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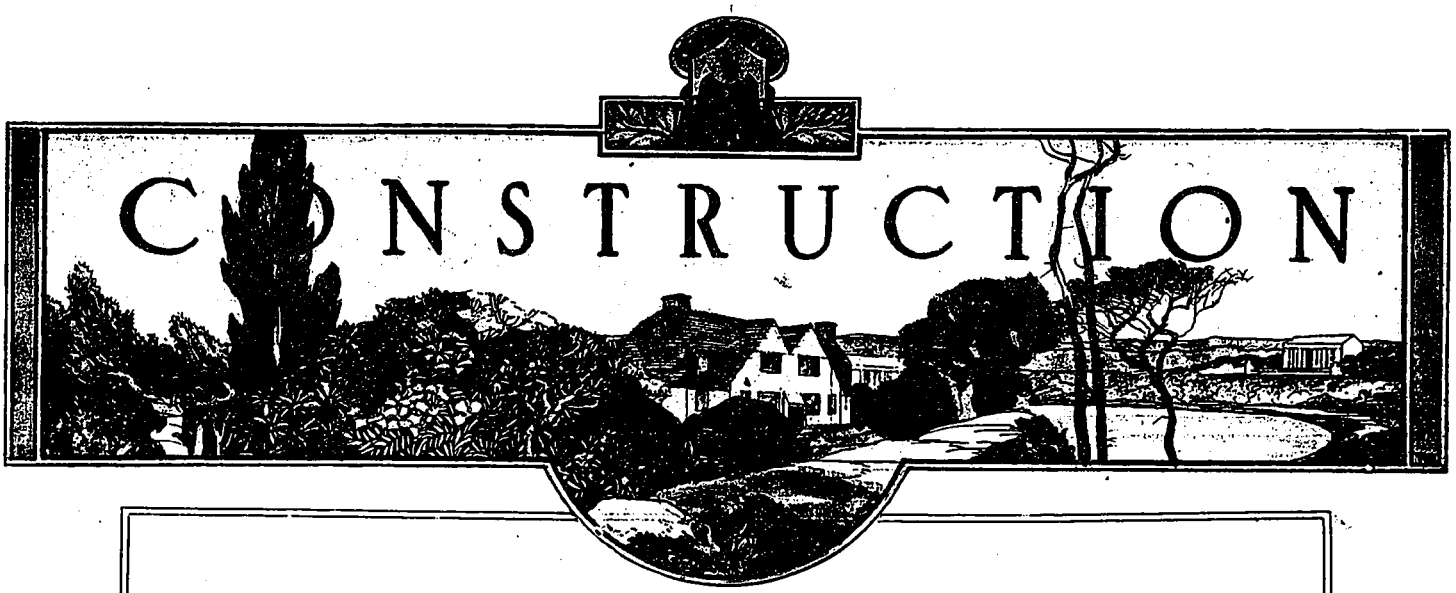

November, 1917 Vol. 10, No. 11

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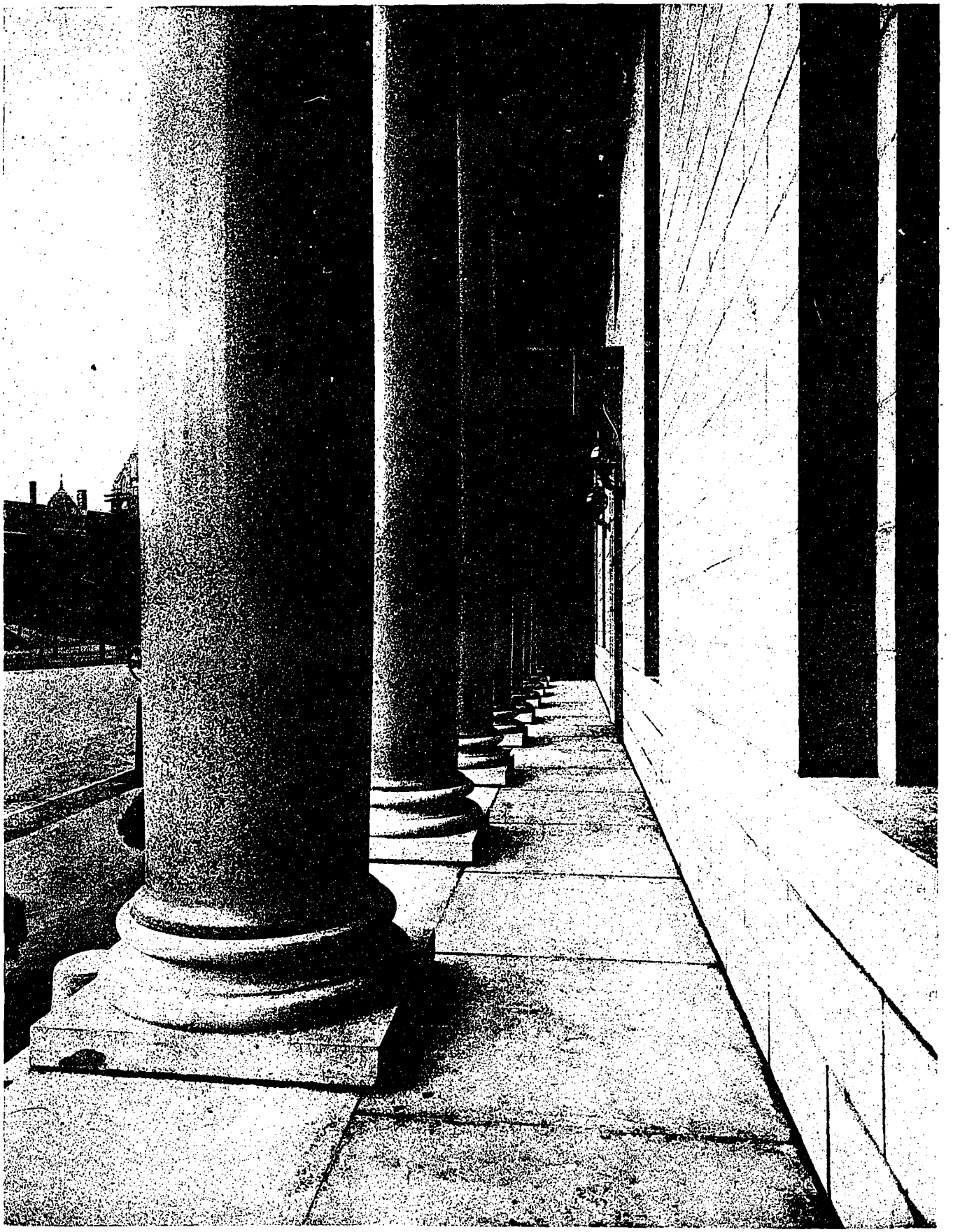


PORTICO LOOKING EAST, MONTREAL PUBLIC LIBRARY.

EUGENE PAYETTE, ARCHITECT.

