, the walls painted in harmonious tones with toilet-room adjoining. The concourse opens into ticket lobby and Henderson street, with three wide train gates. It is approximately 65 ft. x 125 ft. x 40 ft. high, the ceiling construction being of concrete, carried on four large semi-elliptical steel trusses. There are large window openings on all sides. The walls are of light colored tapestry brick, laid up with recessed joints in white mortar, through which runs a faience diaper pattern bearing the floral emblems of France, England, Scotland and Ireland. The brackets under the trusses are of faience tile in color, on which the emblems are merged.

The prevailing color of cornice is an old blue with dolphin and salamander inserts of faience



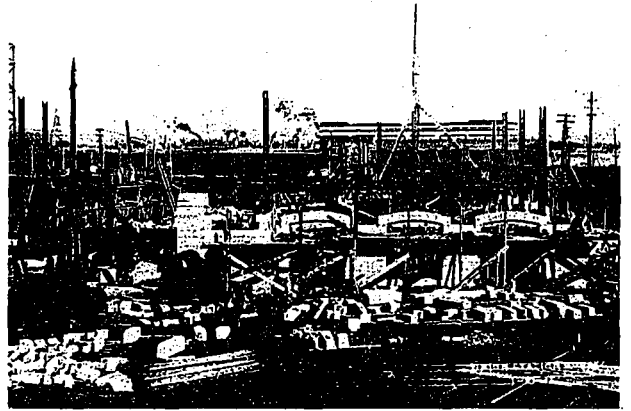
UNION STATION, QUEBEC, CANADIAN PACIFIC RAILWAY.

HARRY EDWARD PRINDLE, ARCHITECT.

tile. The floor is of marble and terrazo. Along the two sides of the room are long seats, finished in oak with marble base. The train indicators will be of the most modern type. The smoking room which opens off one end of the concourse is finished in oak, adjoining which is the men's toilet, with standard and pay toilets.

The baggage room contains approximately 2550 square feet, and express space contains approximately 4600 square feet. The upper portion of building is occupied by the offices of the Canadian Pacific Railway and the Transcontinental Railway.

The entire building rests upon a system of concrete piles, the floor and part of room con-

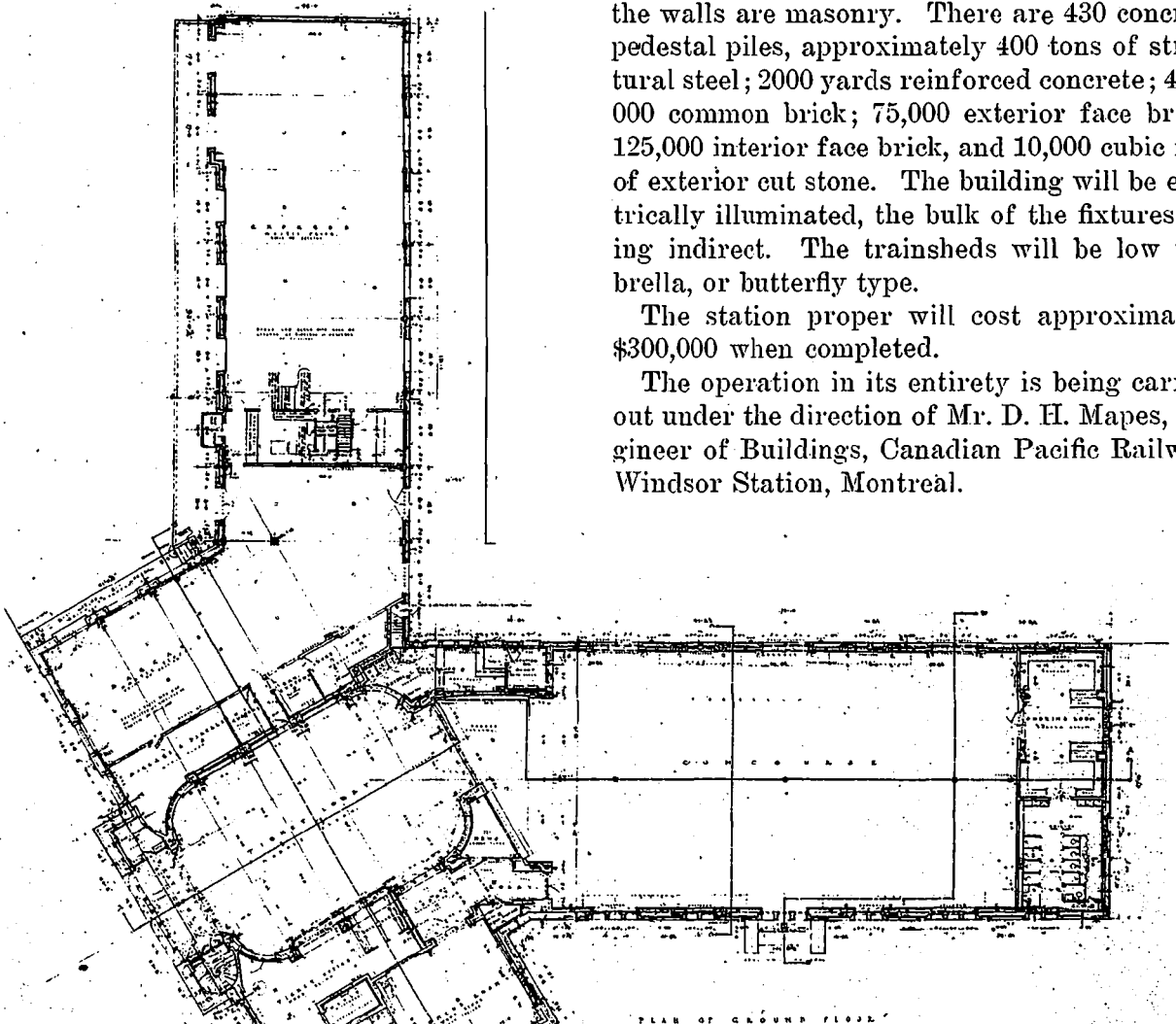


COMMENCING THE SUPERSTRUCTURE, UNION STATION, QUEBEC.

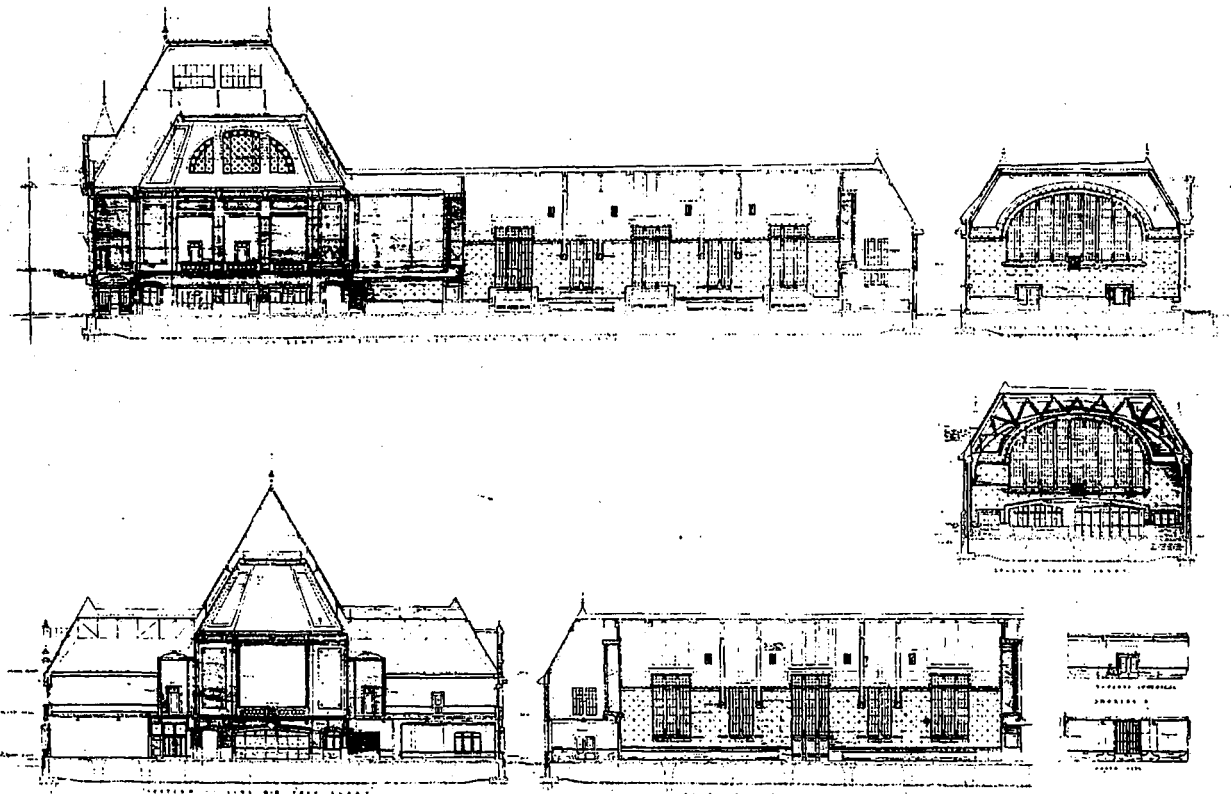
struction is reinforced concrete, sloping surfaces of roof are of gypsum block. The frame throughout is of steel encased in concrete and the walls are masonry. There are 430 concrete pedestal piles, approximately 400 tons of structural steel; 2000 yards reinforced concrete; 400,000 common brick; 75,000 exterior face brick; 125,000 interior face brick, and 10,000 cubic feet of exterior cut stone. The building will be electrically illuminated, the bulk of the fixtures being indirect. The trainsheds will be low umbrella, or butterfly type.

The station proper will cost approximately \$300,000 when completed.

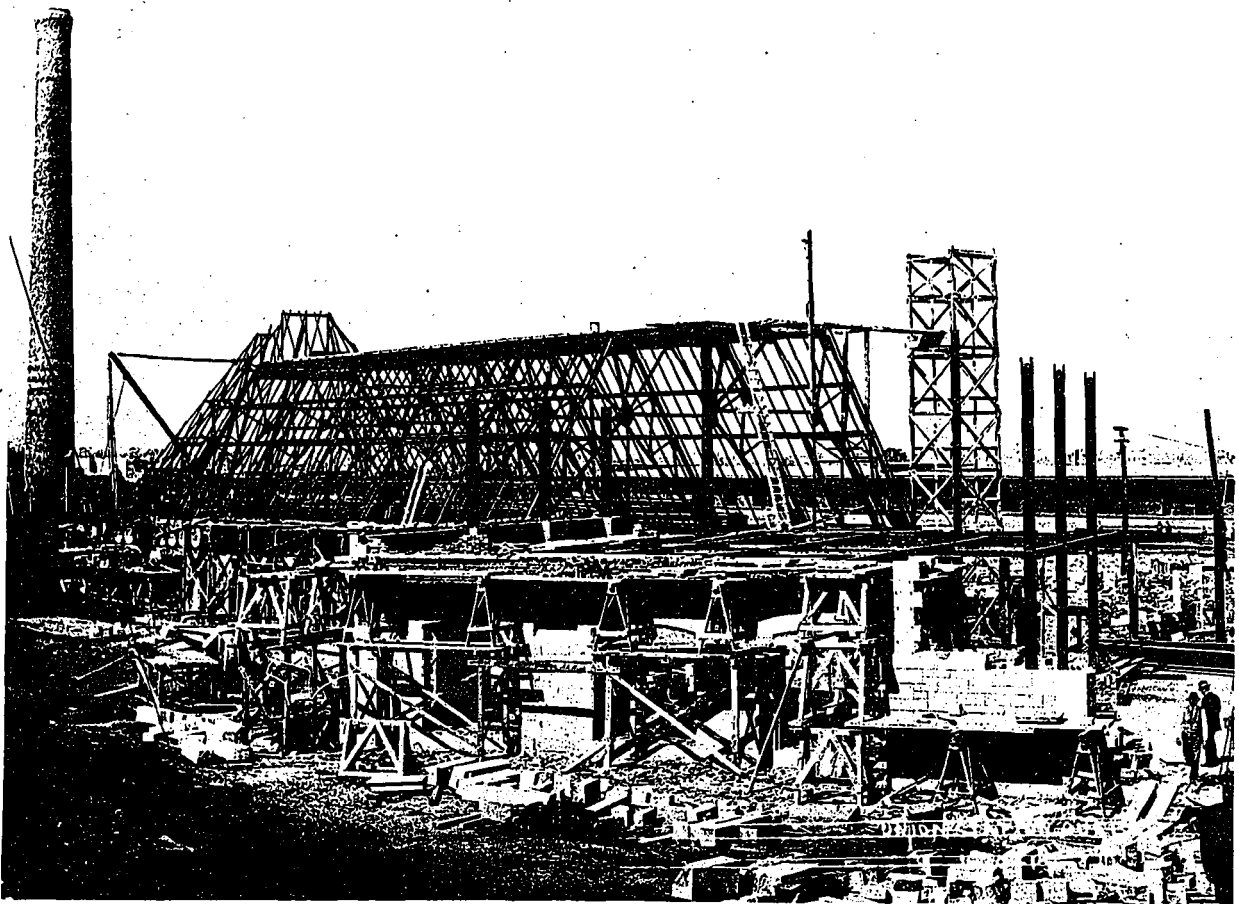
The operation in its entirety is being carried out under the direction of Mr. D. H. Mapes, Engineer of Buildings, Canadian Pacific Railway, Windsor Station, Montreal.



PLAN OF GROUND FLOOR



SECTIONAL VIEW, UNION STATION, QUEBEC.



STEEL FRAME, UNION STATION, QUEBEC.

HARRY EDWARD PRINDLE, ARCHITECT.

For King and Country

Architects and Engineers of Canada Nobly Doing Their Share For the Cause of the Empire

CAPTAIN MCGIFFIN, of the firm of Chapman and McGiffin, has been connected with the Canadian Engineers for a number of years, having held a commission in the 8th Field Company, Canadian Engineers. Since the camps at both Niagara and Toronto were formed Captain McGiffin has been Assistant Commander, under Col. Caldwell, of the Royal Canadian Engineers, who have had charge of the erection and maintenance of the buildings which have been necessary at both camps.

Major H. Eden Smith, of the firm of Eden Smith and Sons, architects, Toronto, has been a well-known figure in military circles in Toronto for the last twenty years, the whole of that time having been spent in connection with the Queen's Own Rifles, for which regiment he has always been an ardent worker. At the outbreak of hostilities Major Smith joined the 35th Battalion, recruited from the Queen's Own Rifles, which he helped organize. Later, Major Smith was given charge of the draught reinforcements to the 3rd Battalion, France.

Major Paul E. Mercier, who has recently succeeded the late Major Janin as Engineer for the City of Montreal, was born at St. Hyacinthe, Quebec, in 1877, and for ten years after his graduation from L'Ecole Polytechnique was connected with the Dominion Government engineering staff. He spent a number of years in the Yukon and the Province of Quebec as resident engineer. On his return from the Yukon, he took charge of the National Transcontinental, later entering into partnership with S. A. Baulne, of Montreal, as consulting engineers. Major



MAJOR H. EDEN SMITH,
3rd Battalion, France.



CAPT. MCGIFFIN,
Commander R.C.E., Exhibition Camp, Toronto.

Mercier is well known in military circles, having organized and commanded the Officers' Training Corp at Laval University.

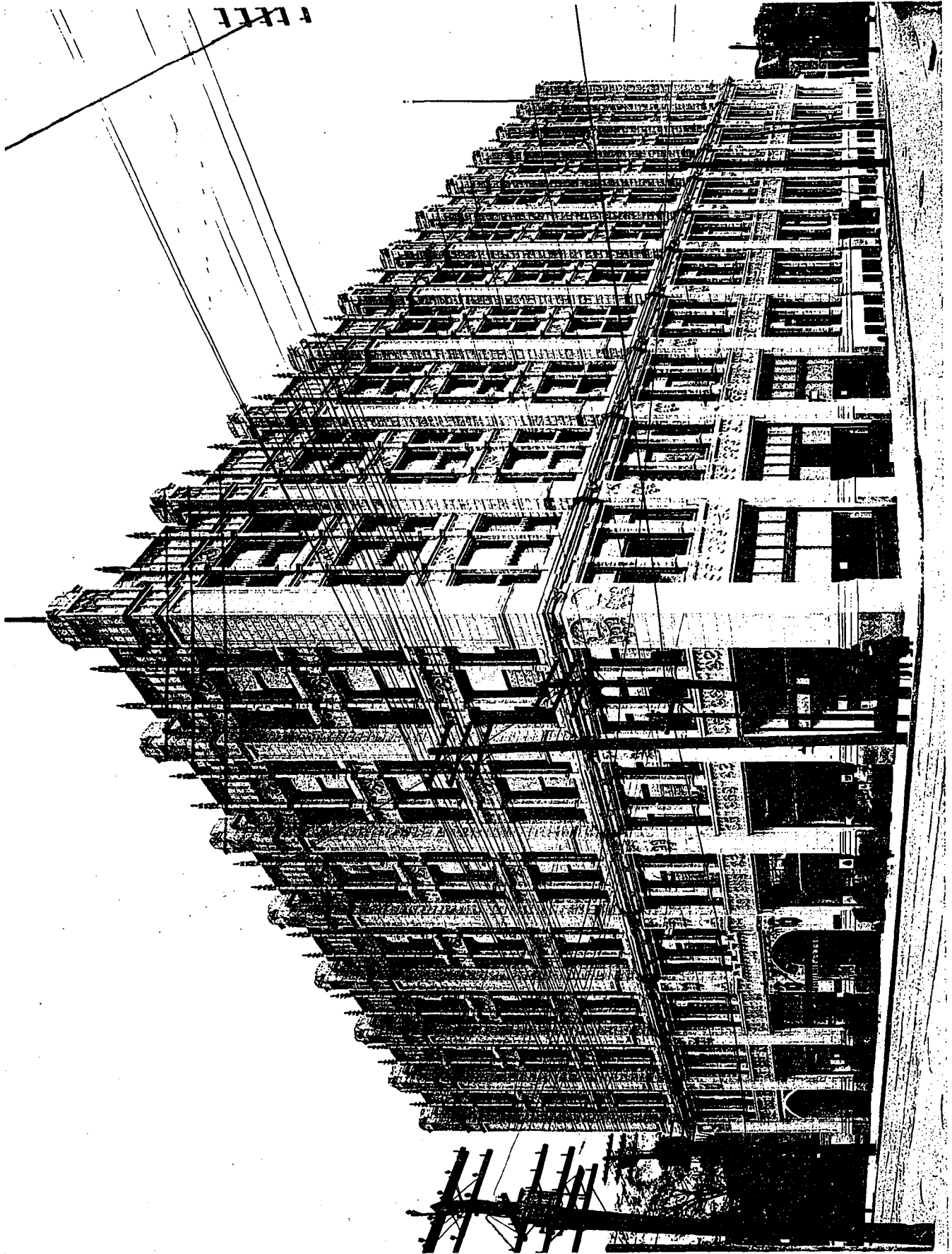
Captain Clayton Stewart has returned to Toronto from the front on sick leave, having spent five months in the trenches.

Captain Arthur S. McConnell, Assistant Professor of Architecture at Toronto University, has been appointed Adjutant of the 116th Ontario Battalion. Capt. McConnell has been training with the C.O.T.C. since the beginning of the war.

Lieut. H. M. West, City Engineer of North Vancouver, who has enlisted for overseas service, is a graduate of Toronto University. Previous to enlisting, the huge sewerage system of North Vancouver was brought to completion under his supervision. The city council of North Vancouver are in the meantime holding open his position until the war is over.

Canadian engineers rightly read with interest the New Year's honor conveyed to General Bertram, member Canadian Society of Civil Engineers. Born at Dundas in 1853, General Bertram entered the organization of John Bertram & Sons, for which firm he was Montreal manager when war broke out.

Sir Sam Hughes was quick to recognize his abilities with the knowledge he had of machine work and the training he had had with the Canadian militia, with which he had held a command for several years. General Bertram was made Chairman of the Canadian Shell Committee at its inception, and it is to his credit that the great industry which has been added to Canada is in such a flourishing condition to-day.



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BURKE, HORWOOD & WHITE, ARCHITECTS.

METHODIST BOOK ROOM, TORONTO.

Methodist Book Room, Toronto

This Immense Building With Its Imposing Appearance is a Model, Containing Many Utilitarian Features For The Successful Operation of a Large Industrial Organization

By W. H. RATCLIFFE

THE Methodist Book and Publishing Company's new building, situated on Queen street west, is one of the largest and most up-to-date publishing buildings in Canada. It embodies not only the publishing department, but all of the Connexional offices, such as the Missionary societies, Sunday School and Young People's work, Superannuation Fund and Social Service Departments.

The Methodists of Canada are to be commended for the progressive step they have taken in having their various departments in such a building, where abundance of light, air and room tends to the contentment of the employees, and therefore efficient labor.

The site is ample for present needs and future extensions, having a frontage of two hundred and thirty-one feet on Queen and Richmond streets, and two hundred and twenty-one feet on John street.

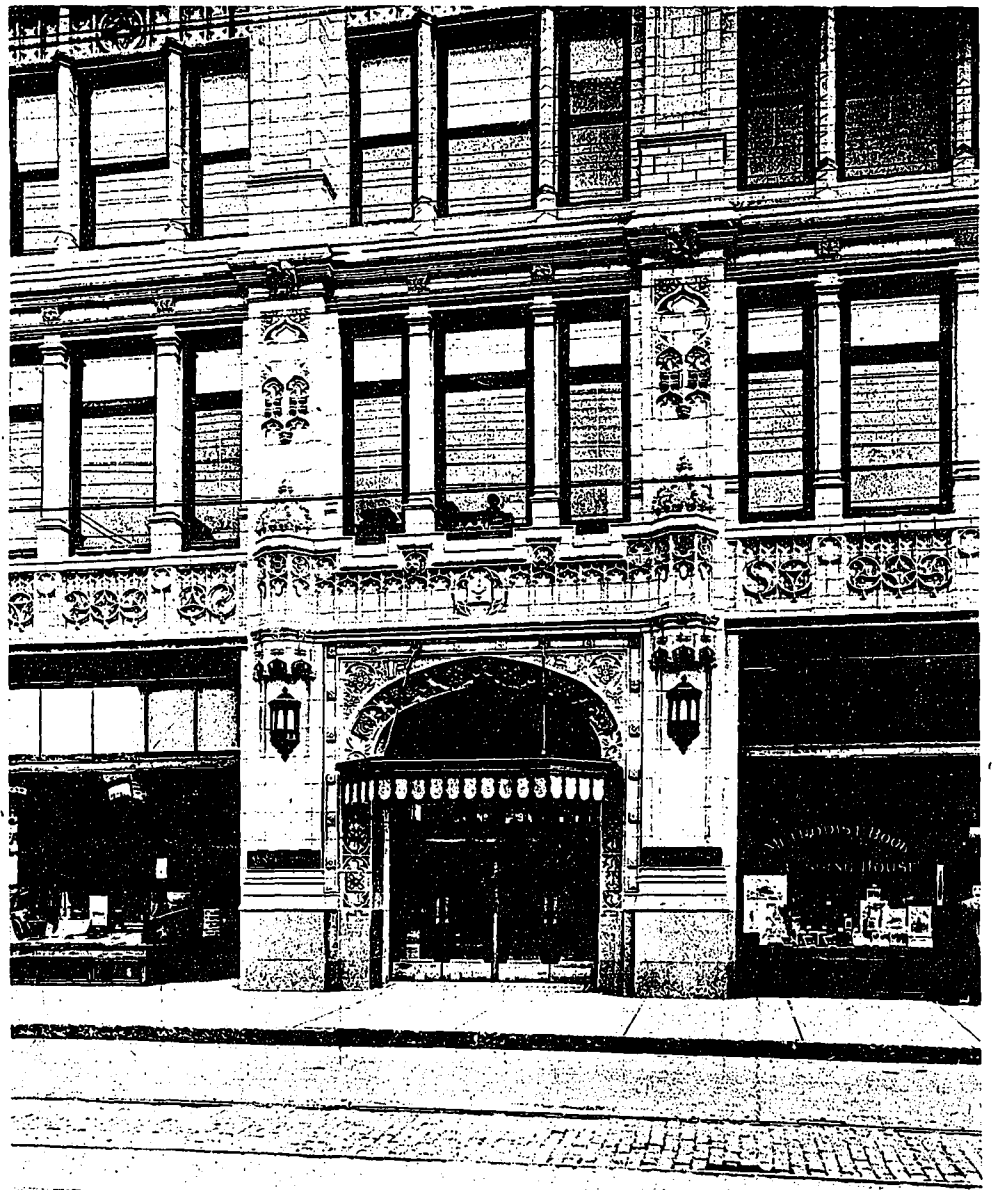
Owing to its close connection with church work, the building was designed in the Gothic style. It has a frontage of one hundred and thirty-five feet on Queen street, two hundred and twenty-two feet on John street and one hundred and ninety-two feet on Richmond street. All of the street fronts are paved with cream matt glazed terra cotta from the granite base to the roof.