Montreal Public Library

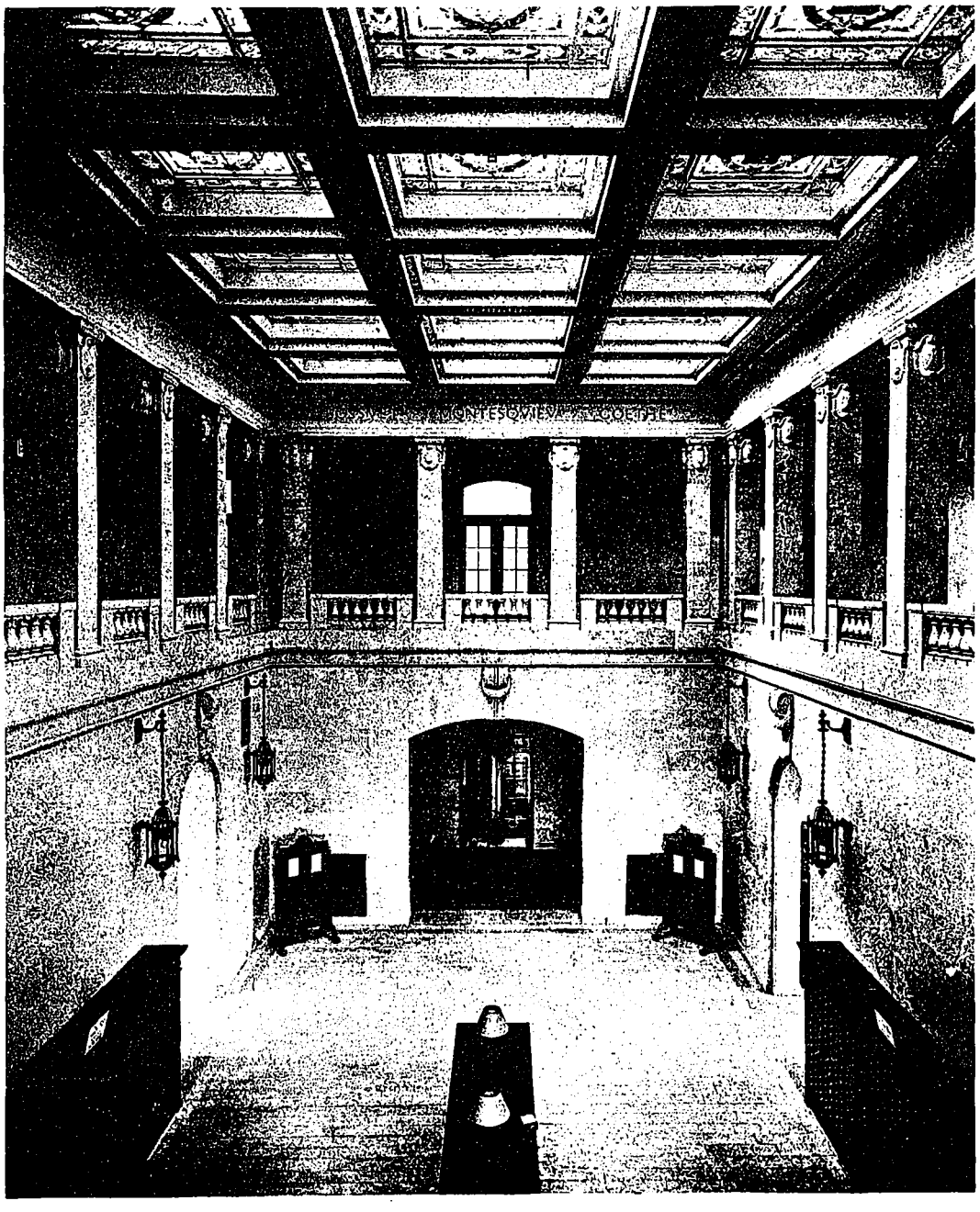
THE long contended question of a new public library in Montreal, which was settled when the City Council finally decided to utilize a plot of city land on East Sherbrooke Street, facing Lafontaine Park, has resulted in a completed building which successfully rewards the efforts of its promoters to provide an institution worthy of the civic importance of the large community which it serves.

Moreover the building represents the working out of an attractive scheme which takes into account two conditions not usually met with in the designing of public structures. As a rule buildings of this character are built on level grounds, but here the main street (Sherbrooke East), facing the park, is higher by eighteen feet than Montcalm and Beaudry Streets, on which the side and rear of the structure abut. It was necessary for the architect, Mr. Eugene Payette, to adjust the plan to this slope, in addition to conforming with an oblique street line extending across the front.

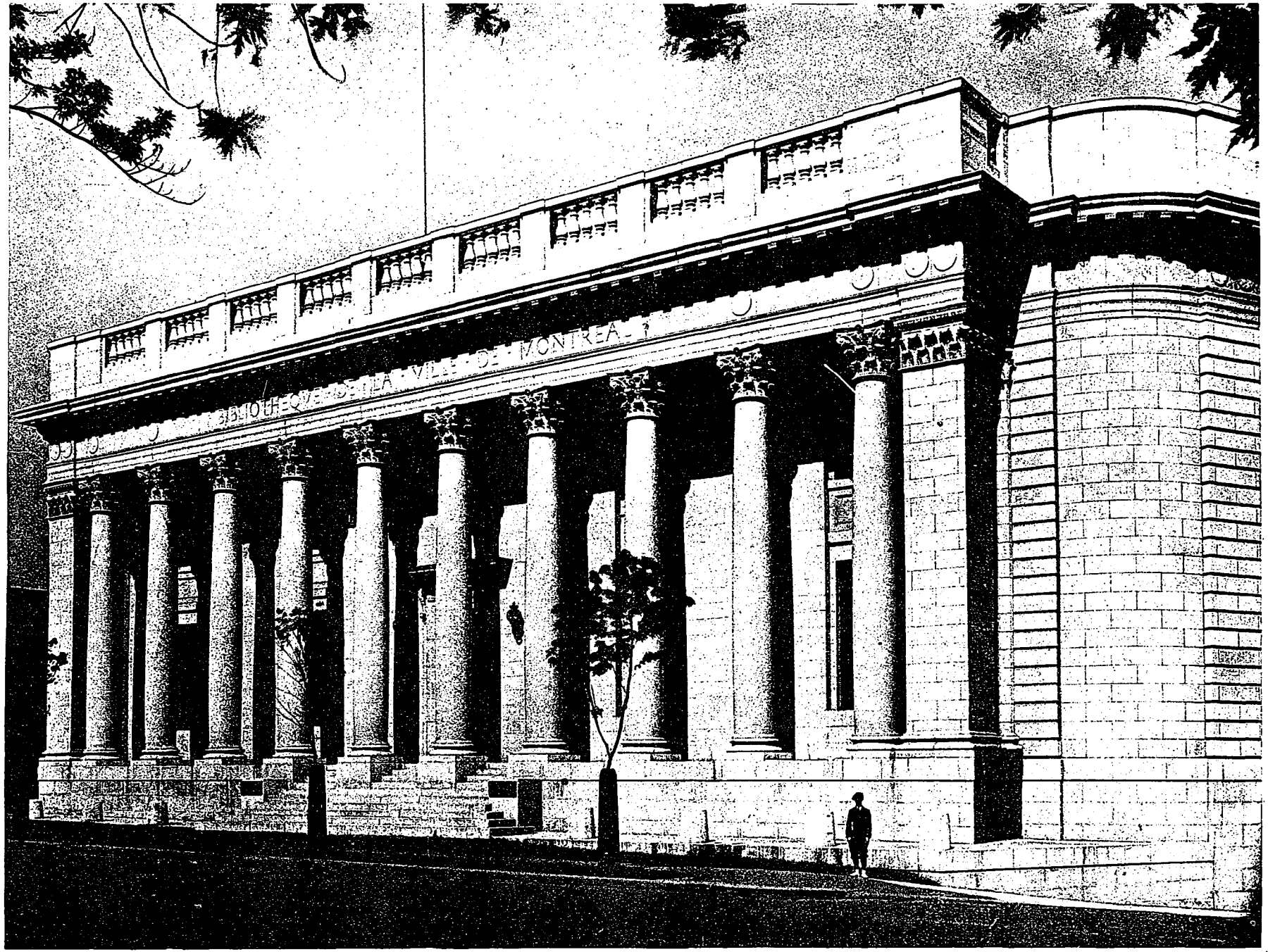
The degree to which these conditions have been satisfactorily met is indicated in the accompanying illustrations. The facade, with its Italian Renaissance character, is both imposing and interesting in its carefully worked out proportions, while the plan is well organized to successfully fulfill in every way the functions of an institution of its kind.

The dimensions of the main portion of the structure are 155 x 109 feet, and the height 58 feet. An extension to this of 109 x 45 feet and 56 feet high, is devoted to book stack purposes.

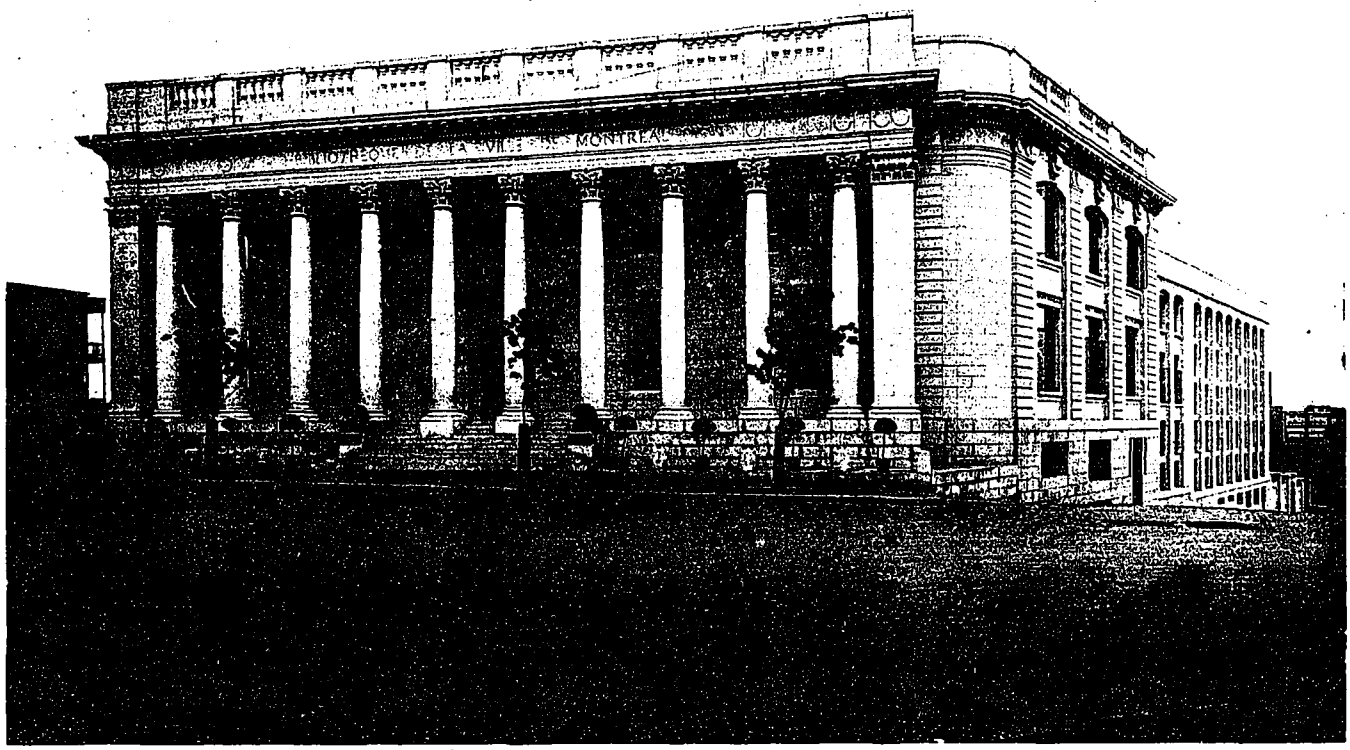
The children's reading room, which has its own individual entrance from Montcalm Street, is placed on the lower or basement floor level, thus doing away entirely with the necessity of its patrons coming in contact with the main portion of the library situated above. This department is conducted independent of the upper floors and is complete in itself. It has its own charging counter for the outside circulation of books, as well as direct access to the stack room for the attendants and separate lavatory conveniences. In addition this floor also includes the janitor's apartment, boiler room and lesser services; all principal rooms



DISTRIBUTING ROOM, MONTREAL PUBLIC LIBRARY. EUGENE PAYETTE, ARCHITECT.

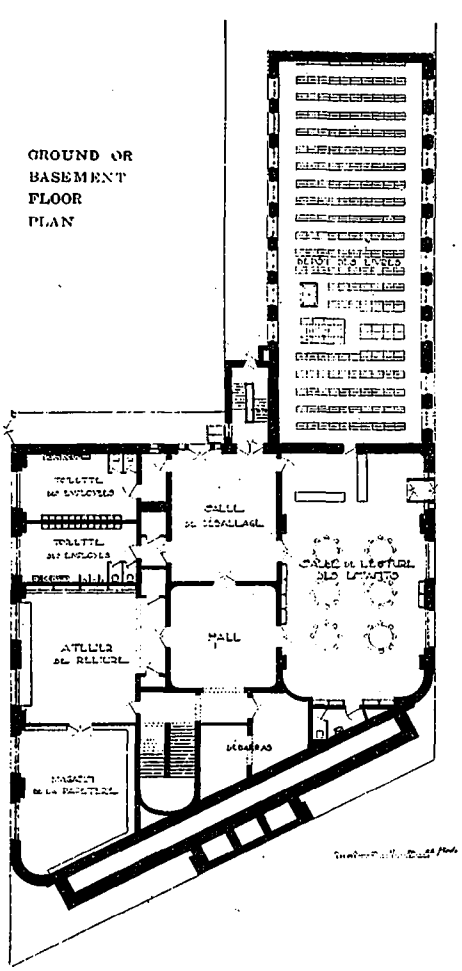


MAIN FACADE, SHERBROOKE STREET EAST. MONTREAL PUBLIC LIBRARY. EUGENE PAYETTE, ARCHITECT.