The entire structure is as nearly fireproof as it is possible to be. All sash and frames are metal, and all windows opening into the court are of steel and glazed with wire glass. The partitions are of tile, and each floor is divided into sections by automatic fire doors. The

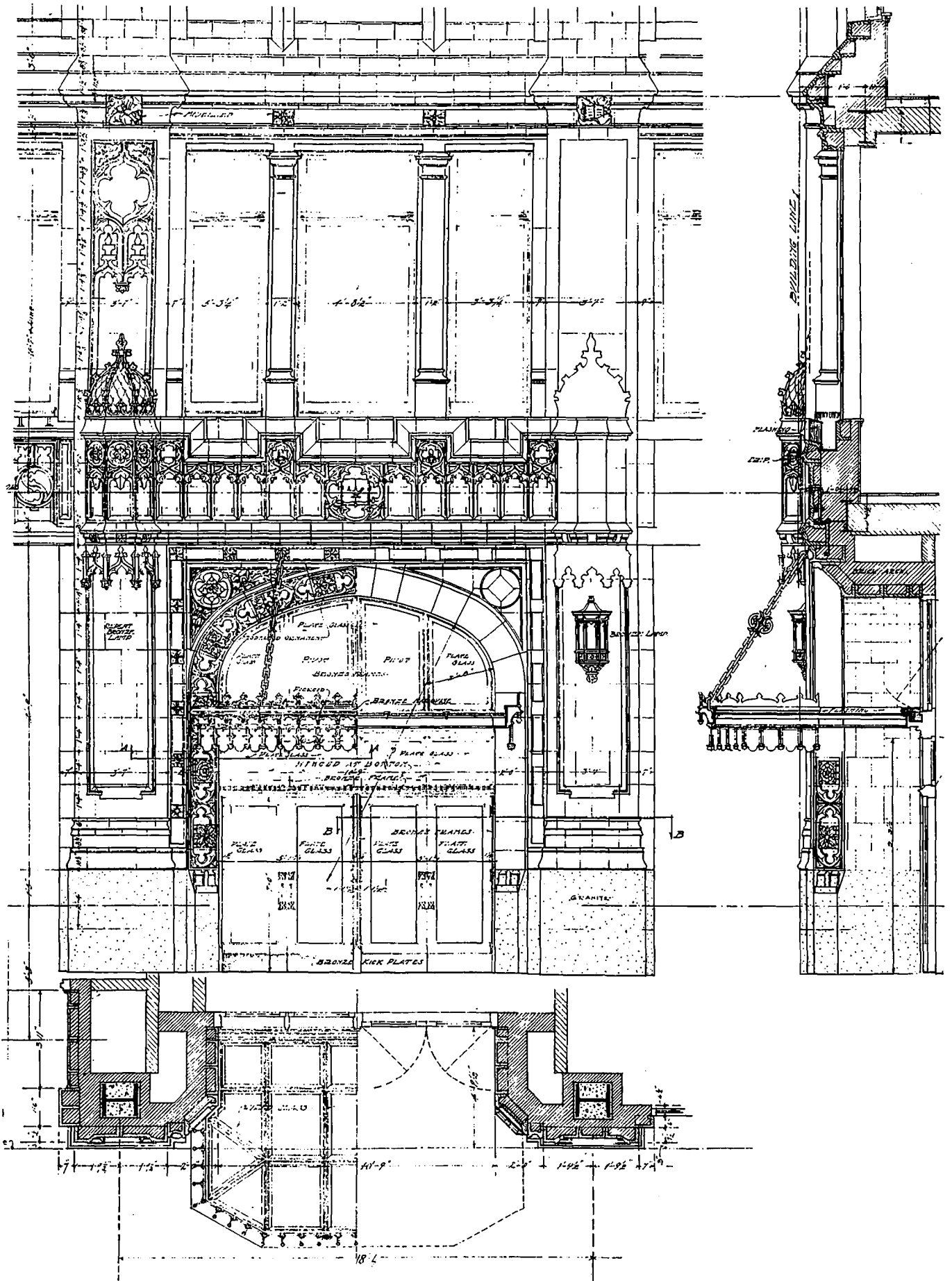
floors are finished with concrete, asphalt, terrazzo or marble, except where it was absolutely essential to have wood.

The construction is skeleton steel, with hollow tile floor arches in the office, and reinforced concrete in the factory sections. Each column rests on a caisson of concrete, varying from five feet six inches to eight feet six inches in diameter, and extending to bedrock a distance of approximately forty feet below the street level.

Considerable difficulty with water was experienced, from an underground creek. Sheet piling and continuous pumping were necessary.



ENTRANCE METHODIST BOOK ROOM, TORONTO.



DETAIL OF MAIN ENTRANCE, METHODIST BOOK ROOM, TORONTO.

The steel work is designed for a line load of four hundred pounds per square foot in the factory section, and the addition of five storeys, as the necessity arises. It is one of the heaviest steel contracts in Toronto, two thousand two hundred tons being used. The structure is sufficient to support a building with light floor loads, such as an office building, ten storeys in height.

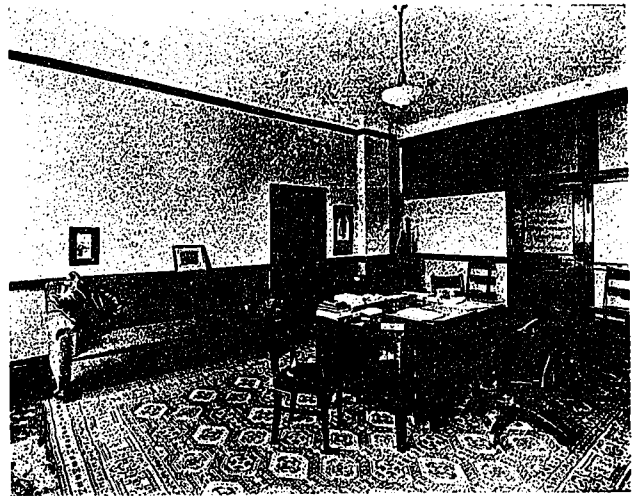
The main entrance is on Queen street, and is protected by a cast bronze marquis. The main entrance hall is roomy, and is pleasing in appearance, though simple in design. It is decorated with Battachino marble wainscot, mahogany trim and ornamental plaster ceiling. The floor is of square marble tile.

The electric fixtures in the hall and on either side of the entrance are of cast bronze specially designed.

In this hall are show windows and doors leading into the stores on either side. Millways for three passenger elevators are provided, two being installed at present.

From Queen street also is the main driveway into the court, which is over the boiler room and coal vault. The court is through a lane to Duncan street.

There are five stores on Queen street, two of



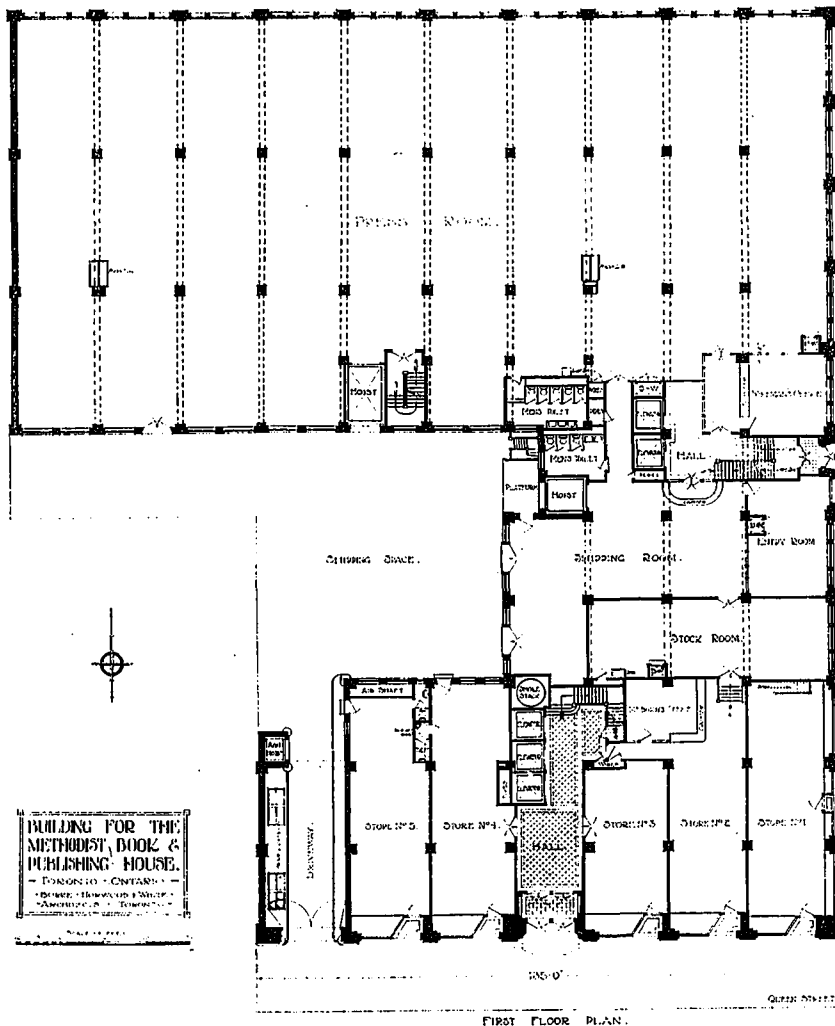
PRIVATE OFFICE, METHODIST BOOK ROOM, TORONTO.

which are occupied by the retail department of the Book Room. The remaining stores are the only portions of the building rented to concerns having no connection with the Methodist Church.

To the rear of the stores is a large stock room fitted with large bunks for surplus stock. Behind this again is the shipping room, with large doors opening directly to the court. No goods are handled on the street fronts.

The employees' entrance is on John street, below which in the basement are the timekeeper's office and the locker rooms. Provision is made for two employees' elevators. A stair leads up from this entrance to the various floors above and connects on each floor with the office of the foreman of the department on that floor. The balance of the ground floor is the pressroom, which is seventy-five feet wide and two hundred feet long. All of the presses are located in this room, from the small job press to the large automatic feeding Miehle presses. They are arranged around the walls, having the centre free for the handling of paper. The floor of this central space is asphalt.

Leaving the press-room, the material is raised by a large freight hoist to the bindery on the second floor, which is of the same dimensions as the pressroom. Here it is cut and bound and passed through to the mailing-room, or wholesale book department, which occupies



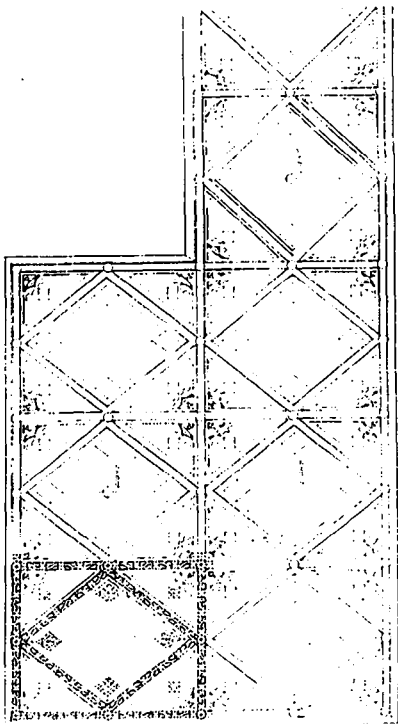
BUILDING FOR THE
METHODIST BOOK &
PUBLISHING HOUSE.
— TORONTO — CANADA —
— ARCHITECT — H. W. H. —
— ENGINEER — J. W. —

FIRST FLOOR PLAN.

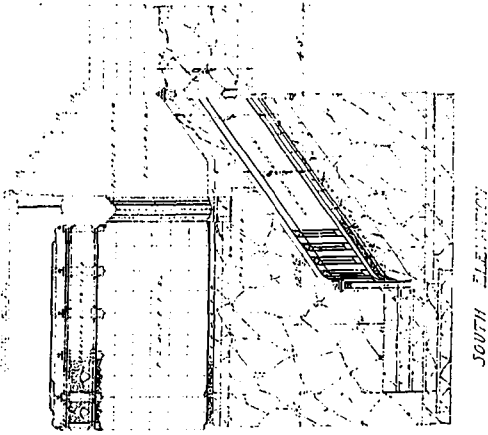
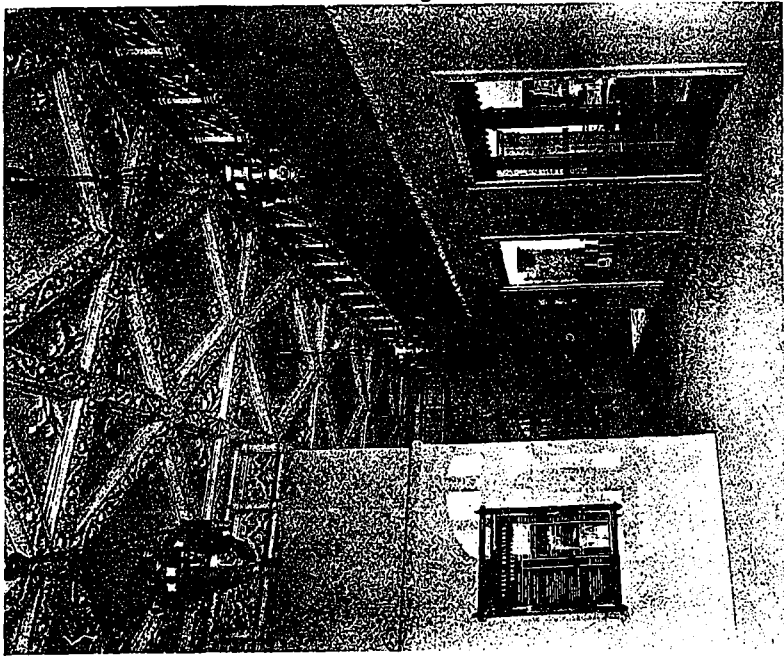
CONSTRUCTION

MAIN ENTRANCE CORRIDOR,
METHODIST BOOK ROOM, TORONTO.

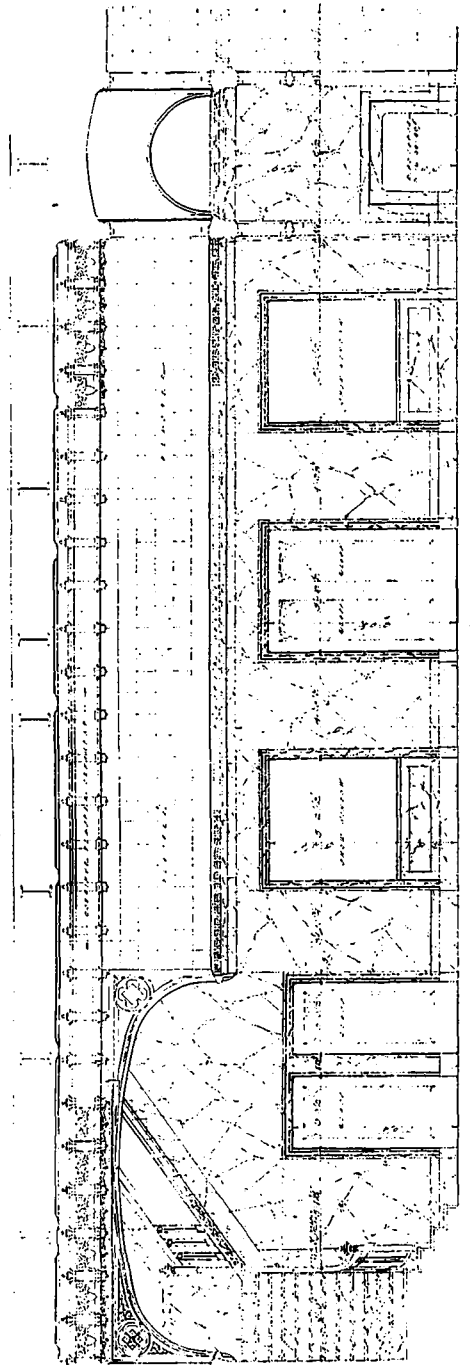
BUNKE, HORWOOD & WHITE, ARCHITECTS.



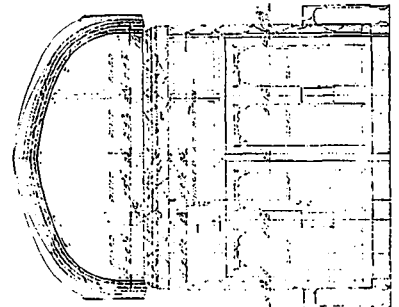
PLAN OF CEILING



SOUTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION

the remaining portion of the second floor.

The sample room of the wholesale department is served by the passenger elevators from the main entrance hall.

In the factory sections there are two freight hoists and four dumb waiters. The hoist serving the press room and bindery is of the heavy duty type. Its car is eight feet wide and fourteen feet long, and is capable of lifting five thousand pounds at high speed, or ten thousand pounds at low speed.

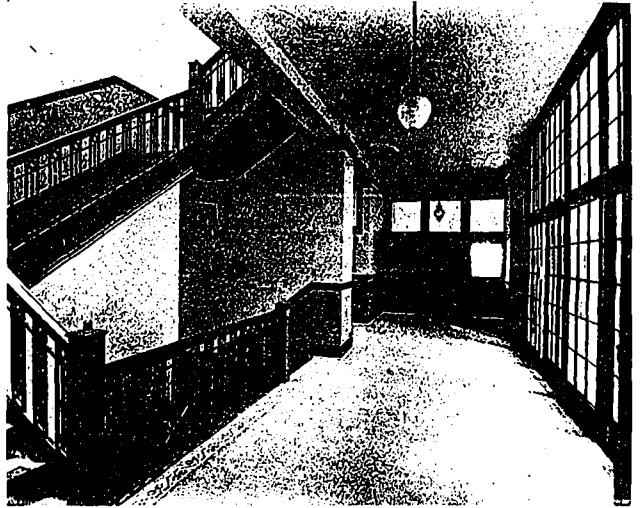
The dumb waiters are automatic, the car being sent to any floor desired, or brought to the user by pressing the corresponding button. None of the doors can be opened unless the car is at that floor.

The front portion of the third floor is occupied by the general offices of the Book Room. The office is separated from the corridor by a long counter, with a bronze cashier's cage centrally located.

The central section of the third floor is occupied by the library department and the offices of the publication and factory managers, while the rear portion on John street and the Richmond street section are occupied by the stereotype, job and proofreaders' rooms. The proofreaders' room is divided into stalls, each one accommodating its reader and checker.

The north-east corner of the fourth floor is devoted to the board room, which is a large and well lighted room, having windows on the Queen street and court sides. This room is used for the meetings of the Ministerial Associations, as well as board meetings.

The balance of the Queen street section is oc-



STAIR HALL, METHODIST BOOK ROOM, TORONTO.

cupied by the Woman's Missionary Society. The central portion is given over to other offices and a lunch room, where meals are served the employes at a nominal sum.

The balance of this floor is devoted to the linotype and type-casting departments.

The fifth floor is entirely occupied by various Connexional offices.

Ample toilet accommodation is provided on each floor, for both the office and factory sections. The office toilets have white Italian marble wainscot and stalls and terrazo floor, while the marble in the factory toilets is Valley grey and the floors asphalt. All are ventilated by exhaust fans located in pent houses on the roof. Exhaust fans are also located there to ventilate the stereotype, type-casting and linotype rooms.

The Richmond street section of the basement is devoted to paper storage. Here thousands of tons of paper may be piled to temper.

All of the paper comes into the receiving room by way of chutes from the court. Here it is unwrapped and piled on benches and trucked out to be stored.

A vault runs the full length of the building on Richmond street underneath the sidewalk. This is used for the storage of book plates, cuts, etc.

Locker rooms, machine shop, engineer's office and carpenter shop occupy the balance of the basement, with the exception of the north-east corner, which is on a lower level, where are located the generators and switchboard. All connections from the generators and street service to the switchboard are in ducts, as well as the leads from the switchboard to the risers for the panel boards on the various floors.

The floor of the sub-basement is twenty-seven feet below the street level. Here are located the sump, pump and boiler rooms and the coal vault.

All drainage below the sewer level is led to the sump, which is six feet in diameter and eighteen feet deep, where it is automatically



CORRIDOR, METHODIST BOOK ROOM, TORONTO.



COMPOSING ROOM, METHODIST BOOK ROOM, TORONTO.

pumped to the drain by electrically driven bilge pumps.

Provision is made in the boiler room for four boilers, but only two are installed at present. They are of the latest water-tube type, rated at three hundred horse-power each. The stoking is done automatically. The coal is handled from the vault to the hoppers in the stokers by an electric conveyor. Connected to the conveyor is a scale, so that actual consumption of coal may be recorded.

The boiler, pump and generator rooms are supplied with fresh air by a supply fan.

Below the boiler room floor is an ash tunnel, the floor of which is forty feet below the street level. The ashes are dumped from the hoppers under the stokers into an ash car, which is run on to an hydraulic hoist and raised to waggon height and dumped, thus saving laborious handling.

The building is heated by exhaust or direct steam, as may be desired. All piping is arranged to suit the enlarged building.

A watchman's time clock has been installed, with stations on the various floors, which automatically records on a master clock located in the engineer's office.

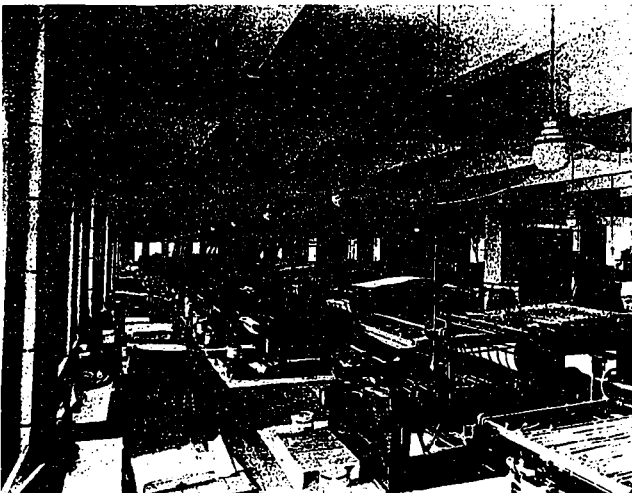


BINDERY, METHODIST BOOK ROOM, TORONTO.

GOOD ROADS CONGRESS

At the Good Roads Congress, to be held in Montreal, a programme of lectures and discussions is being compiled, the names of those taking part embracing most of the leading experts in road making on the American continent.

The congress will be under the auspices of the Dominion Good Roads Association, of which the honorary presidents are U. H. Dandurand, of Montreal, and W. A. McLean, Chief Engineer for Highways in Ontario. The president of the Association is B. Michaud, Deputy Minister of Roads for the Province of Quebec, while O. Hezelwood, president of the Canadian Automobile Federation, is vice-president. The other officers are G. A. McNamee, secretary of the Dominion Good Roads Association; R. S. Henderson, president of the Manitoba Good Roads Association; Alderman R. J. Shore of Winnipeg, Lieut.-Col. W. N. Ponton, president of the Associated Boards of Trade, Belleville, Ont.; Howard W. Pillow, president of the Automobile Association of Canada, and J. A. Sanderson, honorary president of the Ontario Good Roads Association and of the Dairymen's Association of Eastern Ontario.



PRESS ROOM, METHODIST BOOK ROOM, TORONTO.



BOILER ROOM, METHODIST BOOK ROOM, TORONTO.

Building Operations During Cold Weather

A Discussion of The Possibilities of Winter Construction

By F. M. PAULL*

FORCE of habit is apparently one of the strongest compelling influences. Let business take a certain trend for a few seasons and the majority of people will take it for granted that the resulting conditions are a necessity and must naturally exist.

This is the state of opinion in certain quarters at the present time in connection with the sale of building material during the fall and part of the winter season. In general building activity drops off.

While this is not a necessity, it is a fact that by taking the "dull season" for granted, the buyer has accustomed himself to do season buying instead of distributing his expenditures over a period of twelve months. It has been made easy for him to do his buying during a short period. Because of this concentrated expenditure he has not taken advantage of the lower prices of material and labor which exist in the winter time.

Building is to-day, however, an all-year-round proposition. Comparatively few of the big builders lay up a job on account of cold weather if they can by any means induce the owner to go ahead with the plans.

Since there is no real reason for not building in the winter time, a concerted action on the part of those most vitally interested should result in increased building.

Working on this theory, and already convinced of its truth, a Detroit company recently started a campaign. The object of the campaign is to correct existing conditions in the building trade. However, before going ahead on their theory without anything to back them up they appealed to the two classes of people in the building trade who should be most interested in seeing a movement for "More Winter Building" success—the architect and the other manufacturers of building material.

The architect was first sounded—a letter being sent to a list of six thousand or more in all parts of the country. It asked their opinion of the feasibility of doing away with the "dull season" if conditions were made right—the conditions to be unusual inducements in the way of price, shipments and service between November 1st and April 1st, and in addition, special sales and advertising campaigns, setting forth the advantages of building in the winter time. While the replies were not all favorable, there were enough favorable ones to show that architects are as anxious for more winter building as are building supply manufacturers.

The consensus of opinion proved the theory correct that "the winter dull season is mostly a matter of tradition," which could be overcome if everybody—architect, building trades, press and manufacturers worked together.

Substantially the proposition was the same one put up to the architects, and was as follows

1. Do you think more business could be uncovered during the next six months if supply people made special inducements in price, service, delivery, etc.?

2. Do you think that any such co-operative campaign would appeal to the building supply people generally?

3. Would you be willing to co-operate in such a movement? If so, to what extent?

The third proposition provided for giving special advertising instructions in methods of increasing sales, every advertising department to undertake a special "More Winter Building" campaign through their sales and advertising organizations, and to enlist the co-operation of architects and contractors.

The replies received from the manufacturers proved that everybody was interested. Just as in the case of the architects, not all were of the opinion that building could be stimulated in the winter time, even if everybody pulled together. All of the replies were suggestive, however. A few of them will serve as samples of the reasons given for and against the practicability of winter building from the manufacturers' point of view.

A manufacturer of gypsum thinks such a movement would benefit the dealer.

"Of course," he writes, "there is no argument against the fact that it would be better to have building conducted uniformly. Anything we could do to bring about this condition would reflect, indirectly at least, to our credit, if it had only the effect of bettering conditions for our dealers."

On the other hand, a cement concern thinks that cold weather holds up concrete work somewhat more than some other form of building. To quote their own words:

"We agree with you that a good deal can be done along the lines of stimulating winter work, and we are certainly going to do everything we can in that direction."

A manufacturer of asbestos sheathing paper and all materials used in the installation of heating plants, strongly indorses the idea as follows:

"Wish to assure you that we appreciate your

*Fenestra Dept. Detroit Steel Products Co.

sending your winter building proposition to us, and your suggestions have our approval. Without doubt an increase in winter building would give improved conditions to all material houses. We shall be glad to further the movement in every way possible. I think your scheme of going after architects and builders to influence them in wider activity during the winter season is an excellent one, and I want to put myself on record as being heartily in favor of your idea."

Two concerns thought it too bad that the movement for more winter business wasn't started earlier. One of them, a sheet metal concern enthusiastically supported the movement in the following terms:

"The more we think about this proposition the more we are warmed up to the subject, and we now consider it a very happy thought to promote the idea of more winter building. It is unfortunate this subject did not come up at least sixty days ago, so that what we want to put into the minds of the architects and contractors could have been put there somewhat earlier."

The other concern mentioned, hopes for results in 1916 if the movement is pushed now. This is what they say:

"So far as possible we will fall in with your idea. We are in hearty accord with it and hope that enough effort will be put back of the cam-

paign to carry weight. We can hardly expect much results this winter, but certainly hope for some effect in 1916."

Others also replied favorably and promised to co-operate in the movement for more winter building.

"We will do what we can to assist in this movement, as it is an excellent one and will probably be able to obtain some results in this way," writes one.

"We are very much interested in your proposed campaign for "More Winter Business" for building supply people? We are very sorry indeed to state that our experience in campaigns of this kind has been very limited and we would hesitate therefore offering suggestions as to how it should be conducted. We do, however, think that more business would be uncovered during the next few months if builders could be induced to build during the winter instead of in the spring," writes another—and still another has the same view as follows:

"We have read with interest your letter of October 12th regarding "More Winter Business" and there is little question but what a properly conducted campaign directed into the right channels might release considerable business during the winter months that might otherwise hold over until spring."



THE LONG PERGOLA IS AN ADMIRABLE ARCHITECTURAL BRIDGE BETWEEN THE HOUSE AND THE GARDEN.

Two manufacturers while personally endorsing the plan to stimulate winter building believed the old bug-a-boo that "there always had been a dull season and always would be one" was too deep seated to be overcome at this late date.

"The opinion seems to be here," one says, "that the bulk of small building will be held up during the cold weather, however desirable it may be to extend it."

Climatic conditions would be the stumbling block for any campaign, thinks the other—"We believe it would be a distinctive advantage to do away with the dull season, but we do not see very well how this can be overcome entirely, on account of climatic condition."

And so it was all along the line. The consensus of opinion seems to be that any manufacturer entering on such a campaign would benefit the architect, contractor and owner and get out of it just about what he was willing to put into it.

Since the question of More Winter Building was originally brought up, the Building Trade Press has devoted considerable space to discussion of different phases of the question.

A prominent eastern architectural magazine wrote as follows:

"We are heartily in favor of the movement

which you have inaugurated for winter building. There seems to be no good or sufficient reason why building operations could not be carried forward to advantage during the winter months throughout a very large proportion of the United States, and to do so would unquestionably be of some benefit to all parties concerned including architects."

Another publication believes it is impossible to eliminate business seasons. They write:

"This does not seem to be any more practical in the building business than in the drygoods business. The delays incident to the completion of a building in the winter, excessively cold weather and storms, are unavoidable, and for buildings that represent a great outlay of capital such as hotels, apartment buildings and office buildings, there does not seem to be any appreciable advantages in their completion in the spring or the early fall, for the reason that they cannot reasonably expect tenants until the fall, thus leaving a period of several months from which they receive no rentals, to which should be added higher cost incident to the building, and heating the building in winter work. On the other hand, buildings of this type, completed in the early fall, can reasonably expect prompt returns by early rentals."



ARCHITECTURAL DIGNITY COMBINED WITH COMFORT, A FINE SOLUTION OF THE PIAZZA PROBLEM.

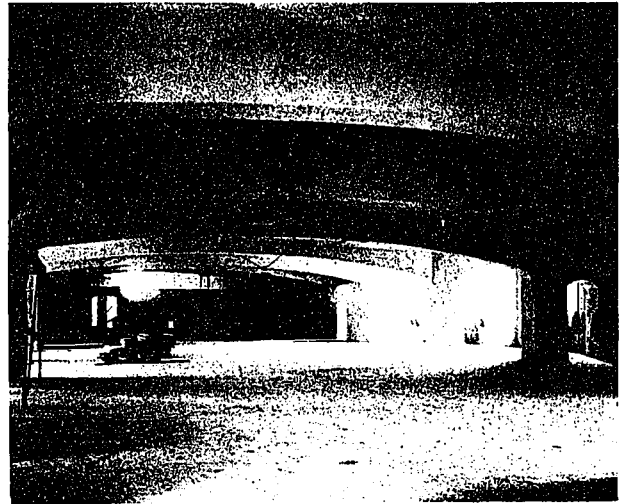
Complicated Concrete Construction

Noteworthy Illustration of What is Being Accomplished in Concrete

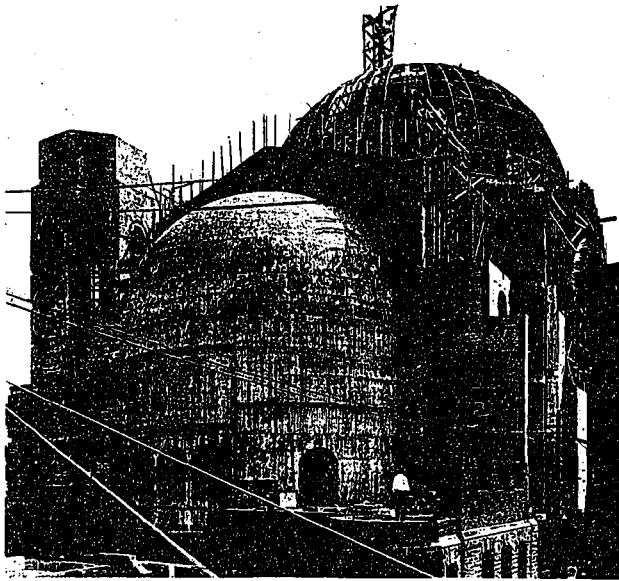
A STRIKING example of the adaptability of concrete to complicated structures is given by the St. Michael's Church now being completed, corner St. Urbain and St. Viateur Sts. in Montreal. The church proper covers an area of about 170 x 90 (exterior dimensions). There are really no columns in this church, and the whole structure is built of plain and reinforced concrete. The style is Byzantine, and the illustrations reproduced here give a better idea of the design and appearance of the building than any lengthy descriptions.

The lay-out, not only from an architectural but also from an engineering point of view was made in all its detail by the architect. It remained for the engineer only to check up the stresses in the concrete, and provide the neces-

four strong tower abutments. Arches, cantilevers, the dome proper, etc., are clearly shown on the illustrations. The dome is about 118 ft. above the sidewalk and 110 ft. above the auditorium floor, and the tower is 170 ft. high.



REINFORCED CONCRETE BEAMS IN BASEMENT.



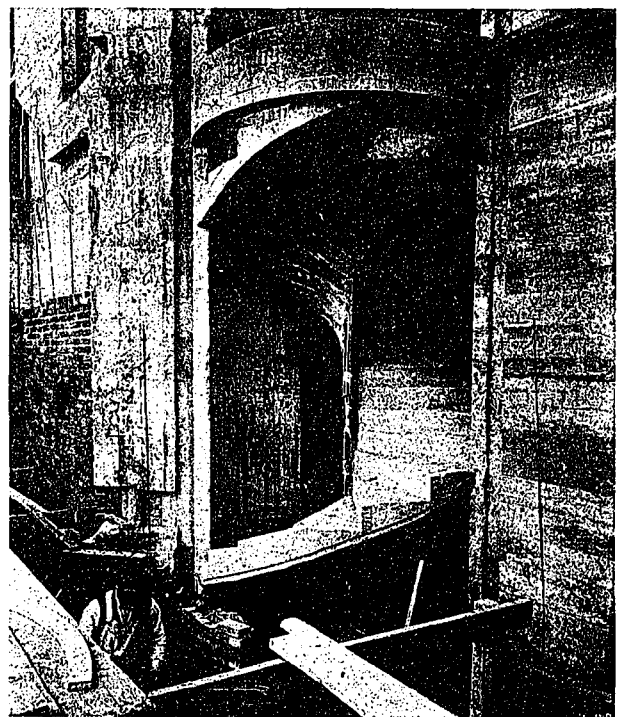
CONCRETE DOME, SHOWING FORMS IN PLACE.

sary steel to take the tension stresses, and in doing so it was easily ascertained that details of construction were also gone into by the architect, as no changes had to be made, and the church is built in strict accordance with the original plans of Mr. Beaugrand Champagne, the architect.

The church is founded on rock. The basement ceiling is carried by flat arches 54 ft. clear span having a raise of 30 ins. only. The arches are 18 ft. c. to c. and are connected with a flat slab 7 ins. thick.

The main auditorium is covered by a dome 74 feet in diameter. This dome is carried by four full centre arches, each 52 ft. diameter, which arches are being carried down to rock by

The outside walls are all covered with Green-dale brick and terra cotta, as the illustrations show. The dome and roofs, however, are finished in concrete, the dome having received a colored waterproof cement finish about 1 in. thick, showing green shamrocks on a white field. The green color was obtained by mixing a green pig-



DETAIL OF CONCRETE STAIRWAY, ST. MICHAEL'S CHURCH, MONTREAL.

ment with the ordinary cement, and the white is obtained by the use of white cement.

It is gratifying to state that although the structure is rather unusual and of huge proportions, the work was executed without any serious accident to men or property.

THE BRITISH COLUMBIA LUMBER SITUATION

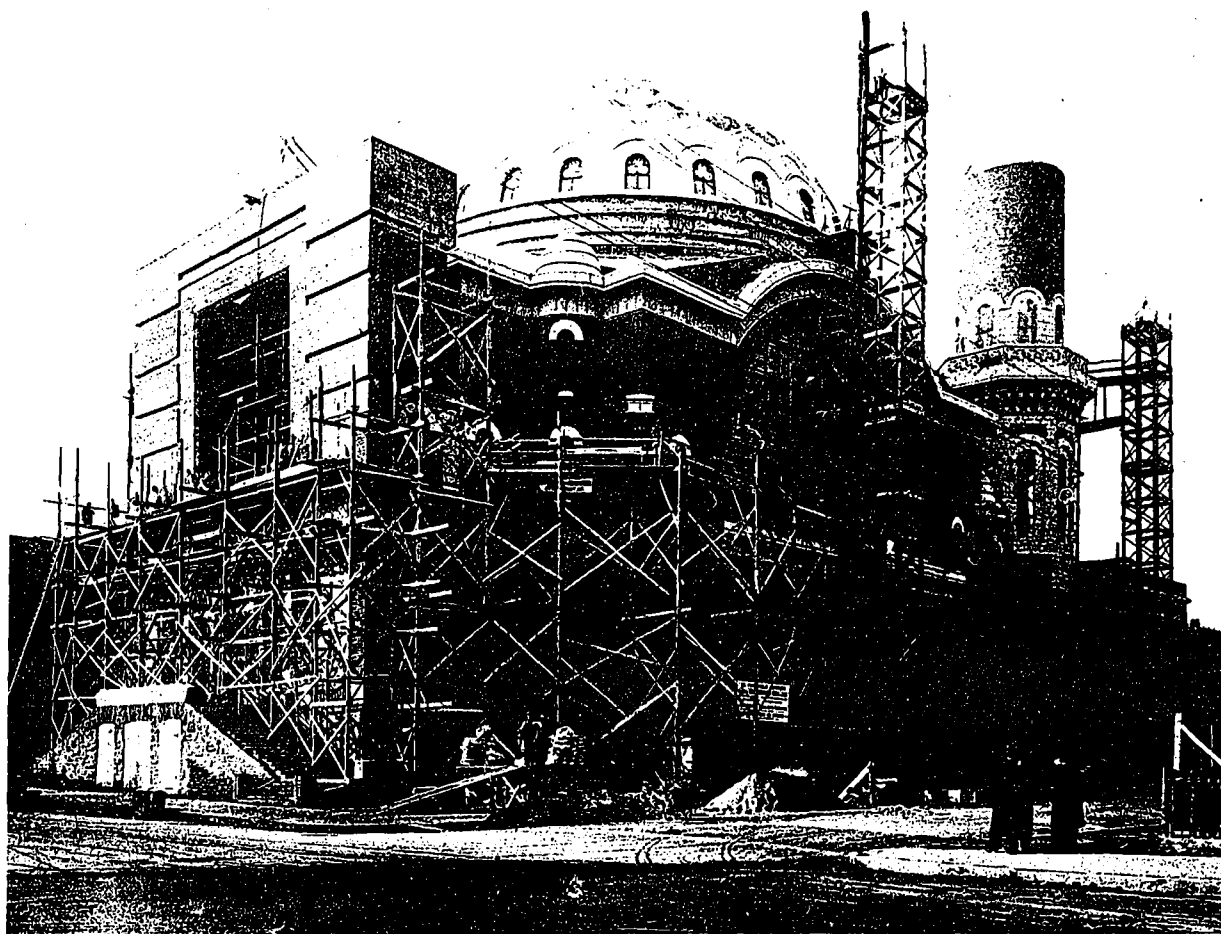
The serious situation confronting the lumber industry of the West owing to chronic over-production and ruinous price-cutting received a great deal of attention at the Pacific Logging Congress and the annual meeting of the Western Forestry and Conservation Association. Both of these meetings were held in the lumbermen's building at the Panama International Exposition at San Francisco.

Conditions in British Columbia were dealt with in a letter sent to the president of the association by the Hon. W. R. Ross, from which the following quotation is made:

"It is with great regret that I find myself unable to attend your meetings at San Francisco. I desired particularly to be present at the discussion of conditions affecting the lumbering industry. It seems to me that there has been definite

progress during the present year. Discussion of what is wrong with the industry is becoming clearer and effort along definite lines is beginning to take shape. From this side of the line we are watching with great interest your work of replacing demoralization by organization and of endeavoring to secure to wood its legitimate market.

"As you know, no Government is so closely identified with the lumbering industry as is that of British Columbia. Present prosperity, public revenue and future development in this Province depend very largely on the profitable marketing of our forest products. Hence the situation of the lumbering business is viewed with the greatest concern by the Government, and every method of restoring the industry to sound health is being studied by us. For the moment we are concentrating upon the conservation of lumber markets, to secure to our products their full legitimate market and check the shrinkage in consumption from which wood has suffered so seriously in the past few years. Government campaigns of advertising have, in the past, been of considerable effect when applied to immigration or the marketing of fruit. The official campaign we now have in progress is, I believe, the first one that has been launched on behalf of the lumbering industry. We intend to push the work



COMPLICATED CONCRETE CONSTRUCTION, ST. MICHAEL'S CHURCH, MONTREAL.

vigorously and to use the most effective and modern methods of publicity. Pamphlets, newspaper articles and advertisements, farm building bulletins, moving pictures, and adaptations of some of the fertile ideas so successfully developed in the Forest Protection Movement in the West will all be used in an intensive artillery fire directed at the consumer. We are fortunate in securing the hearty co-operation of the agricultural authorities and other agencies now actively engaged in pushing the better-farming, more-lumber-consuming movement."

BUILDING HOMES

Massachusetts voters have decided that as home builders, private landlords are a failure. So, by a four to one vote, they adopted a constitutional amendment authorizing cities and towns to go into the business of building homes to be sold or rented to individual citizens. The object is said to be for the purpose of relieving congestion of population. If sold, the communities are properly forbidden to take less

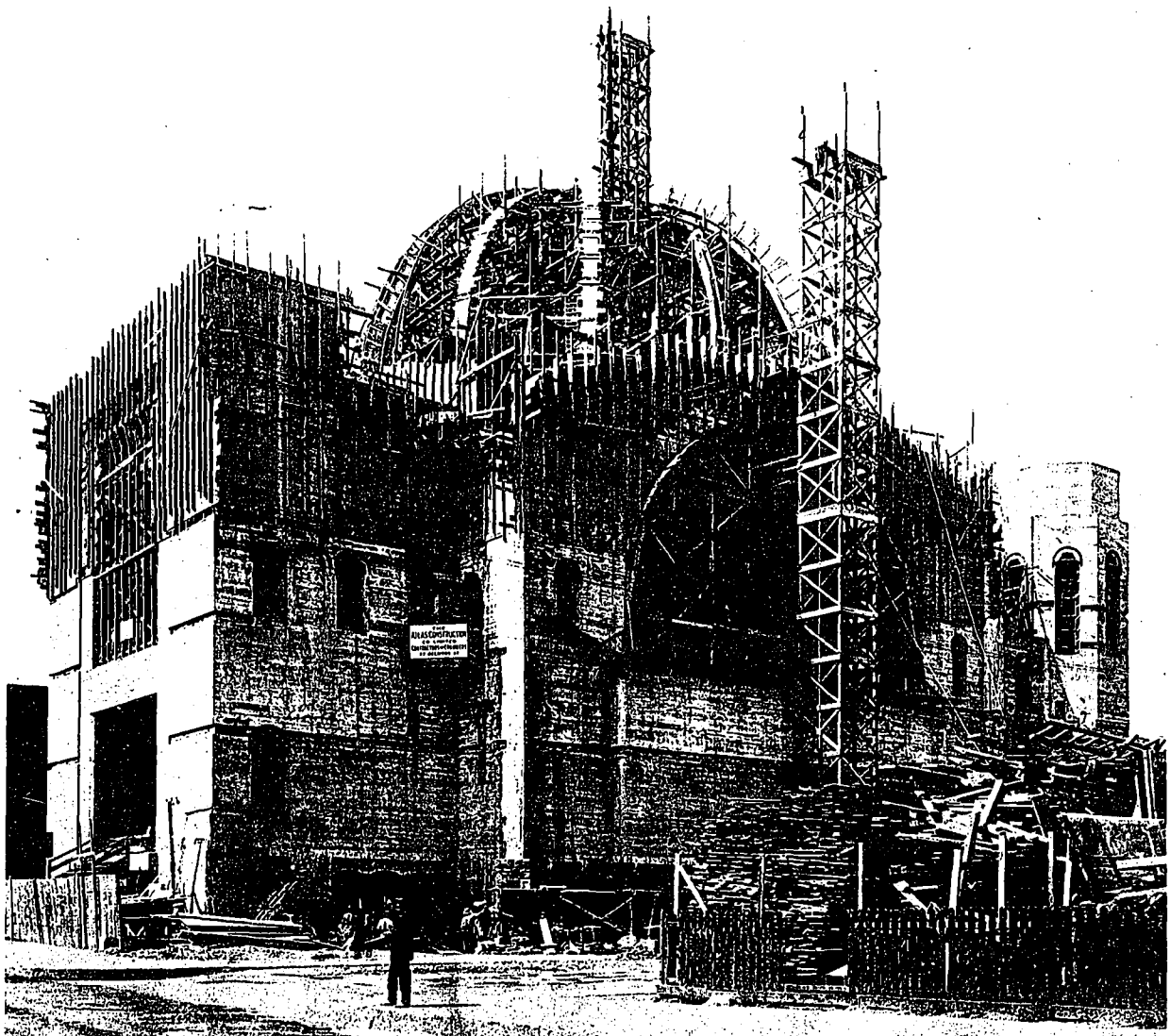
than cost, and probably they cannot be rented for less than would bring a fair return on the investment.