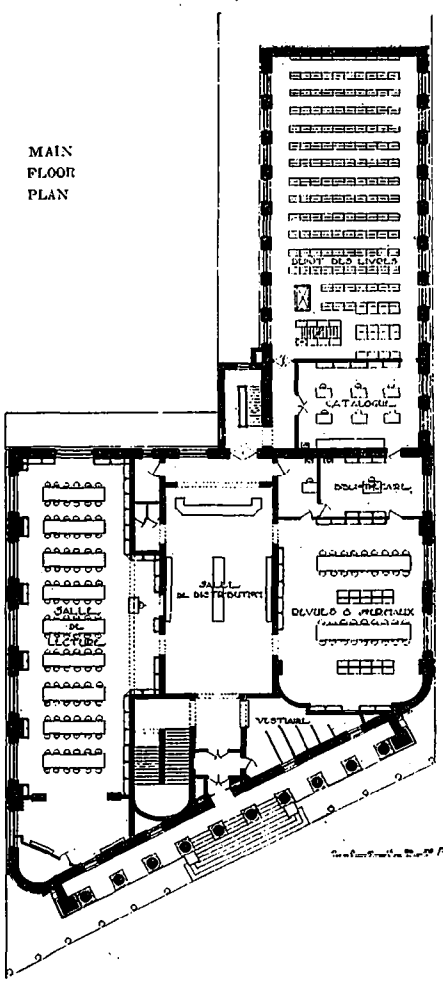


GENERAL VIEW, MONTREAL PUBLIC LIBRARY. EUGENE PAYETTE, ARCHITECT.

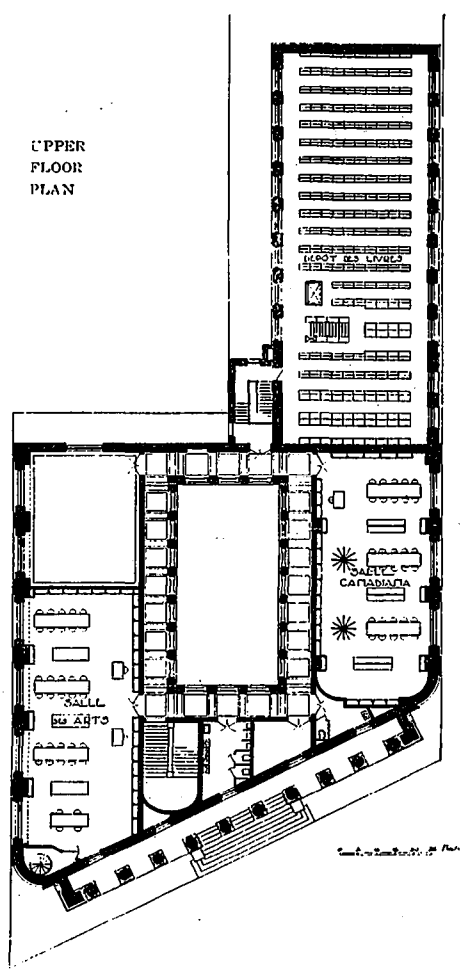
GROUND OR BASEMENT FLOOR PLAN

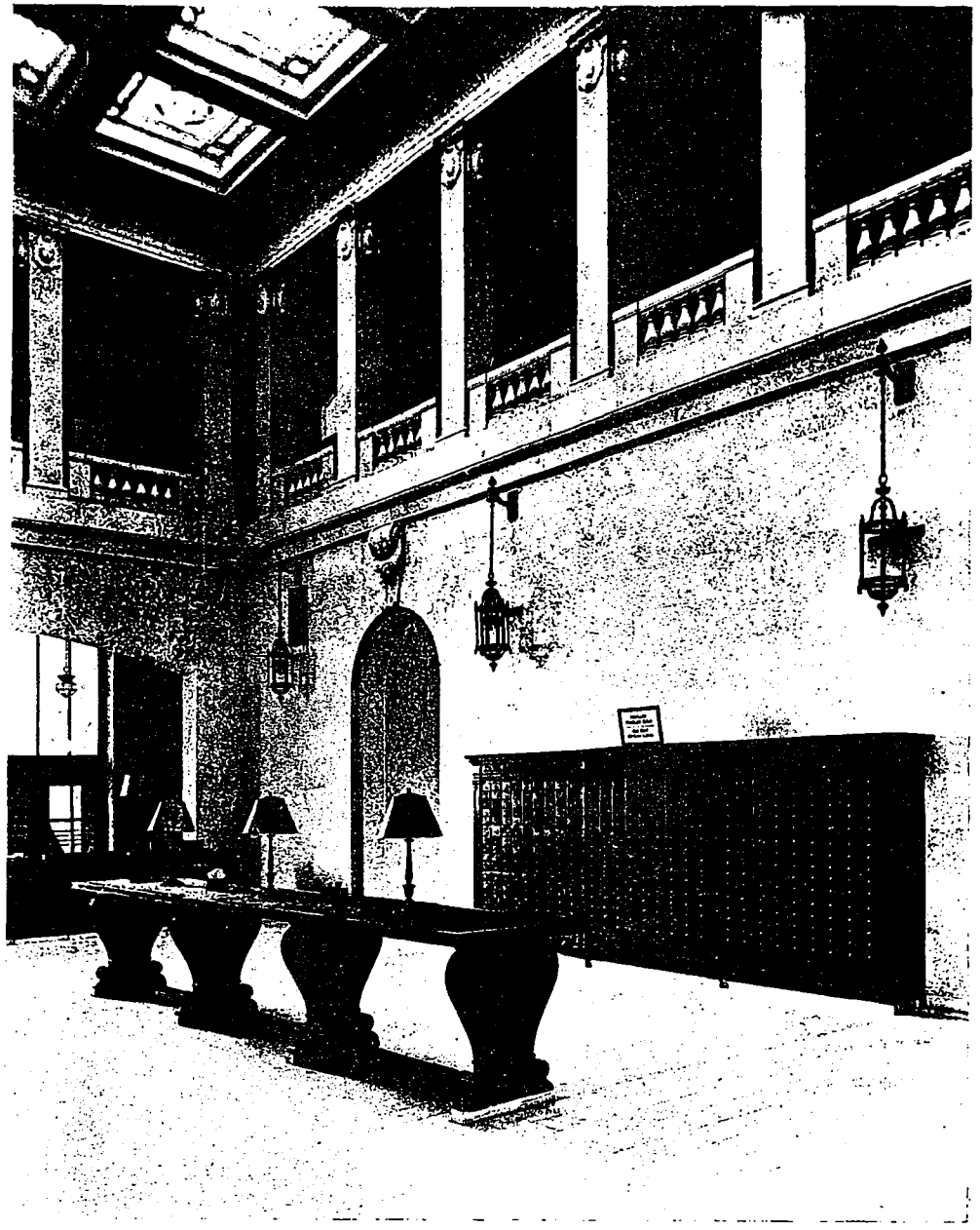


MAIN FLOOR PLAN



UPPER FLOOR PLAN





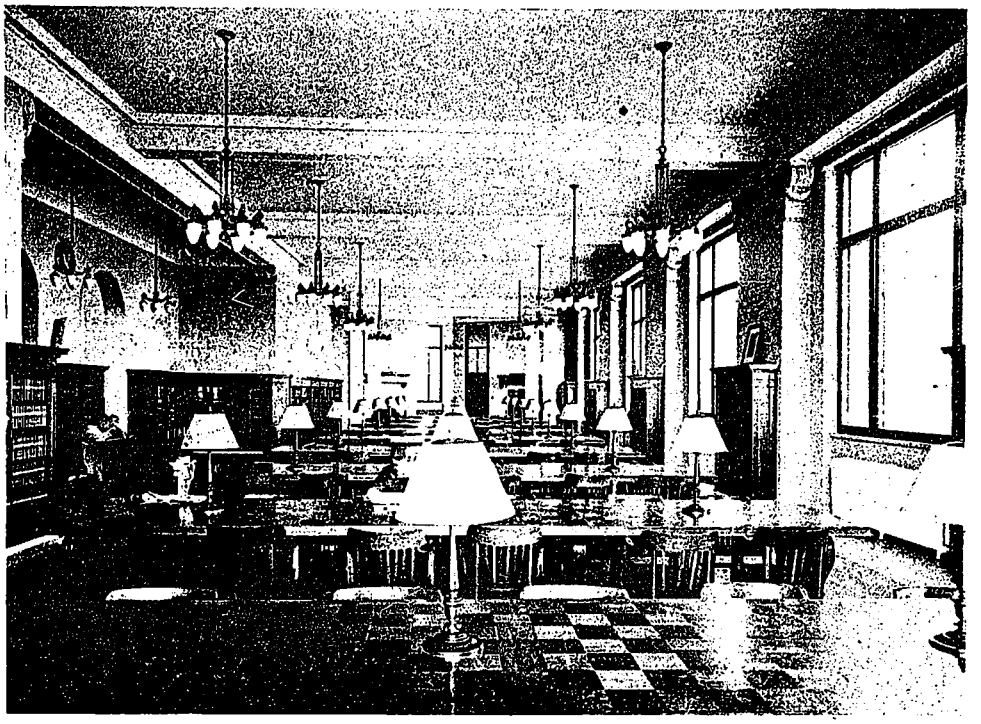
MAIN DISTRIBUTING HALL, LOOKING TOWARDS ONE OF THE DOORWAYS LEADING TO PERIODICAL ROOM, MONTREAL PUBLIC LIBRARY.

EAST GALLERY OF DISTRIBUTING HALL, MONTREAL PUBLIC LIBRARY.
EUGENE PAYETTE, ARCHITECT.

having cream colored pressed brick walls with floors of red quarry Welsh tile.

In the main vestibule, which is entered from Sherbrooke Street, is a bronze tablet inscribed with the names of the Mayor, Commissioners, and Aldermen of the City, together with those of the architect and general contractor of the building. This tablet is crowned by a carved marble pediment carrying the coat-of-arms of the city, with the coat-of-arms of the province on the opposite side.

The principal feature of this floor is the distributing room, the furniture of which consists only of a centre table, two card catalogues and a counter.



MAIN READING ROOM, MONTREAL PUBLIC LIBRARY.

The walls and colonnade are built of light Missisquoi marble. In the frieze over the colonnade are the names of famous authors incised in gold letters and placed in chronological order. This interior is lighted from the ceiling by twenty-one panels of leaded art glass, divided into three rows of seven panels each, and having as their main feature a shield bearing various coats-of-arms. These represent (1) the crests of the old provinces of France which furnished most of the settlers at the time Canada was a French Colony; (2) memorials to Cartier, Champlain and other early Canadians; and (3) representations of the seven oldest provinces of the Dominion. The leaded glass is protected by three thicknesses of plate and wired glass.

The card catalogue cases contain 810 drawers accommodating 700 cards each. In these cases an innovation, first introduced by the architect in the Bibliotheque Saint Sulpice, consists of a rod which is invisible on the face of the case and locked at the back, thereby preventing the public from tampering with this rod and minimizing the risk of getting the cards mixed.

The distributing counter contains the charging desk for outside circulation. This comprises seven trays, forty drawers for subscribers' cards, cash drawer, and four compartment drawers for book slips and shelves for the temporary storing of returned books.

In the periodical room the furniture consists of two large tables with bookrests for magazines, inclined shelf book-cases, newspaper table and two racks with accommodations for newspapers. The reading tables and chairs are numbered, enabling a visitor to leave an inquiry for a book at the counter to be delivered to him at one of the numbered seats at the reading table.

THE CANADIAN ROOM, MONTREAL PUBLIC LIBRARY.

CORRIDOR IN STACK ROOM, MONTREAL PUBLIC LIBRARY.

The "Canadian" room, which is situated on the upper floor, contains, in addition to the tables, cabinets, etc., several multiplex display cases with folding panels, glassed, and resting on a pivoted frame, these being available to display rare manuscripts, autographs, engravings and photographs. The art room contains tables under which are roller shelves for large books.

All available wall space in every reading room is occupied by built-in book cases; those of the main reading room being open, while sliding doors having a locking arrangement are used where valuable books are kept on the upper floor. Every unit of furniture, such as counters, tables and book cases, is provided with a marble base.

The reading rooms and other departments devoted to staff work are equipped with electric bronze clocks controlled by a master clock located in the bindery. There is also a watchman time recording system with two registering stations placed at the extremity of each other on each floor. The stack room has accommodation for 5,000 bound newspaper volumes and 300,000 other volumes of miscellaneous sizes. Besides this there is accommodation for a large number of books in the various reading rooms.