Were it not for the taxation on material in the United States, the home owners would be doubled in number.

HEIGHTS OF EDIFICES

Since the completion of several of New York's high buildings, it becomes necessary to revise a list of the highest structures in the world. This list is now given as follows:

Eiffel Tower, Paris.....	984 feet
Woolworth Building, New York...	750 "
Metropolitan Life Building, New York	700 "
Singer Building, New York.....	612 "
Washington Monument	555 "
Cologne Cathedral (spire).....	517 "
Rouen Cathedral (spire).....	492 "
St. Peter's, Rome (cupola).....	469 "
St. Paul's, London (dome).....	469 "



COMPLICATED CONCRETE CONSTRUCTION, SHOWING METHOD OF BUILDING DOME.

The Carty Building

An Ornate Addition to The Group of Business Structures on Yonge Street, Toronto.
It is Modern, Fireproof and Presents a Handsome Appearance

THE central Yonge street district of Toronto has added another handsome structure to its many business buildings.

Situated on the north-west corner of Yonge and Albert streets, the new Carty building of six storeys presents an imposing appearance, adding a much-needed improvement to the site which it occupies.

The building was planned and supervised by Mr. F. S. Mallory, architect, 65 Adelaide street east, Toronto, expressly for the Nordheimer Company, as their wholesale and retail headquarters for Canada, and contains everything essential for the display and demonstration of musical instruments.

The building is six storeys in height and basement, occupying forty feet on Yonge street by one hundred and eight feet on Albert street. its position favoring it with light from three elevations.

It is built of "steel skeleton construction," with foundations of concrete caissons, which had to be carried down to bed-rock to get a suitable footing.

Hollow tile fireproofing was used throughout the building in covering all structural steel and wall covering. The floors are of arched terra

cotta, the partitions of the same material, eight inches thick, which not only acts as a fireproofing, but also makes them sound proof.

The exterior on the two streets is faced with semi-glazed terra cotta, the ground floor pilasters and cornices are of polished granite. Extending above this all trimmings are of buff Ettonia brick with white joints, the whole of the structure presenting a very ornate appearance.

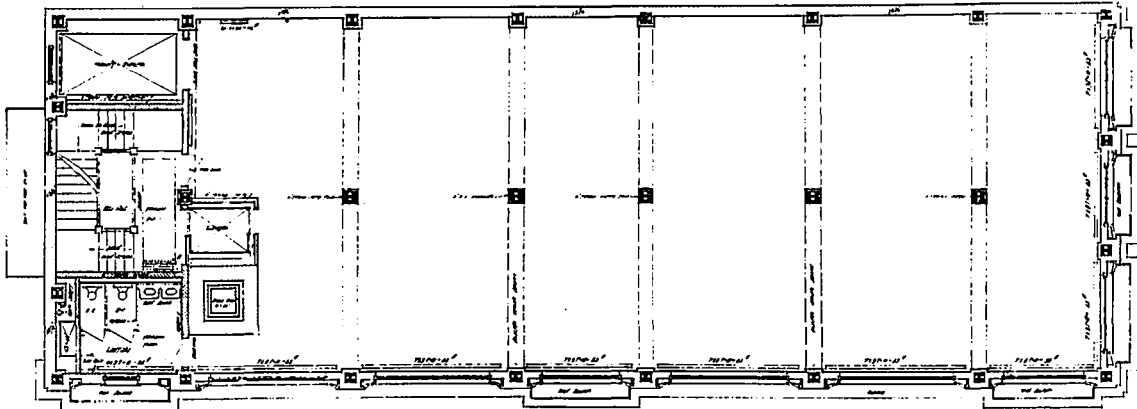
Access to the building is given from both Yonge and Albert streets. The Yonge street entrance is covered by a handsome marquis of ornamental and cast-iron, heavily ornamented. This entrance leads directly into the show and salesroom, the walls and ceiling of which have been highly decorated with ornamental plaster. All doors and trims are finished in mahogany, and the whole of the floor is finished in terrazo.

The Albert street entrance leads into the main hallway, which in turn gives access to the salesroom, stairway, a modern electric elevator and hydraulic freight elevator. The hallway is finished in marble, with the stairway of iron with marble treads and wainscoting, which is carried up to all floors.

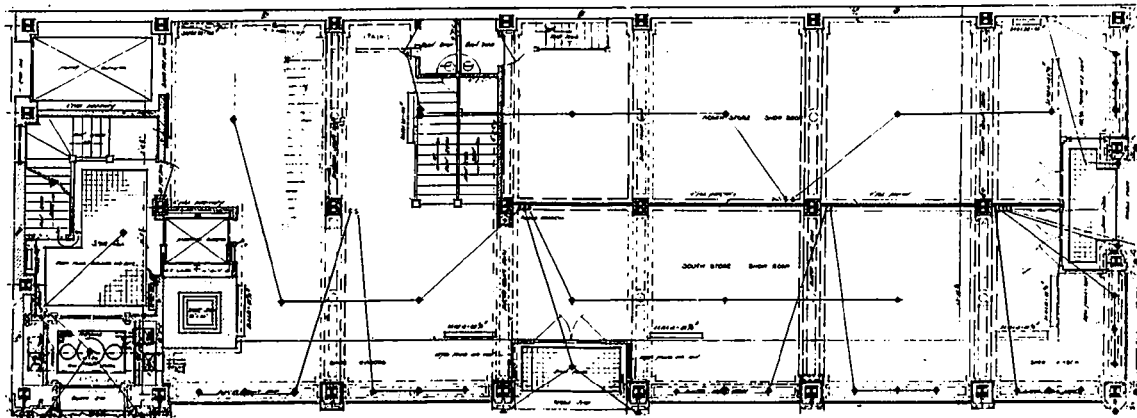
Special attention was paid to the first floor,

which is used as a recital hall, having all the accessories of a modern music hall in acoustics and conveniences. All doors, trim and base are in mahogany, with hardwood floors and ornamental plastering throughout.

All the floors above the first have been treated in mahogany, with hard-

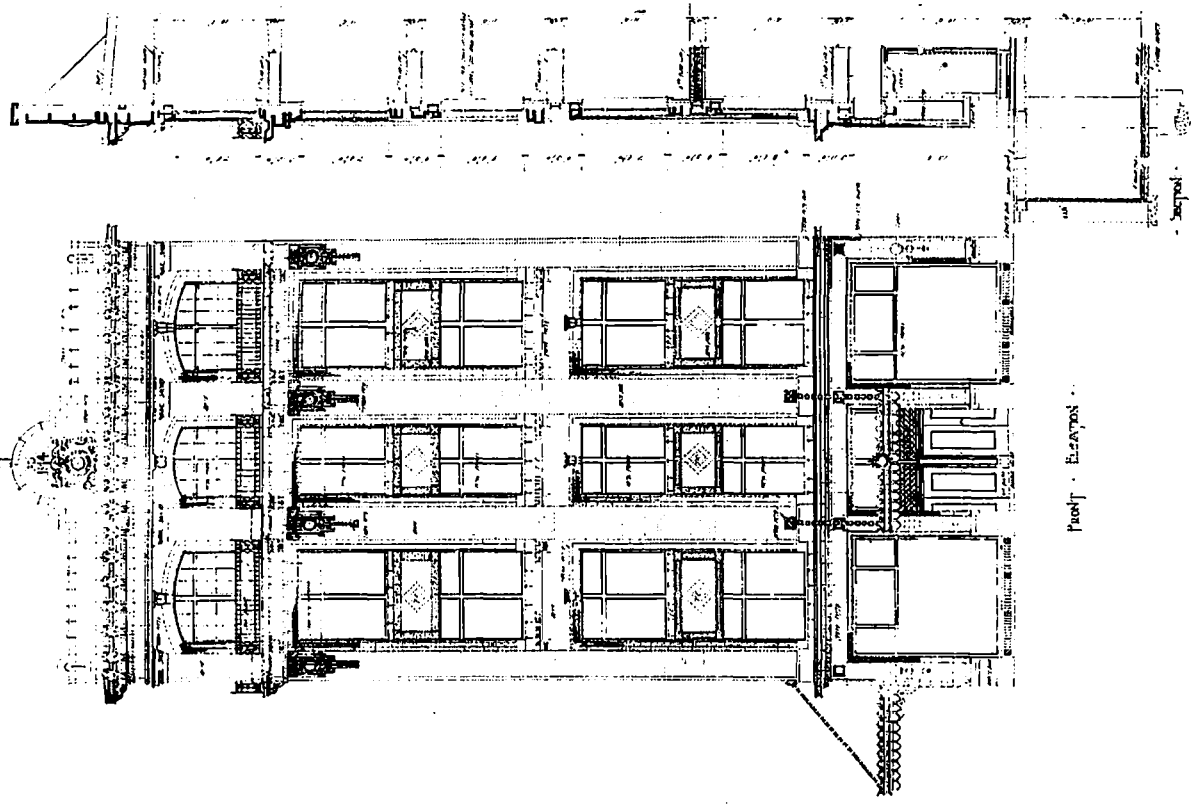


FIRST FLOOR PLAN.



GROUND FLOOR PLAN.

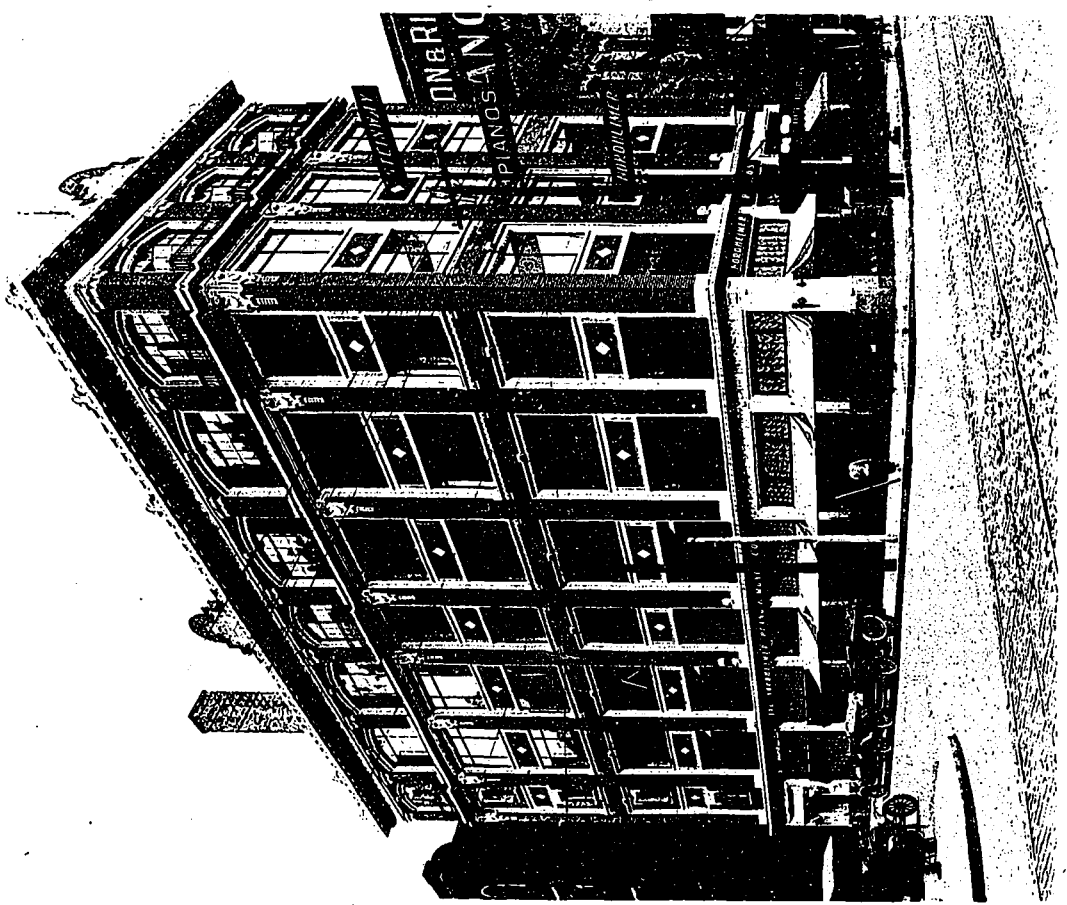
CONSTRUCTION



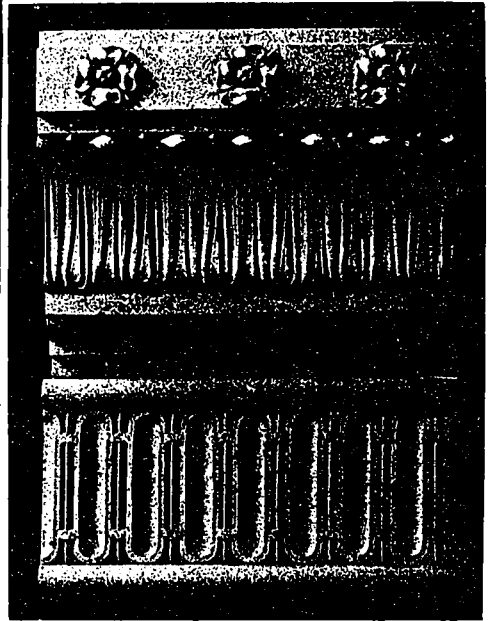
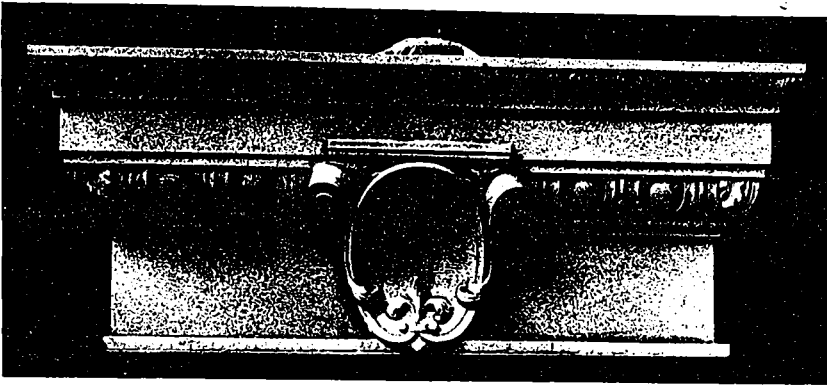
Front Elevation

FRONT ELEVATION OF CARTY BUILDING.

F. S. MALLORY, ARCHITECT.

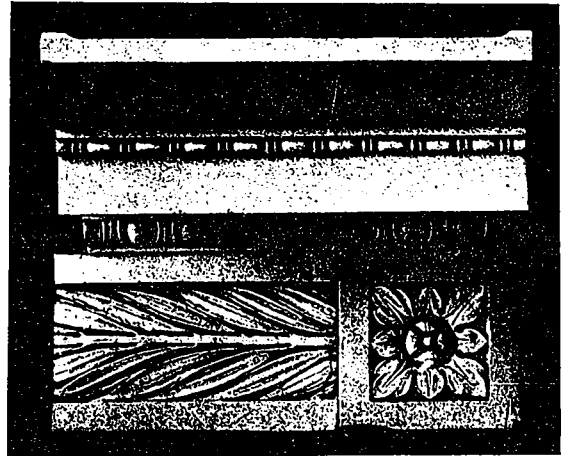
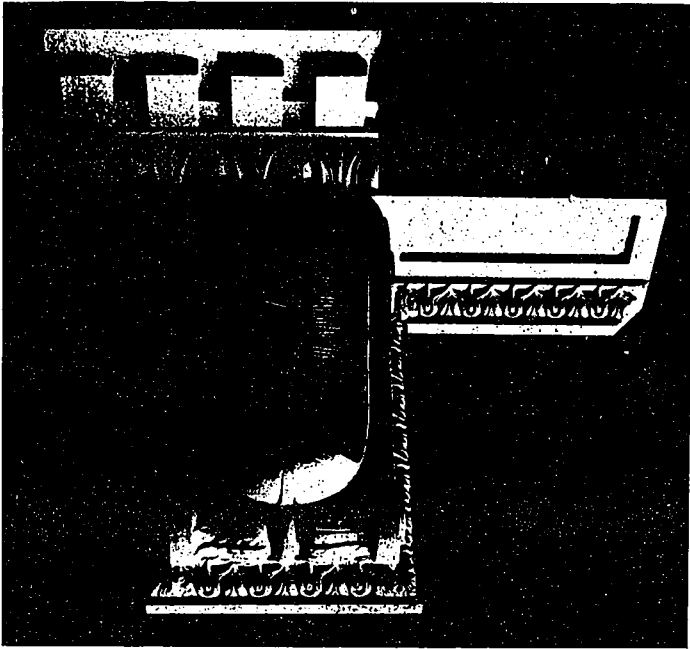


EXTERIOR VIEW OF CARTY BUILDING.

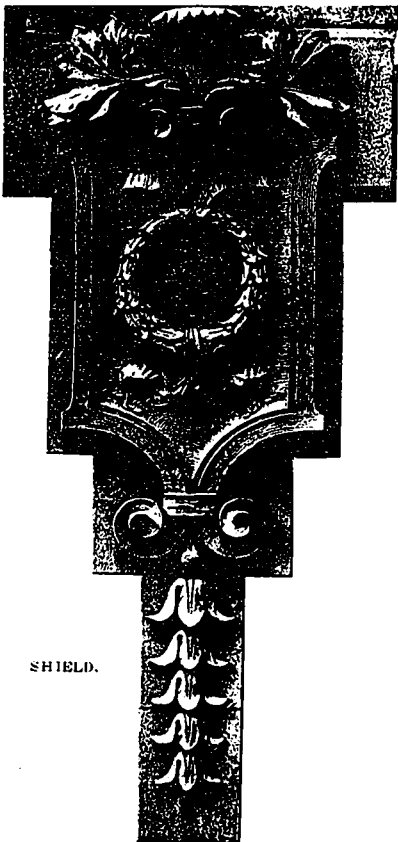


IMPOST CAP.

WINDOW AND SPANDREL ORNAMENT.



ENTRANCE MOULDING.

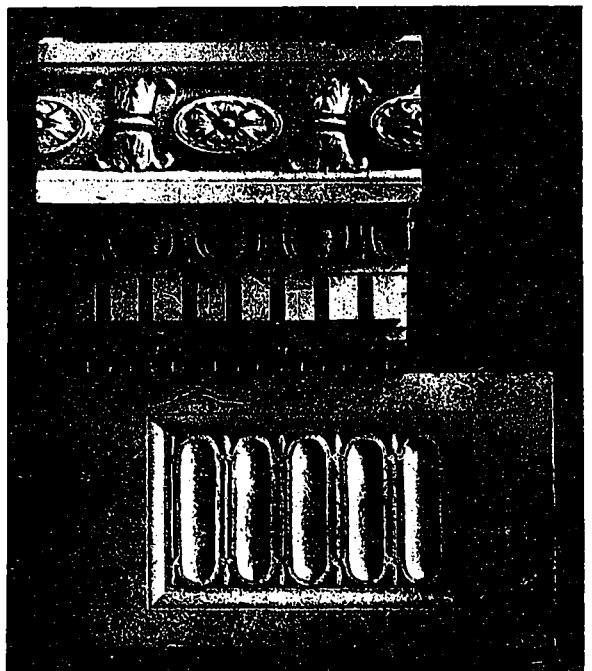


SHIELD.

TERRA COTTA DETAIL.
CARTY BUILDING,
TORONTO.

F. S. MALLORY, ARCHITECT.

wood floors and plain plastering. The top floor, which is used as general offices, has terra cotta balconies, with wrought iron railings, and the whole of the building on the two fronts is capped with a heavily enriched terra cotta cornice and pediments. A part of the first floor was partitioned off with hollow tile and fitted up with a mezzanine floor at the rear, and elaborately decorated, to be used as a candy store.



PANEL AND MOULDING.

CONSTRUCTION

A JOURNAL FOR THE ARCHITECTURAL
ENGINEERING AND CONTRACTING
INTERESTS OF CANADA



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CONTRIBUTIONS.—The Editor will be glad to consider contributions dealing with matters of general interest to the readers of this Journal. When payment is desired, this fact should be stated. We are always glad to receive the loan of photographs and plans of interesting Canadian work. The originals will be carefully preserved and duly returned.

Entered as Second Class Matter in the Post Office at Toronto, Canada.

FRASER S. KEITH EDITOR AND MANAGER

Vol. IX Toronto, January, 1916 No. 1

ESTABLISHING A STATUS

The splendid example set by the architects of Canada in answering their country's call has placed the whole Dominion under such obligation to them, both individually and collectively, that some show of appreciation from the Government in respect to the status of architects would be at the same time a just tribute to the profession and a benefit to the country.

With the Conservation Commission at Ottawa working to establish a standard building by-law for Canada and a gradually awakening public conscience in respect to the class and appearance of buildings and their relation to the

city or community in which they are to be erected, this is an opportune time for the architectural associations of the Dominion to co-operate in a vigorous manner towards securing legislation for their mutual benefit and protection. It will take more than a half-hearted effort to secure such, but the situation warrants doing everything that can possibly be done by the architects themselves with the use of all the influence they possess to achieve this much-to-be-desired end.

In the State of Michigan a registration act has been passed regulating the practice of architecture and placing it within the jurisdiction of a board of examiners, composed of architects who have been in active practice as principals within the State for not less than six years, with the condition that one of the members is to be the senior professor of architecture at the Michigan University.

In New York State a registration law became effective last year, which placed in the hands of a board of regents, who perform the same office for the medical profession, the fixing of standards for the education of architects, the conduct of examinations of those who desire to practice, and the issuance of certificates admitting to practice all entitled to assume the name of architect.

Commenting on the situation as it applies to Chicago, with its glaring evidences of a lack of architectural co-ordination, one of the members at a convention of Illinois architects said: "Chicago's buildings wouldn't even make good ruins. They are a sort of grotesque and painted debris. The churches look like forts. The theatres look like dry goods stores. The dry goods stores look like mausoleums. The general run of apartment buildings look like wedding cakes. And the city's public edifices run the gamut, as Mark Twain said, from Grecian to Roman to catch-as-catch-can styles of architecture. Chicago's loop is, futuristically speaking, a cross between the catacombs of Rome and the nightmares of Aubrey Beardsley; a composite of gingerbread, optimism and dyspeptic towers. As for the outlying homes, they are the result chiefly of speculative plunges instead of artistic flights, and are about as soothing to the eye as porous plasters are to the back. American architecture is a compound of transplanted freaks and politics. The profession is crowded with men who, having been born in Italy or France or Sweden, seek to plant Parthenons, palaces or icebergs in the busy commercial streets of this country."

These remarks, in a lesser degree, perhaps, apply to many cities, and will no doubt obtain until the architectural profession is elevated to the position it deserves. This question is of national significance, and deserves to have national consideration.

A RICH PRIZE

Now comes the main chance for the architects of Canada. No more should art languish on account of inactivity, nor genius be hidden for lack of an incentive. Architecturally all roads lead to the city of Sarnia, where the Board of Education has made a wonderful offer to procure competitive sketches and estimates for the erection of a new public school building. A sheet, headed "Information for Architects," has been issued by the Chairman of the Management Committee of the Board of Education of Sarnia, which is intended to be taken seriously, but which is really a huge joke. For the benefit of those of our readers who have not seen this wonderful document we reproduce it herewith in full, emphasizing certain portions by black-faced type:

The Management Committee of the Board of Education of the city of Sarnia has been instructed by the Board to procure competitive sketches and estimates for the erection of a new public school building and such specifications as to material and workmanship as will indicate the character of the building and enable the committee to judge of the relative merits of the proposed buildings.

COST.—The sketches and specifications submitted shall be on the basis of a total expenditure for the building, including blackboards, seating, etc., of approximately \$50,000.

GUARANTEE.—Each architect shall guarantee in writing that the building designed by him can in the ordinary course be constructed for his estimate of the cost, and that by responsible contractors.

BUILDING.—The building shall be of brick, two storeys in height, with stone basement, and shall contain ten class-rooms, one of them suitable for a kindergarten class if required, teachers' rooms, cloak-rooms, etc.; with steam heating automatically regulated; with forced ventilation; with drinking fountains and washing appliances suitably placed; closets in the basement; basement to be divided into compartments of the proper size for play rooms, workshops suitable for industrial training, domestic science, etc., and to be well lighted and ventilated. The building must conform in every particular to the regulations and recommendations of the Ontario Department of Education.

DRAWINGS.—The sketches required must show:

- (a) Basement.
- (b) First floor.
- (c) Second floor.
- (d) Front elevation.
- (e) Rear elevation.
- (f) Perspective from one corner of building, the point of sight to be taken at the level of the ordinary spectator.

The sketches are to be on a one-quarter inch scale, without shading and without any accessories such as sky, trees, figures, etc.

MOTTO OR CIPHER.—Each sketch is to be marked by a motto or cipher. There shall be no name and no handwriting upon the drawings or specifications. A plain sealed envelope bearing the same motto or cipher on the outside, and containing the architect's guarantee of cost and his motto or cipher, name and address, is to be sent by mail or delivered by some person other than the architect or any person in his employ to James Shanks, Esquire, 272 Wellington street, Sarnia.

TWO OR MORE SKETCHES.—A competitor is not restricted as to the number of designs he submits, but each must be under a separate motto or cipher.

DELIVERY.—Drawings are not to be framed, glazed or mounted, and are not to be personally shown or delivered by the designer. They are to be sent or delivered to James Shanks, Esquire, 272 Wellington street, Sarnia.

JUDGES.—The Board of Education shall be the final judge, but the committee may reject any or all plans.

EXPLANATIONS.—A brief typewritten explanation with the motto or cipher of the designer, but without a name or handwriting thereon, may accompany any design, but no architect shall be permitted to interview the committee or any member of the board regarding any design submitted, or to be submitted by him.

COMPENSATION.—If a plan is decided upon by the committee and the Board of Education, and is duly approved by the Public School Inspector, and the money to erect the building is furnished by the city, the author of the plan approved of and accepted, provided his guarantee of cost is not exceeded by all the contractors satisfactory to the committee who tender (each and all of which are conditions precedent to any liability to pay), shall be paid for completed plans and specifications (including all necessary details) promptly completed and furnished in accordance with his preliminary sketches, specifications and estimates, two per cent. of the actual cost of the work, and arrangements for the superintendence of the work may be made in the discretion of the parties.

DISPOSAL OF DESIGNS.—No unsuccessful design shall be

shown to any competitor, nor to any person other than a member of the Board of Education, without the consent of the author, and all designs other than the one accepted (if any) shall be returned to the competitors as soon as a selection is made.

TIME.—All sketches, specifications, estimates and guarantees must be in the hands of James Shanks, Esquire, before four o'clock, on Monday, the 31st day of January.

Surely the members of the Board of Education of the city of Sarnia are a bunch of practical jokers, the crowning part of the farce being the time allowed for the competition. The invitation to compete was received by a firm of architects in Toronto on January 5th, the time set for all sketches, etc., to be in hand being Monday, the 31st day of January. When a Board of Education desires to insult the architectural profession, why not confine itself to its own home town, instead of making itself ridiculous before the eyes of the whole country.

REGISTRATION OF ARCHITECTS
IN NEW YORK STATE

The Board of Examiners for registration of architects in the State of New York held its first meeting in Albany recently, and took measures to inaugurate the work of issuing certificates to all persons qualified to practice under the title of architect.

The New York State registration law, which went into effect on April 28, 1915, places in the hands of the board of regents, who perform the same office for the medical profession, the fixing of standards of education for architects, the conduct of examinations of those who desire to practice and the issuance of certificates admitting to practice all entitled to assume the name of architect. The law does not interfere with the right of engineers, contractors or others who make drawings and engage in building work, but requires everyone who wishes to practice as "architect" to obtain the regents' certificate. The conditions under which such certificates can be obtained are as follows:

First.—Possession of a diploma or satisfactory certificate from a recognized architectural school or college together with at least three years' practical experience in the office of a reputable architect or architects.

Second.—Registration as an architect in another state or country where the standard of qualifications is not lower than that required in New York State.

Third.—Practice exclusively as an architect for two years previous to April 28, 1915.

Fourth.—Practice exclusively as an architect for one year previous to April 28, 1915, providing application for certificate be made before April 28, 1916.

Every person applying for examination or certificate of registration shall pay a fee of \$25 to the board of regents. No annual fee is required.

Architectural Digest

Articles of More Than Passing Interest From Our Contemporaries

REIMS CATHEDRAL.

An interesting series of opinions on the subject of the restoration of the sculptures of Reims Cathedral is given in the "Strand Magazine." M. Paul Bourget, the well known author, says: "At a time when the skill of surgeons can repair injuries to our wounded heroes, are we to leave our works of art without heads or arms? I know that the restoration of the great doorway will present difficulties, and I do not know if the moulding of all the small figures which have been burned has been preserved. But the indisputable duty of the nation seems to me to be to restore all that can be scrupulously copied." M. Emile Boutrons thinks it should be "partly restored." M. Leon Berard, a former Minister of Fine Arts, says that restoration "is an artistic impossibility." M. Joseph Reinach: "Formerly we had no Parthenon, no Paestum, no Forum of Trajan. Now we have them. Let us keep them. They are so many treasures of our sorrows and sufferings. Do not let them be touched." M. Antonin Mercie, the sculptor, is against any attempt at restoration other than replacing the roof. He says: "Have you ever thought of repairing the Parthenon? To touch it would be to chase away the gods who still dwell there, and who will never leave it." M. Rodin says: "Ignorance is so great everywhere that people think a cathedral can be repaired and restored. If that were true the harm would not be great; we could rebuild cathedrals as we rebuild a battleship. But the sad thing is that no one now knows how to build them." The consensus of opinion seems to point to the impossibility of adequate restoration; the only thing which could render it possible would seem to be the existence of actual casts, which probably have never been taken.

FIRE PROTECTION IN SCHOOLS.

After each fatal fire in school buildings, such as seem to recur at more or less regular intervals, the question is raised: "How many such lessons will be required before defective or improper construction in school houses will be totally abolished? How long will a saving in expense, which is possible only at the risk of children's lives, commend itself to those in authority?"

It seems that in the case of the Peabody school house fire, the children had been regularly and thoroughly trained to make a quick and orderly departure from the building in just such an emergency as occurred, and only a few days prior to the fire, in a test drill, but two minutes were required for all of the children to leave the building. Moreover, it is generally agreed that the conduct of the teachers, after the alarm had been given, was intelligent and heroic. Whatever it was possible to do they apparently did, and yet many lives were sacrificed.

In view of these facts, it seems that the necessity for something more than the ordinary precautions taken to prevent panic and provide a reasonably quick means of escape from a building of this character is clearly indicated. In other words, it is obvious that only when school buildings are constructed entirely of materials that will not burn, is the danger from fires sufficiently well provided against.

It has been stated that there are but three classes of buildings where attendance is involuntary—hospitals, for the care of the mentally or physically defective—jails, where law-breakers and criminals are detained, and schools, where the children of the country are prepared for their life work. The first two classes are now almost invariably constructed of fireproof materials, and why in the case of schools the same safeguards should not be placed around the lives of the occupants whose attendance is required by law, is not apparent.

In addition to the fireproof construction of school buildings, there is another method of protecting them from fires and rendering lives therein reasonably safe. This consists of the proper installation of automatic sprinklers. This method is especially suited to buildings already constructed, and which for one reason or another could not be readily replaced or rebuilt of non-burnable materials.

It is claimed that no serious catastrophe or panic has ever taken place in a building with a properly maintained system of automatic sprinklers. If this claim is entirely accurate, which seems probable, since we have never known of its being seriously disputed, any excuse for longer exposing the lives of children to the danger to which the children of the Peabody school were exposed is invalidated, and failure to employ means readily at hand for the protection of lives becomes a serious matter.

In both the construction and equipment of school buildings, as well as those belonging to other classes, the architect's influence is unquestionably great, and it is hoped that the architects of this country will have their consciences quickened by reading the reports of this last needless sacrifice of human lives, until they will no longer share the responsibility that will attach to the erection of buildings intended for the housing of children for either instruction or entertainment, that have not been made as nearly safe as the means now readily at hand would unquestionably make them.—"American Architect."

FIRE PREVENTION VS. FIRE PROTECTION.

"Locking the barn-door after the horse has been stolen," is a time-honored expression; but it applies with peculiar emphasis to many of our supposedly modern municipal governments. Especially is this true in the matter of the fire loss.

While enormous sums are spent annually in the equipment and upkeep of fire departments for the purpose of controlling and extinguishing fires, it is almost a novelty to find a municipality with a department charged with the inspection, and with authority to enforce the correction, of conditions favorable to fires. In some of our larger cities some progress has been made by the fire departments, which have set apart small details of their staffs, charged with inspection work. The result of their work is minimized, however, by the fact that the inspectors have not sufficient authority.

The fire chiefs have it in their power to advance the fire prevention campaign and secure results. If a fire chief's record depended upon his keeping down the number of fires, instead of his ability to handle fires after they have broken out, there would be greater effort at inspection. Fire chiefs should insist upon sufficient men for inspection work; these men should be held responsible for the inspection and correction of dangerous conditions, and, to make their work effective, the inspectors should be clothed with fire marshal authority, in order that any fire breaking out in their inspection districts might be thoroughly investigated and the cause definitely assigned. In this way an inspector's reputation for thoroughness would be at stake, and, with the knowledge that a fire would be investigated by one familiar with the conditions, there would be fewer fires of a suspicious character, or due to carelessness.

Municipalities can well afford to make generous appropriations for fire-preventive inspection work. It is an investment which will yield large returns, not only in reduced fire loss, but in reduction in the cost of upkeep of fire departments and equipment.—Conservation.

METAL CORROSION BY PLASTER.

Theoretically cement will preserve metal work whereas gypsum will corrode it, but in practice gypsum plaster has no corrosive effect and is equal to Portland cement, provided that gypsum plasters as now made have a sufficient proportion of hydrated lime incorporated in the manufacture to more than neutralize any free acid in pure gypsum.

Mr. W. H. Walker, Director of the Research Laboratory of Applied Chemistry of the Massachusetts Institute of Technology, said recently that every engineer is well aware of the fact that acidulated water, no matter how small the percentage of acid may be, tends to corrode steel by increasing the number of hydrogen ions present. It had been made clear, from tests he carried out, that there were certain alkaline substances present in concrete which corrected any acidity and so protected the contained metal work from corrosion.

This fact has an important bearing upon the question of whether concrete will protect iron or steel from corrosion. Inasmuch as Portland cement, when it sets or hardens, liberates a quantity of caustic lime, which is a strong alkali, the answer to the question must be in the affirmative. Iron and steel will not corrode when embedded in good concrete but caustic lime is soluble in water, and poorly made concrete is not impervious to moisture. Therefore, if iron be embedded in concrete through which water is allowed at any time to percolate, this calcium hydrate will be slowly but surely dissolved. With it will disappear the inhibiting action of the concrete, and iron embedded therein will, in time, rust and become corroded. To ensure absolute protection of the reinforcing members of concrete construction, therefore such concrete must be of good quality and sufficiently dense and carefully made to render it waterproof.

Mr. S. J. Webb, secretary of the Gypsum Industries Association, New York, has investigated the subject of corrosion on metal lath by gypsum plasters, and gave the writer the following results of his investigations. Gypsum plaster to which has been added a small quantity of hydrated lime—enough to give an alkaline reaction, on test—will not corrode metal work of any kind. He maintains that it is not gypsum which corrodes or which creates corrosion, but the currents of damp air which are allowed to have access to the metal work—in other words, that where the metal work is entirely sealed from the action of the air, by having a sufficiently thick coat of plaster over and around it, there is not sufficient porosity in the ordinary wall plaster to allow damp air to reach the metal work, and therefore there will be no corrosion. He had occasion recently to cut into the floor and roof of Hammersteins' Theatre, in New York, which were of gypsum construction, and had been in some nine or ten years. The floor, which was finished with one inch of Portland cement concrete, had been washed with a hose daily for years. The water had not gone through the plaster, and therefore the steel work protected by the floor was in perfect condition.

He also cited another example: The National Fire Underwriters' Laboratories in Chicago had in their basement for two years a section of metal lath coated with gypsum hardwall plaster manufactured in the United States. This section had been subjected to dampness in the cellar for a sufficiently long period to give it a good test. Mr. Webb secured the section and had tests made. On removing the plaster it was found that where the metal lath had been covered with an ordinary thickness of plaster from one-quarter inch upwards there had been slight initial corrosion, but no progressive corrosion. In a few places where the plaster had been skinned very thin so that there was sufficient porosity to allow the air to pass through there had been progressive corrosion. He took a portion of this section with him to New York and exhibited it before a committee who had in charge a revision of the New York building laws. The demonstration was convincing to this body, composed of eminent scientists and men prominent in the building trades, with the result that they approved of the use of gypsum plaster over all metal surfaces.

A section of wall was taken from the King Edward Hotel, Toronto, recently, which had been plastered a number of years ago, with gypsum wall plaster on metal lath. The metal was very badly corroded. The plaster had been applied in a thin coat, and was manufactured at a time when the gypsum hardwall manufacturers had not begun to use hydrated lime to neutralize the slight amount of free acid in gypsum. It is due to examples of this kind, coupled with the fact that pure gypsum gives an acid reaction, that there is a prejudice against the use of hardwall plaster in connection with metal. Some metal lath manufacturers have gone to a great deal of trouble to adapt their materials for use of gypsum plasters.

While we believe that any improvement in the manufacture of metal lath that will make it less liable to corrosion is a distinct advance, we find that if gypsum plaster is applied to the thickness of one-half inch or more and well trowelled to a sufficient density to make an ordinary good wall there is no danger of gypsum hardwall plaster corroding ordinary steel metal lath or other metal surfaces. It will be found that there is always present an initial corrosion, but that where ordinary care is taken there will be no progressive corrosion, and that therefore the metal will be properly protected, and also that it is immaterial whether Portland cement plaster or a gypsum hardwall plaster is used. The ancient objection no longer obtains in regard to the use of gypsum hardwall plasters made by modern methods and formulae. A simple test can be carried out by any one to show whether there is any free acid present in the plaster. When you have your plaster mixed up, insert a strip of litmus paper in the mortar, and if it turns red you will know that there is free acid present, and the mortar should not be used on metal lath. If it turns blue, it means that the material is alkaline, and therefore suitable for metal.—"Stone Trade Journal."

QUALITY, NOT QUANTITY, BASIS OF TECHNICAL ADVERTISING.

As returns are coming in upon the years advertising campaign, it would be interesting to know the experience of some of those manufacturers who last January decided to abandon the use of technical press space for layouts in the popular magazines. Perhaps it was a most ingenious quality of business foresight which pictured that a million readers of stories by the best authors would bring more sales than a thousand directly interested in the thing advertised, but it certainly is not logical. Because a firm that manufactures knit underwear finds its market through the medium of a bromide magazine, it cannot be argued that this will warrant a hardware or a heating concern using the same medium when the purchase involves a technical knowledge in its selection only possessed by an architect or other expert. Yet, because the advertisers in the popular magazine establishes the price of space by its circulation and possibly its returns in one case, it cannot be taken for granted that the same rule will apply in the other. The knowledge of the value and properties of advertising is of slow growth. Even in this day of efficiency experts and publicity professors, the average business manager does not know that no man can write successful copy before he becomes intimately acquainted with the manufacture, the amount of stock on hand, the maximum output, the centers where it will be in best demand and the trade and domestic customs of those centers. Abandoning the former hit or miss policy of distributing advertising as most successful firms have, the art has reached that point with but a few concerns where the salesmanager is also the director of its advertising and from his experience in selling, judge the mediums through which his market can be best and most effectively reached. Already one fifth of the states require the registration and examination of architects before they are allowed to practice. Every progressive city in the country is remodelling and making more drastic its building code to meet these modern conditions. The architect and the building inspector, and not the ultimate consumer are the real distributors of building supplies. This should show the manufacturers that it is better to reach one architect with a convincing advertisement, than a thousand or ten thousand laymen who know nothing about the material and who depend upon the advice of those who do know. Then, not the least factor in favor of the selling value of the technical journal as compared with the popular magazine of wide general circulation is, that the first is subscribed for with a direct purpose of obtaining information. The second, to while away an hour on a train, or to induce a sleepy condition before retiring. When the manufacturer learns the first principle of advertising, which is direct publicity, he will realize that the architect and the contractor, and not the consumer is the real purchaser. He will then seek quality instead of quantity in his advertising circulation.—"Western Architect."

SIMPLICITY IN ARCHITECTURE.

To be straightforward in architectural expression is the most difficult thing on earth; it implies a force of character trained to grasp a multitude of diverse conditions; it demands a knowledge of men, of life, as well as of the crafts and the kindred arts; it calls for untiring activity, ceaseless comparison, and a flood of energy if the architect is ambitious to translate abstract qualities into fluent and distinguishable terms. Architecture, when it soars above the ordinary level, is akin to the finest literature; its purpose is analogous. Having once enjoyed purity of style, brilliancy of conception, and that easy scholarship which is never absent from inspired work, we entertain little affection for the products of mediocrity, no matter how attractive the latter may appear at first sight. But the very nature of the term "simplicity" is one needing careful inquiry, for it holds a subtle meaning, and, although the expression is used glibly every day, few pause to consider or analyse the elusive qualities the word connotes. We have a valid excuse to-day to direct attention to what should be understood by every architect, namely, the need for logical expression in the problems of design entrusted to his care and scholarship. For the age is curious in its uncertain tendencies, and what we are apt to decry as careless inefficiency on the part of the individual, viewed in a larger sense, is more often the product of a decadent and apathetic epoch. Simplicity in architecture is difficult to attain for many reasons, among which the demand for novelty is the chief deterrent. In addition, the lack of co-operation among artists, inability to fix a definite standard of taste, the love of complexity and vulgar display ruled by commercial instinct almost invariably act against real achievement, and, in consequence, a dead level vernacular passes muster as the real thing in the public estimation of what constitutes recent architecture. We are moved to condemn, in the strongest terms, those specimens of building enterprise which disgrace the chief centers of the metropolis; we indulge in melancholy retrospects of what past ages accomplished in architecture; we rage hysterically and utter invectives against those responsible for the perpetration of such monuments of incompetence; yet we fail to realize how the evil can be checked or the public enlightened on this issue of vital importance to art. To return to our discussion. Increased simplicity in the facial aspect of public and other buildings is the surest way to remedy the overweening brutality which is the only attribute possessed by many struc-

tures. We have said that the period militates against the chance of improvement, but it must not be forgotten that we are unfortunate in being at the juncture of two epochs. We are faced with eventualities of vast magnitude to the national life; the old order of things has been completely changed and our outlook broadened in a way which a few years previous we should have deemed impossible. The chief danger is that we should throw over our responsibilities, ignore scholarship, cast tradition to the limbo of things, and embark on a policy of adventure in architecture that could only have a chaotic ending. Those who view architectural evolution with optimism are better qualified to voice an opinion on the subject, and the consensus of limited opinion in that regard holds to the view that scholarship and tradition will eventually succeed, and that the existing lack of co-ordination will be replaced by a system of control and honest endeavor. We are firmly convinced that this view is the only acceptable one, and in its pursuance lies the real way out of the maze of uncertainty which at present clogs English architecture. Simplicity in architectural expression is thought by some to mean a bald statement of fact, an undue plainness in elevations, a sweeping away of ornament and unnecessary features, conformity to the stern discipline of economy, and a reversion to base materials. We are told in some quarters to expect a recrudescence of a columnar type of architecture applied to all sorts of facades without regard to convenience or beauty. If we thought such opinions were entertained with any seriousness, we should lose no time in exposing the fallacy and checking such manoeuvres. Others maintain that simplicity means a series of flat uninteresting buildings pierced with windows, so elementary in conception that the veriest tyro would mock at the result. Both parties are convinced that they are right in their outlook, and use every means within their range to decry attempts at scholarship. The real meaning of the term lies in deeper channels, it disowns baldness of treatment, it is not discovered in mere reproductions of well-tried models; it is concomitant with conception and style, and its principles are indistinguishable from composition and proportion. Complexity in design, if rightly handled, has its uses too; it is a sure weapon in the hand of a master and dangerous to the inexperienced; it is sometimes found side by side with simplicity, in which case it plays the part of a contrast or foil. Its chief function is to impart light and shade, but its interest should be manifest for all to read and understand, otherwise it fails of its purpose and confuses rather than relieves the whole. On the other hand, rich simplicity in the elevational expression of a building is the surest index of inspired work. It is inimitable in its explicit clarity, yet so slight is the barrier which separates the richly simple from baldness or complexity that only years of experience can determine where the one ends and the other begins.

Architects are inclined to misinterpret the works of the past, holding such types to be models of excellence and worthy of emulation, but overlooking the fact that whole periods of history went to the shaping of their attributes; and that the real meaning, elusive to many, inherent in these masterpieces is that the architect, perhaps subconsciously, imparted the very essence of his age to the shaping of the parts and the massing of the whole. It will be asked with pertinence, "How is it possible to impart that desirable rich expression to a plain building if we are to forego the usual features that make up our stock-in-trade?" The answer is pithy and to the point: "By the exercise of common sense in the proportion of parts; by a sound study of what elementary composition implies; by reticence in the selection of ornament and elimination of crude and ugly features which are characteristic of the prevalent fashion." In England especially architecture is too self-conscious, architects too obsessed with the importance of the problems they are engaged upon. There is too much paper architecture, and little if any aptitude is shown to design a building to look well in execution, and at the same time to meet any demands made upon it from a purely artistic and critical standpoint. In the majority of offices, from the time the small-scale drawings are finished and the full-size details compiled, the designer has no thought of the finished aspect of his work; more often than not he relies on an element of chance, and failure after failure is the result. An architect can only put into a building what he has assimilated; to the uninitiated the work may appear satisfactory, but to the scholar, or even the layman, with a critical outlook, such works convey no cheering message. There is something in life which the true artist is always pursuing—it is the quest of the ideal. He can never attain his object; the chagrin he experiences is very poignant, the slight successes very sweet; yet all unknown to himself he imparts an element of sadness to his works which lifts them out of the common into the sphere of nobler things. We take this opportunity to censure the coarse tendencies of those architects who disgrace good Portland stone with insipid and meaningless carvings, innumerable Cupid's heads, and other dressings which shall be nameless. The platitudes showered upon contemporary architecture, the encomiums bestowed on buildings by reason of their material construction, the cheap insincerity of contemporary opinion among architects collectively, together with openly practised charlatanism, are among the evils which have dragged some aspects of English architecture down to the lowest depths it has ever reached.—"The Builder."