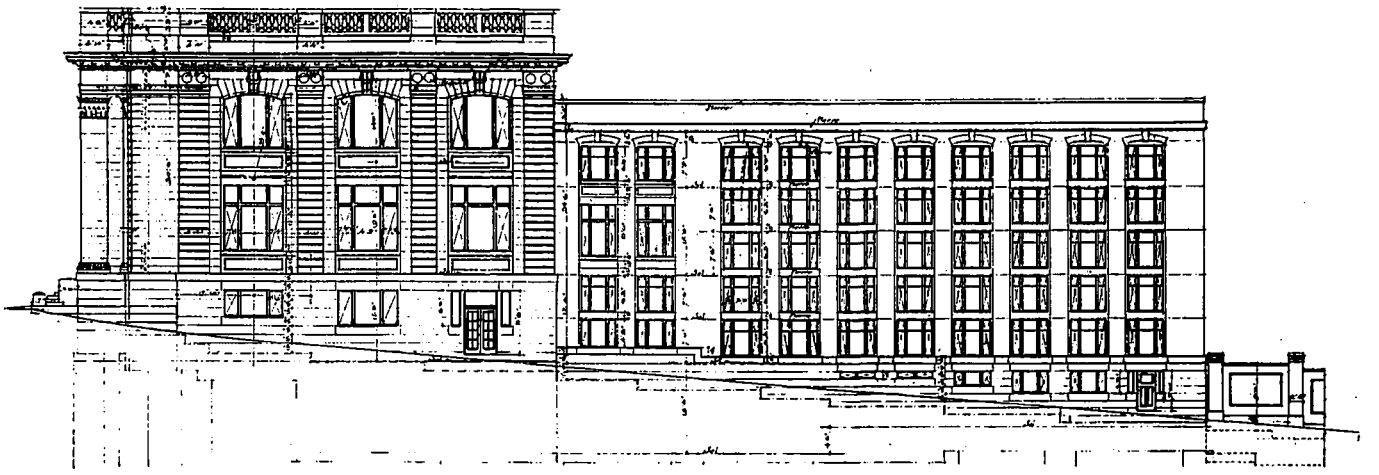
The only difficulty met with in carrying out the work was due to the presence of clay, quicksand and water on the site, which complicated putting in the foundation, and in order to gain time pending the completion of the plans and specifications, this part of the work was started Oct. 24th, 1914, on a percentage basis, the city supplying the material and labor.

The general contract for the superstructure was awarded April 29th, 1915, at the time the foundation work was completed, and possession of the structure was taken over by the city on May 1st, 1917, just about two years to the day from the time the contract for the superstructure was let.

PERIODICAL AND NEWSPAPER ROOM, MONTREAL PUBLIC LIBRARY.

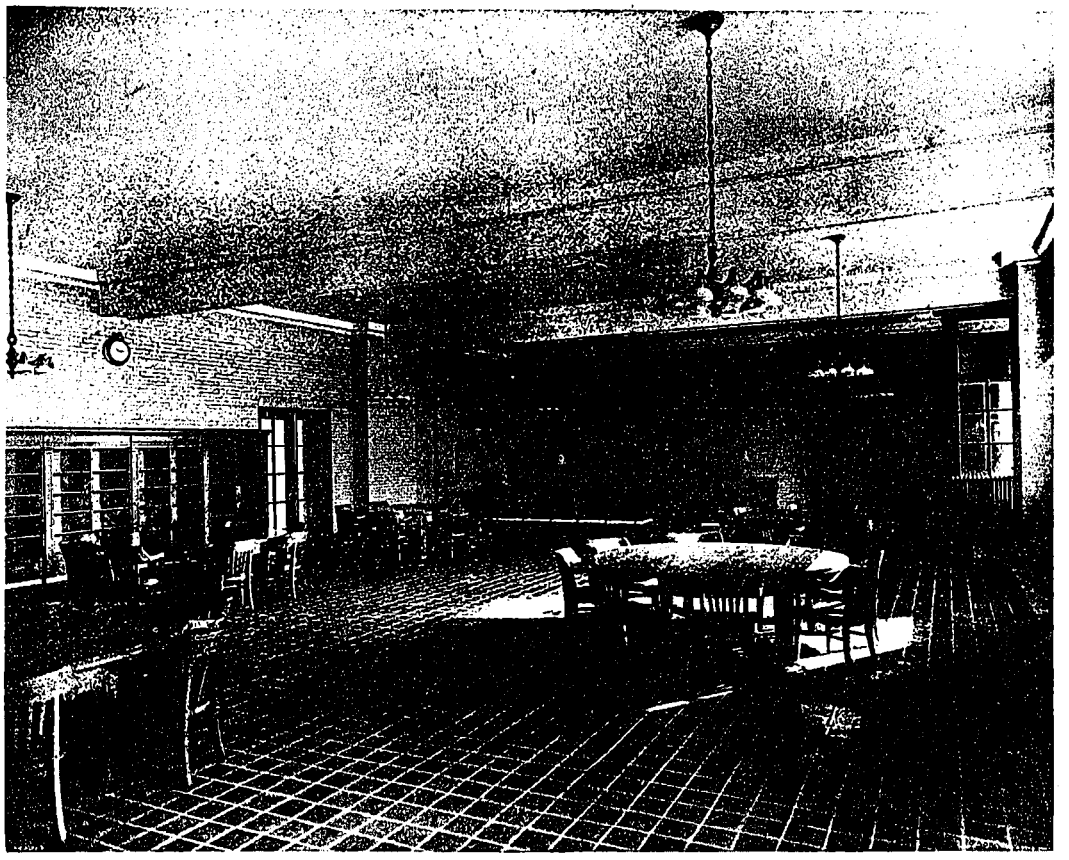
Totally considered, it is a building which not only results in a notable addition to the public architecture of Montreal, but in its erection the city realizes a long-felt civic need, besides obtaining accommodations which will adequately meet the present and to an extent the future requirements of a growing population.

Marble is used extensively throughout the interior, both for floors and

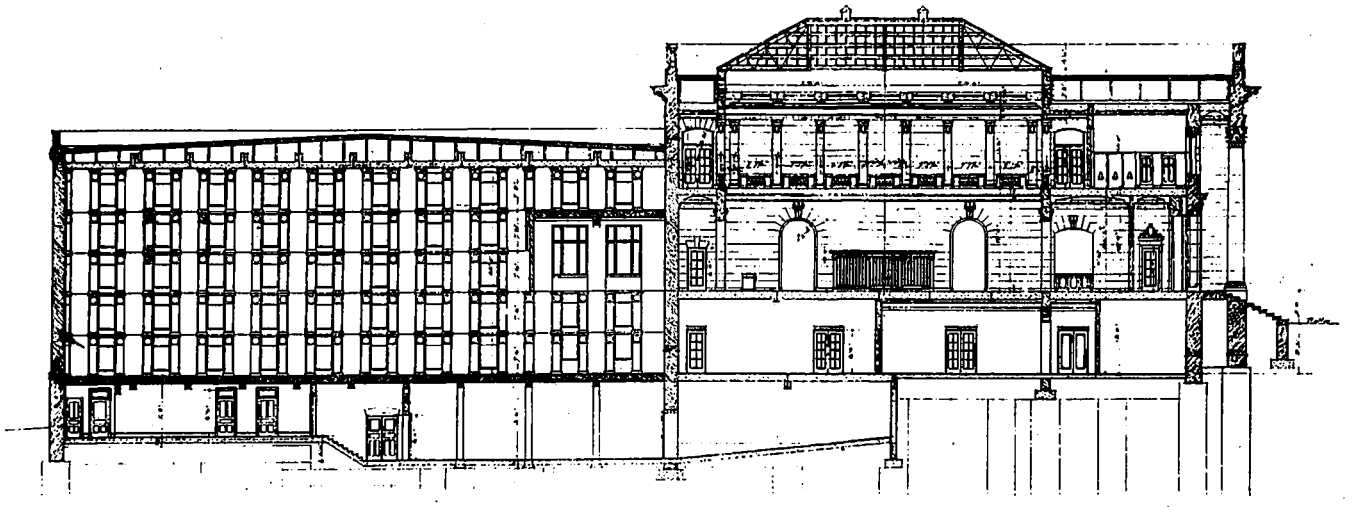


MONTCALM STREET ELEVATION, MONTREAL PUBLIC LIBRARY.