Civic Improvement League of Canada.

The conference of the new Civic Improvement League of Canada, to be held in Ottawa on the 20th inst., is likely to be one of the most important municipal gatherings that have ever been held in the Dominion. The conference will be held in the large Railway Committee room of the House of Commons, and representatives are likely to be present from all the nine Provinces, Montreal, Toronto, Winnipeg and other large cities will be officially represented. Among the principal speakers will be Sir John Willison (chairman) and the Hon. W. J. Hanna, Provincial Secretary of Ontario.

It is anticipated that municipal questions will be dealt with under three main heads, namely:

Municipal Government and Finance.
Immigration, Unemployment and Public Health.
Housing, Town Planning and Local Improvements.

It is agreed that there is urgent need for discussion of the many civic problems that have already arisen and are likely to arise in the future as a result of the war. Great interest has been aroused in the new movement in all parts of the Dominion, and there is extraordinary unanimity with regard to the need for a national organization to study and discuss municipal problems.

Prosperity Paragraphs

Items of General Interest Reflecting Industrial and Financial Conditions in The Dominion

SHOWING STABILITY.

According to the last Canadian bank statement the total demand deposits in Canadian banks during November were greater than at any time in the previous history of Canada, having crossed the \$400,000,000 mark, standing at \$406,735,171, an increase of \$55,851,000 during the year. Notice deposits had also increased from \$701,000,000 to \$714,000,000; the gold reserve has increased from \$11,750,000 to \$15,100,000, and assets from \$1,657,000,000 to \$1,702,000,000.

MUNICIPAL EXPENDITURES.

An impetus to construction work for the year nineteen hundred and sixteen was launched, when over one hundred municipalities in Ontario passed by-laws to spend millions of dollars in civic construction work, and granted concessions to private companies to encourage them to erect factories and plants in their respective towns. Fully 95 per cent. of all by-laws which entailed the expenditure of moneys were passed, which is the answer to the financial conditions which prevail.

WAR NO DRAWBACK TO BUSINESS.

With bank clearings exceeding not only last year, but 1913 as well, in nearly every city, railway earnings away ahead, many industries working day and night, lumbermen scarce, mining active, farmers with money to spend after paying their debts, increased customs revenue, a brisk wholesale business, and reviving retail trade, it looks like prosperous times in Canada. The war is a depressing factor socially, but not commercially, so far as this continent is concerned.

HOPEFUL OUTLOOK.

When the Winter Fair at Guelph was opened by Hon. Martin Burrell, Minister of Agriculture, he pointed out the important part agriculture was playing in Canada's prosperity. Concluding, he said: "A country which over-subscribed the first loan in its history by twice the amount needed, whose granaries are overflowing despite the drain of the young manhood from the country; a country which is prosperous in time of war, will always be able to stand on its own feet."

MORE MONEY AVAILABLE.

The banks in Canada are in a stronger position than they ever have been before. In addition to an increase of nearly \$85,000,000 in savings deposits there has been during the past year a contraction of nearly \$30,000,000 in current loans. It would, therefore, appear that the banks have nearly \$120,000,000 more money than they had last year. The millions advanced by the banks for the crop movement, both at home and in New York, are commencing to return, and some investment must be found for them.

MONTREAL'S CLEARINGS UP 70 PER CENT.

Montreal bank clearings show another sharp increase for the week ended January 1st, the total for the period being \$23,745,438, or nearly 70 per cent. over the figures for the corresponding week last year, and \$13,567,614 in excess of that of 1913. The figures follow:

1915	\$58,045,779
1914	34,303,341
1913	44,481,165

The increase reported last week was \$22,500,294, for the previous week \$25,913,606, and for the week before that \$17,657,070.

HOW CANADA'S POSITION HAS STRENGTHENED.

When war broke out in August, 1914, there was a decided drop in all departments of commerce, and that war depression affected business materially for twelve months. About August last the Western harvest and the orders for munitions of war began to lift the gloom and allow the light to shine through. Our exports increased with such rapidity that now, at the end of nine months of the fiscal year, we have a trade balance in our favor of more than \$150,000,000. By the end of the fiscal year the indications are that this amount will have increased until it will much more than offset the nation's interest charges on borrowings outside of the Dominion.

TORONTO HAS MILLIONS OF WORK UNDER WAY.

"There are buildings now in course of construction in Toronto that aggregate a value of \$12,250,000," said Chief Inspector G. F. W. Price recently. "There is more building going on than is generally supposed.

"Much of it is being done on former permits, which have been renewed, and which are not listed with the newly-issued permits. People who a year or so ago began to build and stopped have begun again, and will finish the work, now that money is moving more freely."

There are only ten inspectors to look after all this work. One man is kept steadily on the Union Station job.

ALLY COUNTRIES GIVE DOMINION PREFERENCE.

Sir Geo. Perley, presiding at the Canadian Business Luncheon Club in London on December 17th, at which thirty leading Canadian firms and institutions were represented, said he had the assurance of the British government's readiness to extend to Canada a preference over the United States and all other neutral countries in war supplies. He said not only British Ministers, but, what was even more important, high officials of the purchasing departments were heart and soul with Canadians in this principle of priority for Canadians over foreign productions. He also saw a great chance for "after war" export trade, which awaited Canadian enterprise in countries like France and Russia. The governments of these countries now accepted the principle of preference for Canada, as one of their allies.

TRADE REVIVAL IN WESTERN CANADA.

In the cities of the West the prosperity of the country is being reflected. Everywhere business is active. The wholesalers and the retailers and the implement dealers find business good. The banks and other collection houses find collections satisfactory, and financial men declare that Westerners are paying up their debts. In Winnipeg the bank clearings have been the largest in history, exceeding some weeks the figures of Montreal and Toronto. The grain shipments have been the biggest in the history of Winnipeg and in the history of the

twin ports, Fort William and Port Arthur. Industrially, Winnipeg has kept up to the pace. In the year there have been twenty new industries established in the city's manufacturing districts, and the pay-roll, output and general conditions of the industries show improvement, advancement, and no steps backward. In other ways also the people of Winnipeg, of Manitoba, and of Alberta and Saskatchewan have shown their prosperity. Record subscriptions have been given to the Patriotic, the Belgian and Poland Relief and the Red Cross Funds. Millions have been subscribed in the Provinces to the Canadian war loan.

BANKS OPTIMISTIC.

At the annual meeting of the Bank of Montreal on December 6th, Mr. H. V. Meredith, president, summarized the general trade and financial position in these phrases:

"The lumber business generally throughout Canada, though suffering from inability to obtain tonnage to market the cut, shows some improvement.

"Farming, the backbone of the country, is prosperous.

"There is a greater demand for the products of the mines at higher prices.

"From the Atlantic to the Pacific good fisheries are reported; also at enhanced prices.

"The textile and allied interests are at the moment well employed, while the steel companies and those engaged in the manufacture of munitions of war are fully occupied."

PREPARING FOR THE FUTURE.

"This is one of the ways by which we are trying to make Canada economically independent of Germany," was the cogent remark of Sir Wm. Peterson, principal of McGill University, at the formal opening of the Forest Products Laboratories of Canada. Many prominent persons were guests at the opening ceremonies, which were performed by the Hon. Dr. Roche, Minister of the Interior. The laboratory consists of a paper mill, a complete paper-making plant, starting with the logs, and ending with all kinds of paper—news, glazed, wrapping, etc.—a system of machines for testing various woods, so as to show their strain-resisting capacity in various ways. Hon. Dr. Roche stated after the opening ceremonies that the purpose of the laboratories were especially to study and gather information as to the ways in which the products of the forests of Canada may be utilized, and also to utilize waste products.

POSSIBILITIES FOR FRANCE'S BUSINESS.

A French deputation of prominent men here have undertaken an investigation of purchases for the French Government in the Dominion. The commission will conduct its enquiries at three cities—Toronto, Ottawa and Montreal. It will go into the question of the cost of various materials required by the Government covering a wide range of articles, and taking into consideration cost of transportation, etc., added thereto. It is probable that the visit of the commission will result in further French orders being placed in the Dominion. The question of financing such orders in Canada will be considered also. The members of the commission are: M. D. Amour, member of the Ministry of Agriculture; M. Choiffeur, of the Banque Credit-Poncier; M. Vivien, director of the National Banque De Credit, and M. Thiriez, secretary of the Syndicate of Spinners.

INDUSTRIAL MINING BOOM.

"There is a boom on in the Porcupine region," said Mr. Thos. Gibson, Deputy Minister of Mines, in an interview the other day; "but it is an industrial, not a speculative boom. There are more men profitably employed there now than in the days of the excitement. The Porcupine mines were getting into shape to produce on a bigger scale before this war started. They went ahead with their preparations, and the war has increased the demand for gold. Shipments, instead of decreasing since the war, have increased. The price of silver has advanced sharply in the last few weeks also, and the Cobalt mines are turning out more silver now in consequence, and catching up on their production of a year ago.

"The war time demand upon Ontario's nickel has had a marked effect on conditions in Sudbury, while the demand of munitions upon copper production has had a similar effect."

EXPORTS INCREASE HUNDRED PER CENT.

What is in many respects the most satisfactory statement of Canadian trade ever issued is that just made public by the Minister of Customs, Hon. J. S. Reid. The statement shows an increase of nearly 100 per cent. in domestic exports for November, 1914. The total under this head was \$92,000,000; the imports for the month amounting in value to a little under half this sum, or \$45,000,000.

The exports of \$92,000,000 are made up principally of agricultural products, \$54,000,000; manufactured goods, \$13,000,000; animals and meats, \$12,000,000; minerals, \$6,500,000; lumber, etc., \$4,500,000, and fisheries, \$2,000,000. All these show a very substantial increase over the corresponding month for 1914, agricultural products jumping from \$38,000,000 to \$54,000,000; manufactured goods from \$6,000,000 to \$13,000,000, and animals, etc., from \$8,000,000 to \$12,000,000. The export of minerals is also exactly double that of November, 1914.

BANK CLEARINGS.

Bank clearings in Toronto for the week ending January 6th made a most remarkable showing, the total being \$53,554,882. The previous high point on record was \$51,304,250 in the first week of 1914.

	1916.	1915.	1914.
Toronto	\$53,554,882	\$37,167,667	\$25,122,398
Montreal	63,886,321	41,690,530	56,512,398
Hamilton	4,277,558	2,829,213	3,900,046
Ottawa	5,120,968	3,980,655	3,980,655

CUSTOMS REVENUE DOUBLES.

For the month just closed customs receipts totalled \$9,432,654, an increase of \$4,513,856, or nearly 100 per cent. over December of last year. For the nine months of the fiscal year the customs revenue has totalled \$71,721,303, an increase of \$12,891,684, or about 23 per cent., as compared with the corresponding nine months of last year. For the full fiscal year the customs revenue should at the present rate show an increase of more than twenty millions as compared with the preceding fiscal year.

Construction News

The following information is obtained from our correspondents, from architects, engineers and local newspapers. These items are published in our Daily Report Service, and are herein compiled for the use of subscribers to the monthly issue of "Construction". Should any of our readers desire this information daily we will be pleased to submit prices upon request.

BUSINESS BUILDINGS.

HALIFAX, N.S.—The building of the Soules Typewriter Co., Granville street, was destroyed by fire; loss \$20,000.

QUEBEC CITY—La Banque d'Hochelega is erecting a \$3,000 addition.

OTTAWA—Wm. Joynt will rebuild his building recently destroyed by fire on Wellington and Sherbourne streets.

SAULT STE. MARIE—Fire damaged the business block of S. W. Fawcett; loss \$10,000.

TORONTO—Thompson-Starrett, general contractors for the Imperial Oil building, have awarded W. J. McGuire, Toronto, the plumbing and heating; hardware to American Hardware Corporation, New York; electric work to Comstock Co., New York.

CIVIL ENGINEERING.

BELLEVILLE, ONT.—The County of Hastings, A. M. Chapman, clerk, Belleville, have plans for two bridges, cost \$20,000.

BROCKVILLE—Plans are being prepared for sewers to cost \$12,000, sidewalks to cost \$3,500, and pavements \$18,500.

CALGARY—Western Canadian Natural Gas Co. have completed plans for \$10,000,000 gas system.

COCHRANE—The town will spend \$5,000 on extension of water mains.

CORNWALL—The town will extend water mains and erect an addition to the pump house; cost \$25,000.

EDMONTON, ALTA.—By-law passed to instal a sewage disposal plant; engineer, A. J. Latornell; cost \$275,000.

FORT FRANCIS, ONT.—Clerk, J. W. Walker. The city will spend \$6,000 on waterworks extensions and \$3,000 for sewers.

FREDERICTON, N.B.—Department of Public Works, Fredericton, are calling tenders for a steel bridge, two spans, 160 feet each; asphalt and reinforced concrete used.

FRONTENAC, P.Q.—The Quebec Streams Commission, Parliament Buildings, Quebec City, are calling tenders for a bridge.

GREENWOOD, B.C.—The B. C. Copper Co. contemplate installing nine miles of narrow gauge railroad or overhead conveyor and power plant.

GUELPH—The city will lay sewers on Galt and Fergus streets; T. J. Moore, city clerk.

HAMILTON—A new steel bridge will be erected on King street by the city.

MERRICKVILLE—Street lighting will be installed.

MIDLAND—A by-law to extend the waterworks system to cost \$13,000 has been passed.

MONTREAL—The new aqueduct for which plans are being prepared will cost \$680,000.

NEW WESTMINSTER, B.C.—Canadian Northern Railway, A. Angstrom, architect, have plans for a new dock.

NIAGARA FALLS—The Ontario Niagara Connecting Bridge Co. will erect a new steel bridge above Niagara Falls.

PORT MOODY, B.C.—Town of Port Moody, W. A. Duncan clerk, will spend \$80,000 on waterworks installation.

SARNIA—The city will extend water mains; engineer, John A. Beard; cost \$120,000.

STRATHROY—The town will extend water mains and electric lighting system.

ST. CATHARINES—A steel bridge will be erected on Ontario street, and waterworks extensions will be made.

TILLSONBURG—The town will erect a steel bridge to cost \$5,000 over Ottawa Creek.

VANCOUVER, B.C.—The city contemplates a five-mile waterworks intake being installed.

VICTORIA, B.C.—Engineer O. D. Lewis, of the C.N.P. Railroad, has prepared plans for a bridge over Selkirk water.

WALKERVILLE—Owen McKay, town engineer, is preparing plans for new pavements to be laid in the spring; cost \$21,000.

WARDSVILLE, ONT.—Engineer Talbot, of London, is preparing plans for two bridges for the county; cost \$25,000.

WINDSOR—Engineer M. E. Brian is calling tenders for a circular brick sewer on Parent avenue.

WINNIPEG—The city will erect a bridge at Point du Bois to cost \$130,000; Alderman Flower, chairman.

WOODSTOCK—The ratepayers passed a by-law to lay storm sewers; cost \$25,000.

CLUBS, HOSPITALS, THEATRES AND HOTELS.

BRANTFORD—Schultz Bros. are erecting an addition to the General Hospital.

BRIDGEWATER, N.S.—Fairview Hotel Co. had hotel destroyed by fire; loss \$16,000; insurance \$4,000.

COBOURG—The Waverley Curling Club will erect a new rink, 146x70 feet.

HALIFAX, N.S.—Rhodes-Curry Co. are contractors on the Casino Theatre being erected.

PETERBORO—J. Revoij has been awarded the contract to erect two frame cottages for the Isolation Hospital.

QUEBEC, P.Q.—Chateau Frontenac Hotel Co. have plans for an addition and alterations, cost \$52,000.

ST. CATHARINES—St. Catharines Lawn Bowling Club contemplate erecting a club house at Glen Ridge.

SYDNEY, N.S.—The King George Hotel was recently destroyed by fire; loss \$70,000.

WINNIPEG—Royal Templars of Temperance will erect a lodge building on Yonge street.

ELECTRICAL CONSTRUCTION.

BRANTFORD—T. H. Jones, city engineer, will furnish information on the new electric railway from Brantford to Galt.

COBDEN—The village passed a by-law to equip an electrical plant; cost \$20,000.

COMBER—The township of Rochester, M. N. Mousseau, clerk, contemplate installing a telephone system.

LONDON—The London and Port Stanley Railway will make extensions and improvements.

MUSKOKA RIVER, ONT.—Hydro-Electric Commissioners awarded contracts in connection with new power plant: Head-gate, penstock, turbine and valves to Wm. Hamilton, Peterboro'; generator and transformer, Canadian General Electric.

ST. THOMAS—The Commissioner of Works, City Hall, is calling tenders for a hydro-electric station; tenders close January 15th.

WEST LORNE—The town will instal a hydro-electric plant to cost \$8,000.

MISCELLANEOUS.

OTTAWA—Tenders open for cast iron pipe; R. L. Hancock, engineer.

TORONTO—J. C. Eaton is installing a swimming pool at 450 Davenport road; cost \$5,000.

PLANTS, FACTORIES AND WAREHOUSES.

BUCKHORN, ONT.—The mill of W. N. Blewett was destroyed; loss \$4,000.

CHATHAM—The ratepayers have granted concessions to the Dominion Sugar Co., of Wallaceburg, and work has started on the new \$600,000 plant. F. W. Marks Construction Co., of Cleveland, are engineers and contractors.

COBOURG—Cobourg City Dairy will erect two additions to their plant, 20x30 and 26x18 feet.

COBOURG—Cobourg Steezy Co., Limited, George Thompson, president, will erect a factory for the manufacture of munitions to cost \$15,000.

COLLINGWOOD—Imperial Oil Company will erect three large steel storage tanks.

HAMILTON—H. G. Christman & Co. have been awarded the contract for the erection of a factory addition to the Burlington Steel Co., cost \$5,000; and factory addition to the Canadian Cartridge Co., cost \$40,000.

KINCARDINE—People's Salt and Sugar Co. have been loaned \$15,000 by the town to erect a new plant.

LISTOWEL—A by-law has been passed to aid Listowel Shoe Co. to erect a factory, cost \$15,000.

MAISONNEUVE, P.Q.—The city will erect a new incinerator in the spring.

MONTREAL—Williams Manufacturing Co., 1189 St. James street, will erect a one-storey factory on Rose de Lima street; cost \$26,000.

MONTREAL—Work has started on a \$5,000 addition to the Canadian Vickers Co. plant, brick construction.

OWEN SOUND—Owen Sound Shoe Co. will remodel the Pacific Hotel and make additions for a factory. Mr. Wilson, G.M.

PETERBORO—The Metal Products Co., J. C. Ellis interested, will erect a brick factory, 30x50 feet, to cost \$35,000.

PETERBORO—The Quaker Oats Co. contemplate erecting a large addition to their factory in the spring.

PETROLIA—Western Sugar Refinery Co. have been granted \$46,000 by the city to assist in erecting a new plant to cost \$600,000.

SCOT'S GUARDS, SASK.—The elevator of Pioneer Elevator Co. was destroyed by fire; loss \$60,000.

PORT MOODY, B.C.—Mr. Jones, architect for the Port Moody Steel Co., will erect the new addition by day labor.

PRINCETON—The flour mill of Maycock & Harris was destroyed by fire; loss \$10,000.

QUEBEC CITY—Rocks Hoe Manufacturing Co. had a \$75,000 factory fire loss; insurance \$32,990.

REGINA, SASK.—H. G. Smith Co., Limited, contemplate erecting a warehouse, four storeys, 120x40.

RIDEAU, ONT.—The C.N.R. will erect car shops and round-houses on a new townsite six miles west of Ottawa.

RIDGETOWN—D. & N. McNorgan will instal new flour milling machinery in the present building at the corner of York and Water streets.

SANDWICH—The Caldwell Sand and Gravel Company, Limited, have been granted certain concessions by the town in return they will erect a plant to cost \$50,000.

SASKATOON, SASK.—H. G. Smith Co., Limited, of Regina, will erect a brick warehouse.

SASKATOON, SASK.—The warehouse of the Northern Storage Co. was totally destroyed by fire; loss \$60,000.

ST. CATHARINES—The Maple Leaf Milling Co., H. Shaw manager, contemplate erecting a new mill.

ST. THOMAS—The Wabash Railroad will erect an addition to their repair shop.

SUDBURY, ONT.—Sudbury Flour Mills Co. will erect a mill addition.

TORONTO—The Marathon Tire Co., St. Catharines, contemplate an addition to factory.

TORONTO—White & Thomas are erecting a two-storey addition to their factory to cost \$4,000.

WHITBY—Chas. Phillips is head of a syndicate which will erect a silk factory to cost \$50,000.

TORONTO—The Laura Secord Candy Co., 64 Princess street, will erect an addition to their factory.

WINNIPEG, MAN.—T. Eaton Co. will erect a five-storey factory adjoining their present building.

TORONTO—The H. B. Ritchie Building, Clifford street, which was destroyed by fire, will likely be rebuilt.

TORONTO—The Gold Medal Furniture Co. will erect a new factory in place of the one destroyed by fire.

TORONTO—Universal Tool Steel Co. are erecting a brick factory addition on Dufferin street; cost \$10,000.

TORONTO—The Toronto Carpet Co. are erecting a new boiler room building on Liberty street; cost \$2,500.

TORONTO—Wm. Davies Co., 521 Front street east, are erecting a \$15,000 icehouse at St. Lawrence Market.

TORONTO—L. E. Dowling, 167 Yonge street, is contractor for the warehouse being built on Richmond street for W. H. Harris; cost \$20,000.

TORONTO—Martin Corrugated Paper Box Co., Pape avenue, will erect a larger factory in place of that destroyed by fire; cost \$200,000.

TORONTO—Goodyear Tire and Rubber Co. contemplate erecting a quarter million dollar plant on Birmingham street, New Toronto.

TORONTO—Robert Simpson Co., Limited, will erect a warehouse to cost \$200,000, on Dalhousie street, eight storeys, reinforced concrete.

TORONTO—Lepage & Beaumont are contractors for factory addition on Dundas street for Hunt & Woodburn, architects, Confederation Life Building.

TORONTO—Dominion Explosives Corporation, Vaudreuil, P.Q., and Col. Dimick, of Boston, Mass., are interested in a new explosive factory, to be erected near Toronto.

TORONTO—In connection with the new Canada Metal factory on Fraser avenue, Mr. F. S. Mallory, architect, has awarded the masonry and grided foundations to the Toms Contracting Co.

TORONTO—F. S. Mallory, architect, has awarded the following contracts in connection with the Canada Metal Co. building: Carpentering, J. D. Young & Son; steel, Hepburn & Disher; metal sash, Steel and Radiation.

PUBLIC BUILDINGS AND STATIONS.

BRANTFORD—The Brantford and Hamilton Railway will erect a new depot to cost \$30,000.

BRANTFORD—H. N. Taylor, architect, has completed plans for a new registry office for Brant County.

BRANTFORD—Lake Erie and Northern Railroad have plans completed for a new station at Lorne Bridge, cost \$40,000.

FREDERICTON, N.B.—Department of Public Works is calling tenders for interior fittings to Customs House.

GRAND MERE, P.Q.—The town will erect a hydro-electric plant.

KINGSTON—The city will erect a \$7,000 addition to Fort Garry, to be used as a soldiers' barracks.

LONDON—London and Port Stanley Electric Railroad will erect a new station and make general improvements to cost \$101,000.

LONDON—London Utilities Commission will erect a \$100,000 office building on their present site, three storeys, work to start in spring.

MONTREAL—The city will erect three comfort stations; architect, A. Chause, City Hall.

Montreal—Department of Militia and Defence have intimated that they will erect a radio-telegraph station on Cote St. Michel.

OTTAWA—The old market will be demolished and a new brick building erected.

OTTAWA—The city contemplate erecting an addition to the City Hall and the erection of two fire stations; F. C. Askwith, engineer.

RED DEER, ALTA.—D. E. McDonald, architect, Edmonton, is preparing plans for interior alterations to Court House on First avenue.

SAULT STE. MARIE—Mr. Ross Frederick, architect, has plans for an addition to the City Hall.

SHAWVILLE—Department of Public Works are calling tenders for post office interior fittings.

TARA, ONT.—A by-law has been passed to erect a new town hall, brick construction.

TORONTO—The city will build an addition to Montgomery avenue firehall and a cattle shed at the civic abattoir.

TORONTO—The Property Department is calling tenders for an extension to the cold storage plant at the civic abattoir.

VANCOUVER, B.C.—The Hudson Bay Co. have awarded the contract for a new addition to their store on Georgia street to Construction and Engineering Co., Limited, 40x120 feet; cost \$20,000.

VICTORIA, B.C.—The city will erect a \$6,000 building for soldiers' sleeping quarters.

RESIDENCES, STORES AND FLATS.

BRACEBRIDGE—Messrs. Hunt & Woodburn, architects, Confederation Life Building, Toronto, are preparing plans for a large residence.

BRANDON, MAN.—The store of E. Crawford was destroyed by fire; loss \$30,000, insurance \$20,000.

LISTOWEL—Mrs. Ezra Riehm will erect a residence on Argyle street.

MONTREAL—J. A. Bray, 6375 Berri street, has plans for two residences; cost \$7,000.

MONTREAL—E. Gagnon is erecting two residences on Dandurand street; cost \$6,000.

MONTREAL—Avila Desnoyers, 453 Beaubien street, is erecting a residence on Boyer street.

MONTREAL—M. Mallette, 1063 Mount Royal, is erecting a residence on Abraham street west; cost \$3,000.

MONTREAL—Owen Roberts, 112 Addington avenue, is erecting four residences on Wilson avenue; cost \$8,000.

QUEBEC, P.Q.—A. Desmeules, 168 Des Stigmates street, is building a flat to cost \$10,000.

QUEBEC, P.Q.—T. D. Dubuc suffered a \$45,000 fire loss to store on St. John street; insurance \$32,000.

QUEBEC, P.Q.—J. E. Myrant, 144½ Latourelle street, is erecting a residence on St. Foye road; cost \$4,000.

QUEBEC, P.Q.—Messrs. Boisvert & St. Laurent, Claire Fontaine street, are erecting an apartment; cost \$22,000.

TORONTO—Kerr & Martin are erecting a \$3,500 residence on Woodside avenue.

TORONTO—T. H. Hutson, 34 Victoria street, is erecting a \$3,000 residence on Spadina road.

TORONTO—J. A. Thatcher, 37 Cowan avenue, is preparing plans for a store and bakery; cost \$8,000.

TORONTO—J. A. Thatcher is preparing plans for two residences on Humber Bay avenue; cost \$9,000.

TORONTO—Wm. Lister, 1433a Dufferin street, is erecting two two-storey stores on Dufferin street.

TORONTO—J. W. Clare, 68 Ascot avenue, is erecting two residences on Dufferin street to cost \$5,000.

TORONTO—Hayward & Whitehorn, 6 Hallam avenue, is erecting a \$4,000 residence on Hallam avenue.

TORONTO—A 20x44 cement block store and residence is being erected by J. P. Lever, 20 Atlas avenue; cost \$3,500.

TORONTO—Wm. Hughes, 59 Amroth avenue, is building two pair of residences on Amroth avenue to cost \$9,000.

TORONTO—Two residences are being erected by B. W. Miller, Dufferin street, to cost \$5,000, on Lauder avenue.

TORONTO—The International Land Corporation have plans for four pairs of residences to cost \$15,000 on Poplar avenue.

TORONTO—H. B. Jackson Bracken will purchase all materials for a modern residence he is building on Bracken avenue.

TORONTO—C. H. Barnett, 66 Gloucester street, is erecting one pair residences on Park avenue; C. F. Wagner, architect; cost \$5,000.

TORONTO—H. S. Kaplan, 75 Macdonald avenue, has prepared plans for a store addition for L. Yolles, 363 Queen street east; cost \$10,000.

TORONTO—W. C. Charters Co., 528 Kingston road, will erect fifty residences and twenty-eight stores on the corner of Kingston road and Malvern avenue; H. C. Sewell, O.L.S., has been awarded the surveying contract, and P. H. Finney is the architect.

TORONTO—Wm. Rennie Seed Co. are erecting a brick addition to their store, 153 King street east. H. A. Johnston, 63 Normandy boulevard, residence, Normandy boulevard, cost \$3,500; A. Edmonds, 105 Oakwood avenue, residence, 37 Thorne avenue, cost \$4,000; E. J. Rogers, 196 John street, residence, Glendale avenue, cost \$3,000; W. A. Scott, 123 Mutual street, residence, Beach avenue, cost \$3,500.

TORONTO—Residences being erected, cost \$3,500: S. Linley, 207 Rhodes avenue, one pair, Rhodes avenue; Lankin Bros., 14 Furness avenue, one pair, Fifth avenue; H. G. Misteale, Danforth and Dawes road, residence, Normandy boulevard; T. W. Robinson, 16 Evelyn crescent, two residences, Glendale and Woodside avenues; Mr. Richards, Westmount avenue, residence, Glenholme avenue; Robertson & Wells, 43 Berwick avenue, residence, Garden avenue; Wm. Richardson, 23 Arlington avenue, residence, 48 Ellesworth avenue; Salvation Army, Albert street, residence, Sherbourne street; C. Spiller, 364 Lauder avenue, one pair residences, Lauder avenue, cost \$5,000; W. H. Scott, 125 Mutual street, residence, Beach avenue, \$4,500; J. Wheatley, 99 Queen street east, residence, Woodycrest; Venn & Evans, 776 Concord avenue, residence, Palmerston street; A. M. Crawford is erecting a residence on Munro Park avenue.

VANCOUVER—The store of Wilson & Richmond, 34 Hastings street, was gutted by fire; loss \$20,000.

WINDSOR—Winter & Little, Pitt street west, are erecting seven frame residences.

WINDSOR—Messrs. Walker & McPhail, architects, are preparing plans for a large modern residence for S. E. Rigg.

SCHOOLS, COLLEGES AND CHURCHES.

ATHABASCA, ALTA.—The School Board, G. Watt, secretary, are calling tenders for frame school.

BEAMSVILLE—The by-law to erect a new High School on Fleming street was passed; cost \$20,000.

BIRCHCLIFFE, ONT.—Mr. Wm. Fraser, architect, 34 Victoria street, Toronto, has awarded the general contract on a new school to W. P. McGiffin, Limited, Toronto.

CALGARY—Mr. McNeill, Chairman Board of Education, will have Haultain and Central Schools fireproofed.

CARAQUET, N.B.—The College of the Sacred Heart, Rev. Father J. Merry, was destroyed by fire; loss \$250,000.

CHATHAM—The Board of Education will erect a new school on Inches avenue; F. D. Laurie, chairman.

ESTEVAN, SASK.—St. Matthew's Church has plans to erect a \$5,000 church; architect, Turner.

FREDERICTON, N.B.—Mr. G. E. Fairweather, St. John, N.B., is preparing plans for an addition to Charlotte street school, three rooms and auditorium; cost \$20,000.

GALT—The Board of Education will erect a new \$50,000 school.

HAMILTON—The Beach Commissioners have plans for a new school.

HAMILTON—Provincial Inspector Houston has ordered a new High School, or an addition to be made.

KINGSTON—Queen's University will have a new library erected, to cost \$150,000. Plans have been prepared.

LAMBTON MILLS—The School Board, secretary, T. E. Hott, are calling tenders for a new school; plans and specifications from Ellis & Ellis, Manning Chambers, Toronto, and Molsous Bank, Lambton Mills.

LOW POINT, N.S.—The church of Rev. Father McAuloy was destroyed by fire; loss \$20,000, insurance \$9,000.

MONTREAL—The directors of the Montreal Protestant Home, Dorchester street, will erect a new training school on the corner of St. Catherines and Dorchester streets; cost \$20,000.

MOUNT DENNIS—The Board of Education, D. Robertson, secretary, will erect a new school to cost \$30,000; architect to be appointed.

PETERBORO—The George Street Church will erect a new Sunday school.

PORTAGE LA PRAIRIE, MAN.—Public school destroyed by fire; loss \$30,000.

PORTAGE LA PRAIRIE, MAN.—The School Board, Dr. Mackinnon, chairman, has appointed Architect Frank Evans to prepare plans for a new school to replace that destroyed by fire recently; cost \$50,000.

PORT COLBORNE—St. James' Church congregation, Rev. D. Russell Smith, will erect a new modern brick church to cost \$15,000.

RENFREW—The School Board, Dr. Murphy, chairman, have plans for a new High school to be erected immediately.

SAANICH, B.C.—A new school will be erected; J. R. Carmichael, secretary.

SARNIA—The School Board, P. Gilbert, secretary, is calling for competitive designs for a new school.

SCARBORO'—Mr. Wm. Fraser, architect, has awarded W. G. Gayton the general contract on the new Scarboro' school, S.S. 12.

SIMCOE—The town will erect two schools of brick construction to cost \$50,000.

SHUNIAH—By-law passed to erect a frame school; cost \$2,000; clerk, H. A. McKibben, Port Arthur.

TORONTO—Morley Avenue Methodist Church, Rev. R. Hobbs, pastor, will erect a new church.

TORONTO—Calvary Church, Silverthorne, contemplate erecting a new church; Rev. A. J. Reid, 946 St. Clarens avenue, rector.

TORONTO—Messrs. Sproatt & Rolph, architects, 34 North street, are preparing plans for Upper Canada College (five buildings).

TORONTO—Mr. C. H. Reed, architect, Confederation Life Building, is calling tenders for one new school and three school additions for the Separate School Board.

TRENTON—The town will erect a new High school upon the recommendation of the Provincial Inspector.

VANCOUVER—The city has purchased a site to erect a school in South Hastings.

VANCOUVER, B.C.—St. Andrew's Church, a new frame church on Oak street, was destroyed by fire; loss \$16,000.

WESTBORO'—Messrs. Richards & Abram, Booth Building, Ottawa, are preparing plans for a new school to cost \$25,000.

WINDSOR—Architect J. C. Fennington, 35 Labelle Building, is calling tenders for a High School addition; tenders close January 31st.

WOLFE ISLAND—The Church of the Sacred Heart will erect a new church; Power & Sons, Merchants' Bank Chambers, are architects.

FIRE PROTECTION.

Upon the recommendation of City Architect Pearse, of Toronto, the council has passed a by-law compelling all lodge and other buildings where social entertainments are conducted to provide fire appliances as are used in buildings used exclusively for this purpose.

SECURES HUGE ORDER

The Canadian Car and Foundry Company closed an order for nearly two thousand freight cars, valued at about \$2,000,000, for the French Government. Work on the order is to be started at once. The order ranks as one of the largest equipment contracts yet entered into by a Canadian firm for export.

CLAY WORKERS' CONVENTION.

The fourteenth annual convention of the National Clay Workers' Association will be held in Toronto from January 15th to 20th. It is expected that three hundred delegates from Canada and the United States will be in session. The Board of Control has made a grant of three hundred dollars to help entertain the visiting delegates. Mr. G. C. Keith, 32 Colborne street, is secretary.

LARGE FACTORY TO BE REBUILT.

The factory of the Martin Corrugated Paper Box Co., on Fape avenue, Toronto, which was recently destroyed by fire, entailing a loss of approximately two hundred and fifty thousand dollars, is to be rebuilt at once. The company have decided to erect a new building to cost three hundred thousand dollars. This will increase the capacity of the plant twenty per cent., and take care of the future increase in business.

ARCHITECT UPHELD.

An interesting decision, both to contractors and architects, was recently given by Mr. Justice Middleton, at Port McNicol, Ontario. It appears that the architect in charge of the erection of a new school for the town of Port McNicol ordered a portion of a wall torn down, which did not comply with his specifications. The contractor insisted on the work being left as it was, and defied the architect, who immediately had the contractor removed by force, resulting in an action being brought against the town and architect for damages. The judge's decision was against the plaintiff.

NATIONAL TERRA COTTA SOCIETY CONVENTION.

The annual convention of the National Terra Cotta Society was held at Hotel LaSalle, Chicago, on December 9th, 10th and 11th. A number of new committees were appointed this year, for which considerable work was outlined to be accomplished during the coming year, along lines of general interest to the society and the development of co-operation among the members in the industry. The consensus of opinion of those present was that 1916 will be a very prosperous year in the industry. "The terra cotta trade has been greatly depressed," said one of the members, "but within the last month or so there has been rapidly growing evidence of returning activity. Building prospects are now excellent in all parts of the country."

The election of officers was held on Saturday afternoon, December 11, Fritz Wagner being re-elected president. Thomas Armstrong was chosen as vice-president; Harry Lucas, of the Northwestern Terra Cotta Company, Chicago, secretary; and E. V. Eskensen, of the New Jersey Terra Cotta Company, Perth Amboy, N.J., treasurer. From fifty to sixty delegates were present at the convention, representing twenty-seven different companies.

Contractors & Sub-Contractors

As Supplied by The Architects of the Buildings Featured in This Issue

THE QUEBEC UNION STATION.

Architect, Harry Edward Prindle, Montreal.
Brick exterior, The Citadel Brick and Paving Co.
Brick interior, Dartnell, Limited.
Boilers, Babcock & Wilcox.
Casements and window construction, also doors and window trim, Steel and Radiation, Limited.
Chimneys, Canadian Custodis Co.
Electric wiring and apparatus, L. K. Comstock & Co.
Expanded metal, McFarlane-Douglas Co., Limited.
Granite, Argenteuil Granite Co.
Limestone, Chateaufort Quarry Co.
Marble, Missisquoi Marble Co., Limited.
Mill work, R. McFarlane & Co., Limited.
Ornamental iron, L. H. Gaudry & Co.
Piling, McArthur Concrete Pile and Foundation Co.
Plumbing, James Ballantyne and Landry & Chatter.
Plaster work (ceiling), R. D. Clark & Sons, Limited.
Steel, Eastern Canada Steel and Iron Works.
Tile, Guastavino Tile Co.
General contractors, Downing-Cook Co.

METHODIST BOOK ROOM.

Architects, Burke, Horwood & White.
Awnings, The Robert Simpson Company.
Boilers, Goldie & McCulloch Co., Detroit Stokers; W. D. Beath supplied coal conveyors.
Brick, Don Valley Brick Co.
Concrete work, Crescent Concrete Co.
Electric fixtures, electric wiring and apparatus, Bennett & Wright.
Elevators and hoists, A. B. See Electric Elevator Company; sub-contractor, The Elevator Specialty Co., supplied the hydraulic ash hoist.
Excavation and foundations, Campbell-Latimer.
Fire escapes, Architectural Bronze Company.
Flooring, marble mosaic and terrazo, Lautz-Dunham Co.
Furniture, The Office Specialty Co.
Glass, paint and varnish, The James Casey Co.
Granite, Thompson Granite Co.
Hardware, Aikenhead Hardware Co., Yale and Towne fittings.
Heating and ventilating, Bennett & Wright; sub-contractors, Sheldons Limited, installed ventilating system, and Keith's Limited supplied the fan.
Interior cabinet work, F. C. Banks.
Metal sash, Henry Hope & Sons.
Ornamental iron, iron stairs, grilles, Architectural Bronze Co.
Phone system, De Beau Telephone Co.
Plaster work, J. Hynes.
Plumbing, Bennett & Wright; fixtures supplied by Standard Ideal Co.
Refrigerating, piped, _____
Roofing, The Philip Carey Co.
Sheet metal and fire doors, A. B. Ormsby Co.
Steel, McGregor & McIntyre.
Store fronts, Kawneer Manufacturing Co.
Terra cotta, Atlantic Terra Cotta Co.
Vacuum cleaners, piped, _____
Vaults, Fairbanks-Morse Co. supplied; made by The Dominion Safe and Vault Co.
General contractor, John H. Parker Co.

ST. MICHAEL'S CHURCH.

Architect, A. B. Champagne, Montreal.
Brick (plain, fancy, enameled, fire), Webster & Sons, Limited.
Casements and window construction, also doors and window trim, Wm. Rutherford & Sons Co., Limited.
Electric wiring and apparatus, W. J. O'Leary & Co.
Glass (plate), W. J. Large.
Hardware (Brand), Ruswin Durand Hardware Co.
Heating and ventilating engineers, P. J. Sullivan Co., Limited.
Marble, Lepage Marble Works.
Paints (interior and exterior), W. J. Large.
Plumbing, P. J. Sullivan Co., Limited.
Plaster work (ceiling), Peter B. Baxter.
Roofing, tar and gravel by Metal Shingle and Siding Co., Limited.
Terra cotta (ornamental), New Jersey Terra Cotta Co.
General contractors, Atlas Construction Co.

THE CARTY BUILDING.

Architect, F. S. Mallory, Toronto.
Brick, The Don Valley Brick Co.
Cabinet work, J. S. Scott.
Carpentering, J. D. Young.
Elevators, Otis-Fensom Co.
Grill and ornamental iron, Canadian Ornamental Iron Company.
Hardware, Aikenhead Hardware Co.
Marble, J. G. Gibson Marble Works.
Mason, James Wickett, Limited.
Painting and glazing, James Casey Co.
Plastering, Duckworth Bros.
Plumbing and heating and wiring and ventilating, Bennett & Wright.
Sheet metal and roofing, A. B. Ormsby.
Sprinkler system, W. J. McGuire.
Steel, Dominion Bridge Company.
Terra cotta (exterior), Atlantic Terra Cotta Co.
Tile work, Italian Mosaic and Tile Co.
Vacuum cleaning, Hydro Vacuum Cleaner Co.

PERSONALS.

Mr. J. M. Moore, architect and engineer, of London, Ontario, has been elected to the Board of Control of that city.

Mr. A. Charette has been appointed representative of the Plumbers' Association of Montreal on the Board of the Builders' Exchange.

Although both Col. Chadwick and Col. Beckett, of the firm of Chadwick & Beckett, Toronto, have enlisted for overseas service, and are now actively engaged in military affairs, their office has not been closed. It is being continued under the management of Bryan Chadwick, Col. Chadwick's brother, who has been connected with the firm for the past six years.

IMPORTANT DISCOVERY.

The discovery of mineral phosphate of lime in the Rocky Mountains by the Dominion Commission on Conservation, will prove economically important to Canada if large deposits are uncovered. By means of the substance the exhausted fertility of the Western growing districts may be restored and maintained. At the present time the only mineral fertilizer is apatite, found near Ottawa, which field is very small.

HYDRO RADIALS.

In connection with the hydro radials, upon which upwards of fifty municipalities have lately voted and approved of the scheme, it is interesting to analyze this undertaking from the point of view of the manufacturer and contractor. Almost every kind of material used in building and engineering construction will be in demand. In spending this \$35,000,000 a great market will be opened up to the manufacturer, as well as a large field for labor.

ANOTHER BIG INDUSTRIAL DEVELOPMENT.

Another big, new industrial development in Canada consequent upon war necessities and opportunities is likely to be the refining within the Dominion of the millions of dollars worth of nickel matte from Sudbury, which now goes to New Jersey for refining. It is stated on reliable authority that the Government is now considering arrangements for requiring refining in Canada, thus keeping control of the export of a commodity so largely used in armament manufacture, and at the same time taking advantage of present war conditions to establish permanently in Canada an industry that will prove immensely valuable when peace comes.

LARGE GAS LINE.

One of the largest, if not the largest, pipe line and gas undertakings of the continent has just been consummated and work begun, by the disposal in New York of \$10,000,000 worth of bonds. The proposition, as outlined by Engineer J. L. Kempher, will take in all towns along the line of the C.P.R. from the gas fields of Southern Alberta to Winnipeg, including Brandon, Regina and Moose Jaw. At the present time the cost to consumers has not been dealt with, but since the larger cities along the line of the project have accepted the offers made to them there should be no doubt as to the success of the scheme, and it should prove a great factor in eliminating much of the unemployment in the West and open up a large field for manufacturers.

CANADA GETTING GERMAN TRADE.

Ample proof that Canadian manufacturers in general are benefiting to a marked extent through the increased volume of trade resulting from enemy manufacturers being barred, through exigencies of war, from the world's markets, is furnished by enquiries made among manufacturers and producers. Manufacturers say that the chief benefit to accrue from German and Austrian products being kept at home is not so much that they are barred from Canadian markets as that Canadian manufacturers are now supplying the increased demand in other parts of the world. Instances of these are manufacturers of patent leather, sole leather, belting and similar leather goods, manufacturers of drugs, tapestries, incandescent light bulbs, electric shades, opal shades and ruby lenses for semaphores.

LONDON PALACE OF INDUSTRY.

Ground has just been broken for a huge new permanent exhibition building to be known as the Palace of Industry. The building is located at Willesden Green—about six miles distant from the centre of the city—will cover an area of 610,000 square feet, nearly four times the size of any similar building in London. It will be opened early in 1917 with an exhibition known as the "Industries of the Empire Fair," which is planned to be "the greatest trade exhibition ever organized." The Fair will be under the co-operative auspices of all the principal trade organizations of the British Empire, and over 3,000 exhibitors, representing seventy distinct lines of business, have already applied for space. The frontage of the stalls will aggregate twelve miles in length. It is to be solely a display of British goods, no foreign exhibits whatever being allowed.

BOOKLETS, CATALOGUES, ETC.

Achievements In Modern Heating and Ventilation, is the title of a twenty page catalogue, issued by The James Smart Mfg. Co., Brockville, describing the Kelsey System. It is well illustrated with view of buildings where Kelsey Systems are installed and illustrates and describes the principles and advantages of the warm air generators, manufactured by this firm.

Cement Gun.—A one hundred and eight page monograph compiled and edited by Arthur E. Lee embraces a description of the cement gun apparatus manufactured by The Cement-Gun Company, Incorporated, 30 Church Street, New York, and includes information on its principle and mechanical construction and its multiple application and adaptability to engineering and construction work.

Reducing and Regulating Valves.—The H. Mueller Mfg. Co., Ltd., Sarnia, Ont., are sending out a thirty-two page catalogue illustrating and describing in a clear and concise manner the Mueller Reducing and Regulating Valve and Pump Governors, manufactured by them. It contains also useful information for anyone using or requiring valves of this type.

Sanitary School Desks.—A folder illustrating and describing a new line of silent sanitary school desks being turned out by The James Smart Mfg. Co., of Brockville, a notable feature of which is the noiseless automatic seat hinge.

The Proper Place.—Referring to blueprints and drawings. A well designed and beautifully printed catalogue issued by Yawman & Erbe Manufacturing Co., Rochester, N. Y. It describes the handy filing system, manufactured by this firm which solves the problem of keeping track of architect's blueprints and drawings.

1916 Catalogue of the Reliance Ballbearing Door Hanger Company. 30 East 42nd Street, New York. Illustrates their ballbearing door hangers, drawer slides and elevator door lock and would be a useful addition to the literature of any architect or builder.

NEWLY INCORPORATED COMPANIES.

Canadian Electrode Co.—Interested, Howard Murray and Stephen Hart, Montreal.

The Robert Simpson Co. Western, Limited—Capital \$4,000,000; headquarters, Regina, Sask. The company is affiliated with the Toronto company of same name.