walls, with the exception of the reading room, where the floors are of tile with marble border. The exterior walls of the building are of grey Queenston limestone on a light granite base, Stanstead granite being used for the ten columns forming the colonnade, the dimensions of which are three feet in diameter at base and twenty-five feet high. The building contains 1,200,000 cubic feet, and cost $560,-500 (46.6c. per cubic foot), including furniture and electric light fixtures, but exclusive of the cost of the land.



CHILDREN'S READING ROOM, MONTREAL PUBLIC LIBRARY.



LONGITUDINAL SECTION, MONTREAL PUBLIC LIBRARY.

Why The Practice of Technical Professions in Canada Should be Regulated by Law

By J. P. HYNES

Paper read before Royal Architectural Institute of Canada.

THE questions of architectural education and of legal restrictions on the right to practice architecture have agitated the architects of the English speaking world for more than a generation. To-day the question of a college educational course is practically conceded on all sides, while the question of legal restrictions is slowly taking form in actual legislation in at least ten States in the American Union and was before the Imperial Parliament when war broke out. In Ontario ten years ago these questions were discussed with considerable feeling and for the time settled in favor of promoting education and dropping legislation; the expectations being that the educational institutions would then fulfill the reason of their existence and supply the province with trained men to handle its problems. However, the constant and growing usage of alien architects erecting most of the larger commercial buildings of the province has raised the whole question again, and the following is an attempt to state the present situation and point to its remedy.

On investigation it was found that alien architects have for at least the last thirty-five years almost continuously practiced in Ontario on a large number of important buildings, as may be instanced by the following examples:

Starting with the Western Assurance Company building, in Toronto, there has followed in almost continuous succession, the Canada Life Assurance Building, Toronto; the Canadian Bank of Commerce, Toronto; the Bank of Hamilton, Hamilton; the Ontario Parliament Buildings, Toronto; the Toronto Board of Trade, the Bank of Hamilton Building, Toronto; the Bank of Toronto Building, Toronto and St. Catharines; the Imperial Oil Company's Building, Toronto; two buildings for the Robt. Simpson Company and three for the T. Eaton Company, in Toronto, and one in Hamilton. At the present time there is under construction or about to be erected in Toronto, the T. Eaton Company warehouse; the T. Eaton Company departmental stores; the Wm. Davies Company abattoir, and buildings for the Brown Brass Company; the Goodyear Tire Company, the proposed Devonshire Hotel, and several theatres, while throughout the province there are the International Nickel Company's buildings, Port Colborne; the Dominion Government Arsenal, Lindsay; Dominion Government Explosive factory, Renfrew; Dominion Government Explosive factory, Trenton.

The effect on the resident architects is that it is depriving them of the opportunities that the province naturally affords them, and which, if they enjoyed, would bring them such recognition that there would be little thought of bringing aliens into the province.

The effect on the practice of architecture in the province is to discourage the resident practitioners and drive the young men graduates from the University from the province, and create a strong tendency to a low standard of practice by introducing unfair competition; as very frequently the alien practitioners practice on a purely commercial basis even to the extent of association with the contractor in such a way as to make it appear to the client that the architect's services are of such little consequence that they are thrown in by the contractor.

Through the personal agitation of a number of architects and builders, considerable comment on the number of alien architects practicing in the province, appeared in the papers, noticeably the trade journals, and was eventually discussed at an executive meeting of the Toronto Branch of the Canadian Manufacturers Association. This led to an interview between the President of the above Association and the President of the Ontario Association of Architects, after which the former, on behalf of his association, convened a meeting of representatives from the Toronto Branch of the Canadian Manufacturers Association, the Ontario Association of Architects, the Toronto Branch of the Canadian Society of Civil Engineers and the Toronto Builders Exchange.

After considerable discussion it was determined to jointly memorialize the Dominion Government, to bring to its attention the extent to which alien architects and contractors were doing business in Canada and that even the Government itself had given the erection of the new arsenal, at Lindsay, to aliens.

In drafting this memorial, many suggestions were deliberated upon; some were realized to be impracticable and others were deemed inefficient, as may be illustrated by the two following cases:

It was considered that if there was the same legislation to prohibit American architects practicing in Canada as there was thought to be prohibiting Canadians practicing in the United States, it would be a satisfactory method of control. Upon direct correspondence with Washington it was learned, however, that the legislation restricting aliens entering the United States excepted members of the learned pro-

fessions and that the Department of Immigration at Washington had ruled that any architect, while residing in his own country and holding a certificate of graduation from a recognized university or of good standing in a recognized society of professional architects, might practice in the United States subject to State license and registration laws. It may be observed in passing, however, that this permission extends only to the individual who is a member in good standing, and not to his staff of employees.

The other was to control the practice by Customs duties and this was discussed with the Customs expert of the Canadian Manufacturers Association. The present duty is 22½ per cent., plus a war tax of 6½ per cent. on 4 per cent. of the cost of the building, which is evidently too low to act as a deterrent on the employment of alien architects and is easily avoided and frequently entirely evaded. A duty high enough to be a deterrent was deemed impractical to obtain or administer, as well as being too easily subject to change, the duty on architectural drawings having been subject to several variations in the past few years.

Legislation controlling the practice of architecture has been in force in Quebec for twenty-six years, and more recently in Manitoba and Saskatchewan, and in ten of the United States, starting with Illinois in 1897; New Jersey, California, New York, Utah, Florida, Colorado, Michigan, Louisiana, and North Carolina have since then adopted some form of license of registration for architects.

It is understood that many architects in the States, where license laws are in force, are disappointed at their lack of effectiveness in improving the status of the practice of architecture; and that the advancement in that direction was more attributable to the increasing number of architects who took University courses of training. It is also evident that the Quebec, Manitoba or Saskatchewan Acts have not been effective in protecting resident architects in their respective provinces from undue alien competition.

The model for such legislation before the Ontario Legislature would undoubtedly be the Ontario Medical Council Act, which licenses medical doctors to practice in Ontario, but the experience of the Ontario Association of Architects ten years ago and graduate nurses and others who have since sought similar legislation, indicates that the objection that such legislation is close corporation legislation would defeat any effort on these lines, as there is not sufficient parallel between the practice of medicine and architecture to ask that legislation similar to that given to the doctors be given to the architects.