St. Maurice Paper Co., Limited—Interested, Alexandre Chas Casgrain, Montreal.

The Manitoba-Ontario Railway—Line from Port William to Lake of the Woods.

The Canada Cement Co.—The company is entitled to manufacture shells.

Messrs. L. S. Yolles, H. Rottenberg, L. M. Singer and G. T. Walsh, all of Toronto, have been incorporated to carry on business as architects, contractors and building wreckers.

W. J. Galbraith & Co., contractors, Montreal.

Castonguay & Frere, contractors, Longue Point, Montreal.

Automatic Faucet Company, Limited, Vancouver.

Three-O-System Company, Limited, Toronto, will manufacture furnaces and boilers.

Central Engineering Co., Limited, Montreal.

Electric Welding Co., Toronto, engineering contractors.

COMING CONVENTIONS.

AMERICAN CERAMIC SOCIETY'S annual convention will be held at Cleveland, Ohio, February 21 to 24.

AMERICAN CONCRETE PIPE ASSOCIATION—Annual convention to be held in Chicago, February 17 and 18, 1916. Secretary, E. S. Hanson, 538 S. Clark street, Chicago, Ill.

AMERICAN WOOD PRESERVERS' ASSOCIATION—The twelfth annual convention to be held in Chicago, January 18, 19 and 20, 1916. Chas. C. Schnatterbeck, Chairman Committee on Publicity and Promotion, American Wood Preservers' Association, Baltimore, Maryland.

CANADIAN LUMBERMEN'S ASSOCIATION—At Ottawa, February 18, 19 and 20, 1916, annual convention. Frank Hawkins, secretary, Ottawa.

CANADIAN NATIONAL CLAY PRODUCTS ASSOCIATION—To be held at the King Edward Hotel, Toronto, on January 18, 19, 20.

CANADIAN SOCIETY OF CIVIL ENGINEERS—The thirtieth annual meeting to be held in Montreal, January 25, 26 and 27, 1916. Secretary, Prof. C. H. McLeod, 176 Mansfield street, Montreal.

HOLLOW BUILDING TILE MANUFACTURERS' ASSOCIATION OF AMERICA—Convention to be held in New York, N.Y., on January 26.

NATIONAL BRICK MANUFACTURERS' ASSOCIATION will hold its annual convention at Hotel Statler, Cleveland, Ohio, February 21 to 26.

NATIONAL BUILDERS' SUPPLY ASSOCIATION will hold its annual convention at Hotel Statler, Cleveland, Ohio, February 17, 18, 19.

THE COMPLETE BUILDING SHOW will be held for the first time from February 16 to 26, at the Coliseum, Cleveland, Ohio.

TECHNICAL SOCIETIES.

ALBERTA ASSOCIATION OF ARCHITECTS.—President, Jas. A. Henderson, F.R.I., B.A., Edmonton; Hon. Secretary, W. D. Cromarty, Edmonton.

ARCHITECTURAL INSTITUTE OF BRITISH COLUMBIA.—President, R. Mackay Fripp; Secretary, Fred L. Townley, 325 Homer St., Vancouver, B.C.

CANADIAN CEMENT AND CONCRETE ASSOCIATION.—President, Peter Gillespie Toronto, Ont.; Secretary-Treasurer, Wm. Snaith, The Thor Works, Toronto, Ont.

CANADIAN CLAY PRODUCTS' MANUFACTURERS' ASSOCIATION.—President, Chas. A. Millar; Secretary-Treasurer, G. C. Keith, Toronto.

CANADIAN ELECTRICAL ASSOCIATION.—President, Col. D. R. Street, Ottawa, Secretary, Alan Sullivan, Confederation Life Building, Toronto.

CANADIAN FORESTRY ASSOCIATION.—President, William Power, M.P., Secretary, James Lawler, Journal Building, Ottawa.

CANADIAN GAS ASSOCIATION.—President, Arthur Hewitt, General Manager Consumers' Gas Company, Toronto; John Kellor, Secretary-Treasurer, Hamilton, Ont.

CANADIAN INDEPENDENT TELEPHONE ASSOCIATION.—President, W. Doan, M.D., Harrietsville, Ont.; Secretary-Treasurer, Francis Dagger, 21 Richmond street West, Toronto.

CANADIAN INSTITUTE.—198 College Street, Toronto. President, J. B. Tyrrell; Secretary, Mr. J. Patterson.

CANADIAN NATIONAL ASSOCIATION OF BUILDERS' EXCHANGES.—Western Section—President, C. R. Frost, 609 Second St., Edmonton, Alta.; Secretary-Treasurer, A. M. Frith, 224 McDougall Ave., Winnipeg. Eastern Section—President, Geo. Gander, Toronto; Secretary-Treasurer, P. L. Fraser, Builders' Exchange, Toronto.

MANITOBA ASSOCIATION OF ARCHITECTS.—President, Col. J. B. Mitchell, Winnipeg; Secretary-Treasurer, R. G. Handford.

ONTARIO ASSOCIATION OF ARCHITECTS.—President, C. P. Meredith, Ottawa; Secretary, H. E. Moore, 195 Bloor St. E., Toronto.

PROVINCE OF QUEBEC ASSOCIATION OF ARCHITECTS. Secretary, J. Emile Vanier, No. 5, Beaver Hall Square, Montreal.

ROYAL ARCHITECTURAL INSTITUTE OF CANADA.—President, H. C. Russell, Winnipeg, Man.; Hon. Secretary, Alcide Chausse, No. 5, Beaver Hall Square, Montreal Que.

SOCIETY OF CHEMICAL INDUSTRY.—Wallace P. Cohoe, Chairman; Alfred Burton, Toronto, Secretary.

TECHNICAL SOCIETY OF PETERBORO.—Bank of Commerce Building, Peterboro. President, N. C. Mills, P.O. Box 995, Peterboro, Ont.

UNION OF CANADIAN MUNICIPALITIES.—President, T. L. Church, Mayor of Toronto, Ont.; Hon. Secretary-Treasurer, W. D. Lighthall, K.C. Ex-Mayor of Westmount; Asst. Secretary, G. S. Wilson, 402 Coristine Bldg., Montreal.

Barrett Specification Roofs

Made in Canada

Investigate Roofing Claims!

GRAVEL and slag roofs laid along the lines of The Barrett Specification cover many of the first-class buildings of the Dominion, because the experience of more than 60 years has proven that—

- 1st —They last longer than any other kind.
- 2nd—There is no painting, coating or similar maintenance cost.
- 3rd—Their unit cost per year of service is lower than any other.
- 4th—They take the base rate of insurance and are approved by the Underwriters' Laboratories.

Claims regarding roofing should be met with this question: "How many can you refer to who have used say 500 squares of your roofing on a comparatively flat surface for ten years and bought more?"

Then investigate such claims!

We can supply scores of names for this purpose.

Exaggerated statements sometimes sell roofing, because the principles of Barrett Specification Roofs are not well known to the purchaser. Once he understands the long service they give and the low unit cost, he will have no other kind.

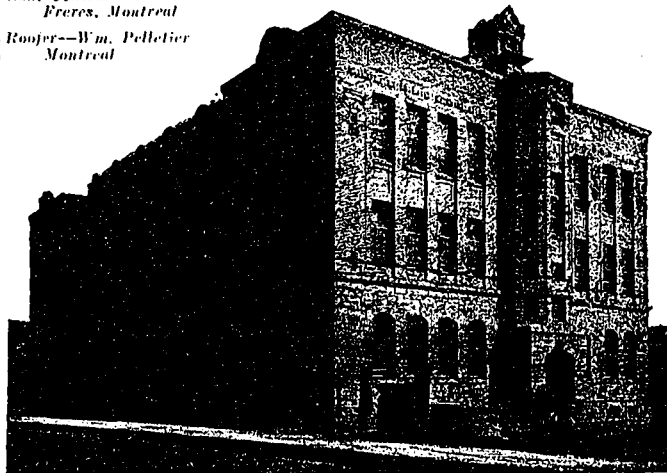
Copies of The Barrett Specification sent free on request.

Architects—Yenne & Labelle
Montreal

Gen. Contractors—O. Filion &
Freres, Montreal

Roofers—Wm. Pelletier
Montreal

BARRETT SPECIFICATION ROOF ON THE
GIDEON CIMET SCHOOL,
POUPART STREET, MONTREAL.



Special Note

We advise incorporating in plans the full wording of The Barrett Specification in order to avoid any misunderstanding.

If any abbreviated form is desired, however, the following is suggested:

ROOFING—Shall be a Barrett Specification Roof laid as directed in printed Specification, revised August 15, 1911, using the materials specified and subject to the inspection requirement.

THE PATERSON MANUFACTURING
COMPANY, LIMITED

MONTREAL TORONTO WINNIPEG VANCOUVER

THE CARRITTE-PATERSON
MANUFACTURING COMPANY, LIMITED

ST. JOHN, N.B. HALIFAX, N.S. SYDNEY, N.S.

Important Legal Decision

APPEAL from a decision of the Appellate Division of the Supreme Court of Ontario (1), reversing the judgment of a Divisional Court (2), in favor of the plaintiff.

The action was brought for an injunction to restrain the respondent from erecting an apartment house on lot 32 on the east side of Maynard avenue, in the city of Toronto, and which adjoins the lands upon which the appellant has erected a valuable private residence.

The lands now owned by the appellant and respondent respectively were formerly owned by the Reverend George Maynard.

The executors of the Reverend George Maynard conveyed lot 32 above mentioned to one John Williamson, by deed dated the 18th April, 1888, the material portion of which is as follows: "All and singular that certain parcel or tract of land and premises (describing them) to be used only as a site for a detached brick or stone dwelling house, to cost at least two thousand dollars, to be of fair architectural appearance, and to be built at the same distance from the street line as the houses on the adjoining lots."

The respondent's title is derived through this conveyance to Williamson.

When the appellant purchased the land now owned by him it was one of the few remaining vacant lots on Maynard avenue, and he did so with the knowledge that there were restrictions on that street governing the class of buildings to be erected thereon, and also knowing from his personal inspection that the houses on the street were all private dwellings and worth from \$7,000 to \$10,000. The appellant erected a first-class private dwelling house, costing approximately \$14,000, over and above the value of the land, which he would not have done had he not believed that there were building restrictions sufficient to prevent the erection of such a building as is proposed by the respondent.

The respondent proposes to construct what is called an apartment house upon lot 32, and the plans and specifications which he had prepared show that it is intended to include the construction of six separate and distinct suites, or sets of rooms, each cut off from the others by its own front door, and composed of a living room, four bedrooms, a bathroom, a dining-room and a kitchen.

The appellant, believing that his property would be very greatly depreciated and damaged if the respondent were permitted to construct the proposed building, commenced this action.

After the commencement of the action the appellant moved for an interlocutory injunction. The motion was by consent turned into a motion

for judgment, and on the 3rd May, 1912, judgment was pronounced by Mr. Justice Middleton dismissing the action with costs.

The learned judge considered that he was bound by the decision in *Re Robertson and Defoe* (1), and dismissed the action. This judgment was reversed by the Divisional Court (composed of Falconbridge, C.J., K.B., Britton and Riddell, J.J.), Britton, J., dissenting.

The judgment of the Divisional Court was reversed by the Appellate Division (R. M. Meredith, Garrow, Maclaren, Magee and Hodgins, J.J.A.), Maclaren and Magee, J.J.A.), dissenting.

From the judgment of the Court of Appeal for Ontario the appellant appealed to the Supreme Court of Canada.

Glyn Osler and J. H. Cooke for the appellant. The conveyance to Williamson contains a restrictive covenant limiting the use of the land by the grantee and his assigns. *Mackay v. Dick* (1), at page 263; *Rawson v. Inhabitants of School District* (2), *Brookes v. Drysdale* (3), at page 60.

The words used are to be interpreted in their ordinary and popular sense. *Rogers v. Hosegood* (4), at page 409; *Hext v. Gill* (5); *Ex parte Breull* (6).

J. M. Godfrey, for the respondent, referred to *Kimber v. Admans* (7); *Robertson v. Defoe* (8); *Neill v. Duke of Devonshire* (9), at page 149.

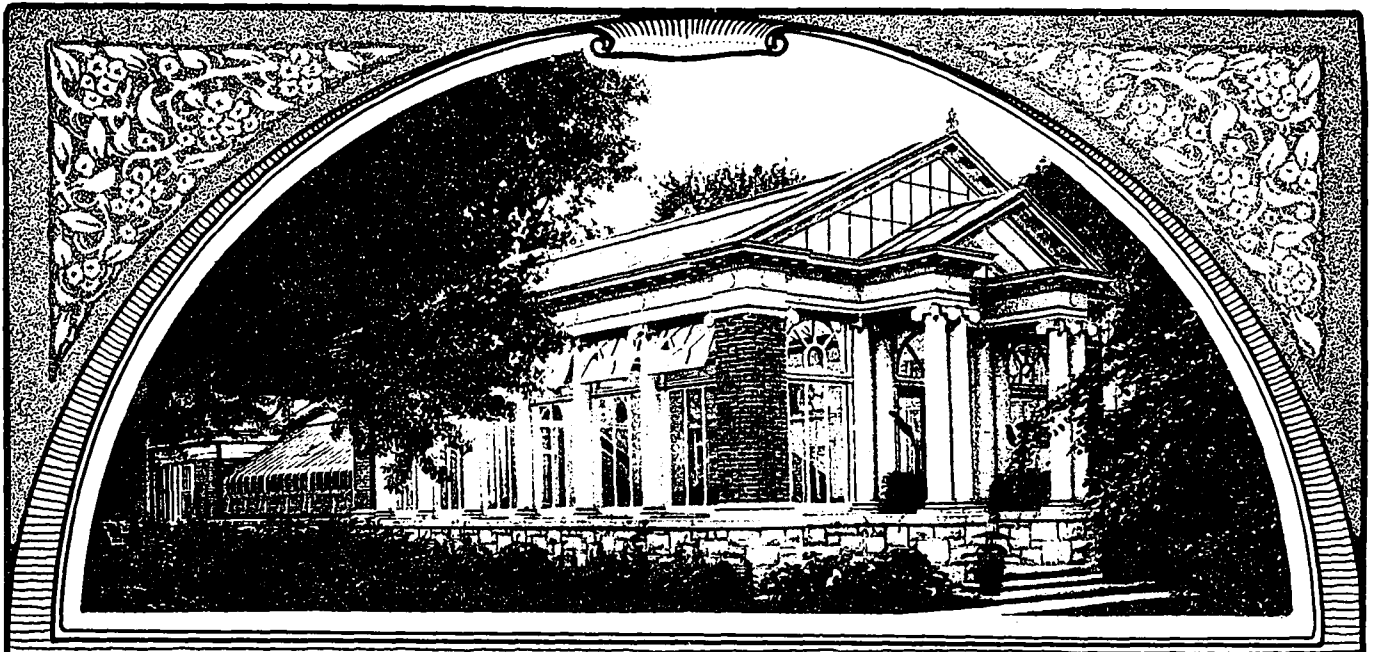
The Chief Justice (dissenting):—I am of opinion that this appeal should be dismissed with costs.

Idington, J.:—The respondent claims that he is entitled within the terms of a grant of certain lands conveyed to be used only as a site for a detached brick or stone dwelling house to cost at least two thousand dollars, to be of fair architectural appearance, and to be built at the same distance from the street line as the houses on the adjoining lots, to erect on said site half a dozen dwelling houses so attached together and covered in that they may wear the external appearance of one house.

If this is to be construed as a covenant I conceive and respectfully submit that respondent is simply attempting by a juggling use of the word "apartment" to seem to keep the promise to the ear yet break it to the hope.

It is part of the office of the law to defeat such like attempts and see that what was within the reasonable contemplation of the parties to a contract as expressed in their use of the words thereof, is so adhered to that neither the purpose nor the language is frittered away by over-refinement.

It is the use of the site, and not the use or abuse of the detached dwelling when built, that



Meeting The Difficult to Meet in Glass Structures

TO reproduce through the medium of glass, and a restrained use of wood, stone and brick, that feeling of solidity and endurance essential in an Architect's rendering of the classic in design, you will agree is a difficult task.

That it has been successfully accom-

plished in this subject you will agree.

Its location in intimate association with the owner's residence, prompted its treatment.

As evidence of our ability to meet the difficult to meet in glass enclosures; this would seem a convincing example.

Lord & Burnham Co.

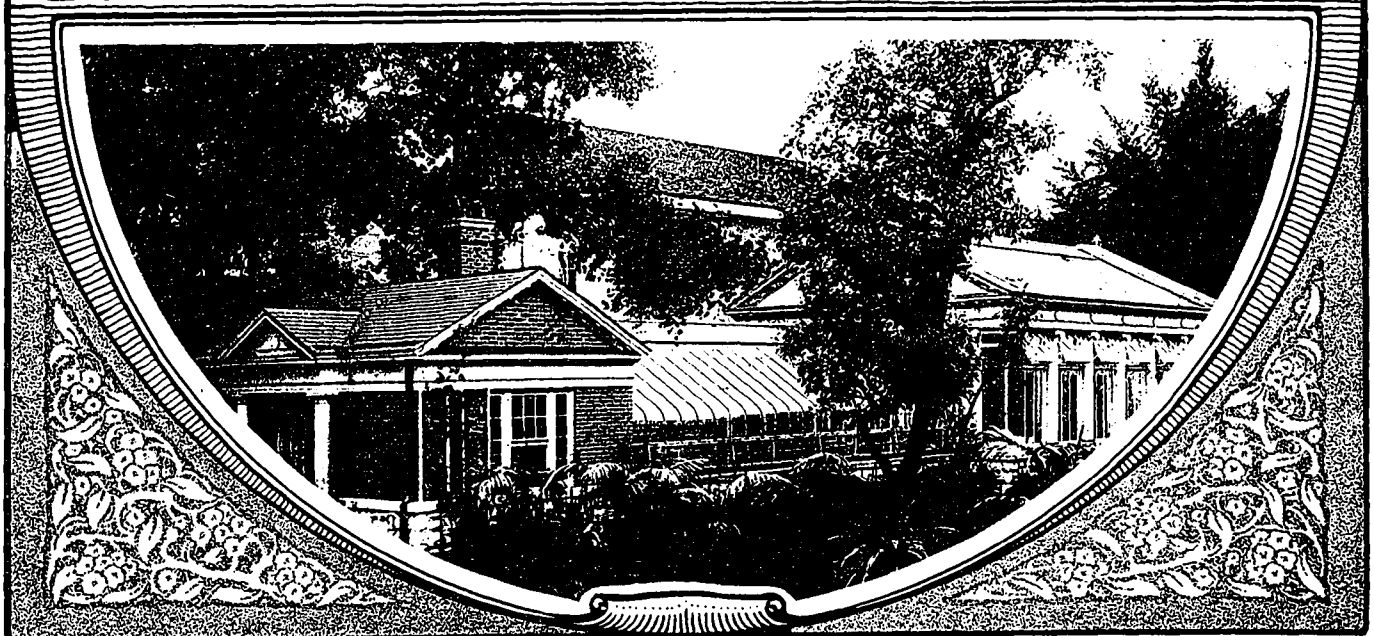
Limited, of Canada

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Factory, ST. CATHARINES, Ontario.

TORONTO
Royal Bank Building,

MONTREAL
Transportation Building,



is in question. The illustrations pressed in argument of what might be done in way of overcrowding even a detached dwelling, against which this stipulation is not aimed, are therefore of no avail.

We must look at the whole instrument, and doing so here I have no doubt the grantor and grantee intended the latter should be bound to use the land in the manner stipulated, and for this purpose I presume the grantee executed the deed.

I think the appeal should be allowed with costs throughout.

Duff, J. (dissenting):—The covenant in this case, in my judgment, has no application to the building in question. The building is, undoubtedly, a house. It is a dwelling house, because it is constructed solely for housing people as dwellers. The contention that because the house contains a certain number of apartments in which separate families might conveniently live, it is therefore not a “detached” dwelling house is a contention which, if not wholly irrelevant, must involve the proposition that the building is not a dwelling house, but an assemblage of dwelling houses. I think it is rather extravagant to affirm that a given house is not a “detached” house solely because it contains a number of apartments capable of separate occupation.

I think the considerations which ought to govern the determination of the case are set forth very satisfactorily in the judgment of Mr. Justice Meredith in the court below.

Anglin, J.:—It is common ground that the terms of the “covenant” in question should be given the meaning ordinarily attached to them when used in common parlance. *Rogers v. Hosegood* (1); *Hext v. Gill* (2), at page 719. It is urged by the appellant that the construction put by the respondent upon these terms is technical and refined; the respondent makes a similar complaint of the construction insisted upon by the appellant.

It would be a most extraordinary description of a modern apartment house, such as the defendant proposes to erect, to call it “a detached dwelling house”—a description that nobody would ever dream of using colloquially. No purchaser of a property, which he had not seen but had bought relying on the vendor’s description of it as “a detached dwelling house,” would expect to have foisted upon him, or be compelled to take, as answering that description, an apartment house such as the defendant’s plans provide for. If further evidence were required of the purview of the restriction intended to be imposed upon the user of the property in question as a building site, it is furnished by the fact that, his purpose being to ensure that Maynard avenue should maintain its character as a first-class residential street, the vendor stipulated that on the site now owned by the re-

spondent there should be erected nothing other than a dwelling house of brick or stone costing at least \$2,000. What sort of modern apartment house built of brick or stone could be constructed for \$2,000? The amount of this minimum price seems to show conclusively that the purpose was that nothing other than a single dwelling house in the ordinary acceptance of that term should be erected on the land.

I am, with respect, of the opinion that the decision in *Robertson v. Defoe* (1), relied on by the respondent, cannot be sustained. Each apartment in the modern residential apartment how such a building can be deemed in compliance with a covenant that “every residence erected on the land shall be a detached house.” “House” was the word considered in *Kimber v. Admans* (2). “Dwelling-house” was the term dealt with in *Rogers v. Hosegood* (3). See, too, *Ilford Park Estates v. Jacobs* (4).

For the reasons stated by Mr. Justice Riddell in the Divisional Court I agree with his conclusion that the provision in question should be deemed a covenant, and not a condition. The fact that, no right of re-entry for breach being reserved, the stipulation, treated as a condition, would be ineffectual, affords another reason for treating it as a covenant; *ut res magis valeat*. To the authorities cited by Riddell, J., I would merely add a reference to *Hodson v. Coppard* (4), and *Stevinson’s Case* (5).

I would, for the foregoing reasons, with respect, allow this appeal with costs in this court and the Court of Appeal, and would restore the judgment of the Divisional Court.

Brodeur, J.:—The appellant is the owner of a lot on Maynard street, in the city of Toronto, and the respondent is the owner of an adjoining lot on the same street. These lots were sold with the covenant that each of them “would be used only as a site for a detached brick or stone dwelling house to cost at least \$2,000, to be of fair architectural appearance, and to be built at the same distance from the street as the houses on the adjoining lots.”

The respondent proposes to erect an apartment house, and the appellant, as transferee of the rights of the original vendor, claims an injunction to restrain the respondent from building that apartment house. He claims that the apartment proposed to be erected is not a detached house, and is, in that respect, an infringement of the covenant above referred to.

I consider that apartment houses were not within the covenant, and that its construction is an infringement of that covenant. *Rogers v. Hosegood* (1).

I consider that the words in the covenant should be given their ordinary popular meaning. *Rogers v. Hosegood*, at page 409; *Ex parte Breull*; *In re Bowie* (2).

For these reasons I think that the injunction prayed for should be granted.