It is primarily for the protection of the public that the doctors are licensed, and there appears to be no better way, as doctors must act instanter. The public, however, are most effectively protected in their relations with architects by laws on sanitation and construction, and it is no hardship to the architects to practice under these laws.

Out of this question of licensing arises the question of a standard of qualification which should govern the practice of architecture, or in other words, what standard of education should be required. The standard of education to-day is not that of a certificate from an examining or licensing board, but that of a course in architecture in a recognized university, and from this arises the question "Whose duty is it to provide the University course?"

This was found in the principle put forward at the time that the Ontario Association of Architects withdrew its bill for licensing in deference to the contention of the University of Toronto that to license by examination without a course of tuition would set up a low standard of education for architects in Ontario and at the same time be detrimental to the advancement of the university courses in architecture.

"The principle was that as the Province needs men of training to handle the problems of the community, it devolves upon the province to provide the means by which such training may be obtained."

That the Province admits its responsibility in this is evidenced in fact by its whole educational system, but especially by its higher educational and university courses.

In looking into the status of the various professions trained in these courses in this province, namely, medicine, law, dentistry, pharmacy, pedagogy, veterinary surgery, engineering in its many branches, architecture, chemistry, and in the many other branches of technology, it was observed that medicine, law, dentistry, pharmacy and pedagogy enjoyed the confidence of the people of the Province, even to the extent of a pronounced pride being evinced by the public that not only was the rank and file of these callings of a high standard, but that many in them attained to eminence in their professions. Moreover, it was observed that the people of the province did not resort to non-resident and alien practitioners in these callings.

The legislative restrictions accounted directly for the latter and indirectly for the confidence and pride the public evince.

It is evident that in a province like Ontario there is sufficient practice in every one of the professions named for men of ability to attain distinction, and that in those professions that had the opportunities of the province conserved for them many men of distinction were constantly in evidence, but that in such professions as

did not have the opportunities conserved for them the men of distinction were not so numerous and alien practitioners were always evident.

Examining the situation under this light, it became evident that architects are one of the less favored group and that their grievances are shared by all practitioners of technology.

The conclusion evidenced by the above is that the Government, to attain the object of its higher education in technology, namely, to provide the province with men of training to serve the community and in whom the community may have confidence and pride, must conserve the opportunities of technical practice that develop in the province for the resident practitioners of such technical work.

It develops into a choice of raising the practitioners of technology in the province to the high standard that the educational facilities now provided by the Province for them, would under favorable conditions permit them to attain and which have been attained in the professions that have their opportunities conserved for them, or, of having these educational advantages in technology and the opportunities for technical practice of this Province exploited by students taking the course provided in this Province and immediately departing to devote their energies to other communities and by alien, non-resident and untrained technical practitioners exploiting the technical opportunities of this Province.

To allow the present conditions to persist is a flagrant breach of the economic principle that a country should develop its manhood and material resources for its own benefit rather than for the benefit of aliens.

In a word it may be stated that it devolves upon the Province not only to provide the means to train men to serve the community's need in technical work, but to make that training effective, it also devolves upon the Province to conserve the opportunities in the practice of technology in the Province for the resident practitioners.

This may be done by the Government establishing in the Department of Education a registrar who shall register all present resident practitioners of technology in the Province, and after the date of the first registration, all graduates in technology from the universities of the Province and such others who, on becoming residents of the Province, comply with the provisions set out in an act which would control in this Province the practice of technology in all its branches.

The advantage of legislation on these lines is that it keeps the control entirely in the hands of the Educational Department of the Province and at the same time makes the educational facilities of the Province efficient in results as they now are in training.

It eliminates all professional boards of examination or license, and maintains but one standard of education on which to practice, namely, a recognized university course.

DISCUSSION

Mr. Wickson stated that Mr. Hynes' idea seemed to be that if we had a school of architecture in our universities and if the Government were to legislate that the only people who could practice in Ontario would be those passed by the Department of Education and not by a board of architects or some outside body, it would largely tend to obtaining the ends desired. A number of Toronto architects including his own firm had a very rigid rule that they would not take a student into their office unless he passed through a university course.

Mr. Ouellette declared that this was similar to the attitude of the architects in Quebec, where students taking the course of architecture at McGill and Laval were given the advantage of spending their holidays in the office of a registered architect. Under this arrangement they obtained three or four months' practical experience in a year which enabled them to practically make the five years' course in four years.

Mr. Wickson briefly reviewed what had previously been attempted as regards legislation. He agreed that examination for admission to the practice of architecture should be in the hands of the educational section of the Province and not in the hands of the Association, and that the act should be formulated and enforced entirely by the Government. Mr. Hynes, Mr. Wickson said, was fully converted to the view that there is no encouragement for a young fellow trained in architecture to stay in Canada because aliens get the greater part of the work without any restriction.

Mr. Smith stated that the Government should make it impossible for aliens to come into the country. Canada did not want to lose her young men of ability and genius and there should be some encouragement to prevent them from going to the United States.

Mr. Pearson was of the opinion that this could not be prevented. About the only step that could be taken along these lines would be to penalize an architect who, living in the United States, entered Canada to practice.

Mr. Jordan could not see how Mr. Hynes' suggestion would change the situation. Perhaps it would have a tendency to greatly improve the standard of the architects who are permitted to practice in Canada; but how could that standard be controlled, or how could alien architects be prevented from coming in?

Mr. McLaren replied that if none but men who took a university course were permitted to practice it would virtually shut out the aliens.

Mr. Wickson agreed that it would raise the standard of the men and probably in the course of time only local work would get the work in this field. It was necessary to remember that architects from New York were taken to Chicago to do work, and architects from Chicago to Detroit, and so on. It would seem impossible to enforce the principle that the architecture of a place be done by its own men. If the Government would take a much more vigorous action in regard to education and if it would not give any work to firms outside of Canada the position might be different.

Mr. Smith referred to the practice of certain clients in going across the border for architects who perhaps have specialized in certain classes of buildings. Of course this was a thing which could only be overcome by education.

Mr. Wickson pointed out that the United States did not develop its high standard by the employment of outsiders. If one would go back into the history of the United States he would find that there were very few outsiders brought in.

Mr. Smith desired to know if it were only alien architects whom Mr. Hynes was aiming at, or the unsuccessfully trained architects as well.

According to Mr. Wickson it was both. The idea was that if all architects practicing in Ontario had to be properly trained men, it would raise the standard of the profession so that the importation of alien architects would cease automatically; and with this in view it would be a good thing to get the Government to become a little more active.

In answer to an inquiry Mr. Ouellette explained that the Quebec Act did not prevent aliens from coming into that Province. It only required that an architect must belong to some recognized association of architects in the country from which he came and if this was established and he registered in the Province he had the right to practice.

The remarks which followed were mainly devoted to the discussion of the Customs tariff. The present duty of 22 per cent. of 1 per cent. was considered entirely too low. Mr. Pearson thought that it should be 25 per cent. of the commission the architect receives.

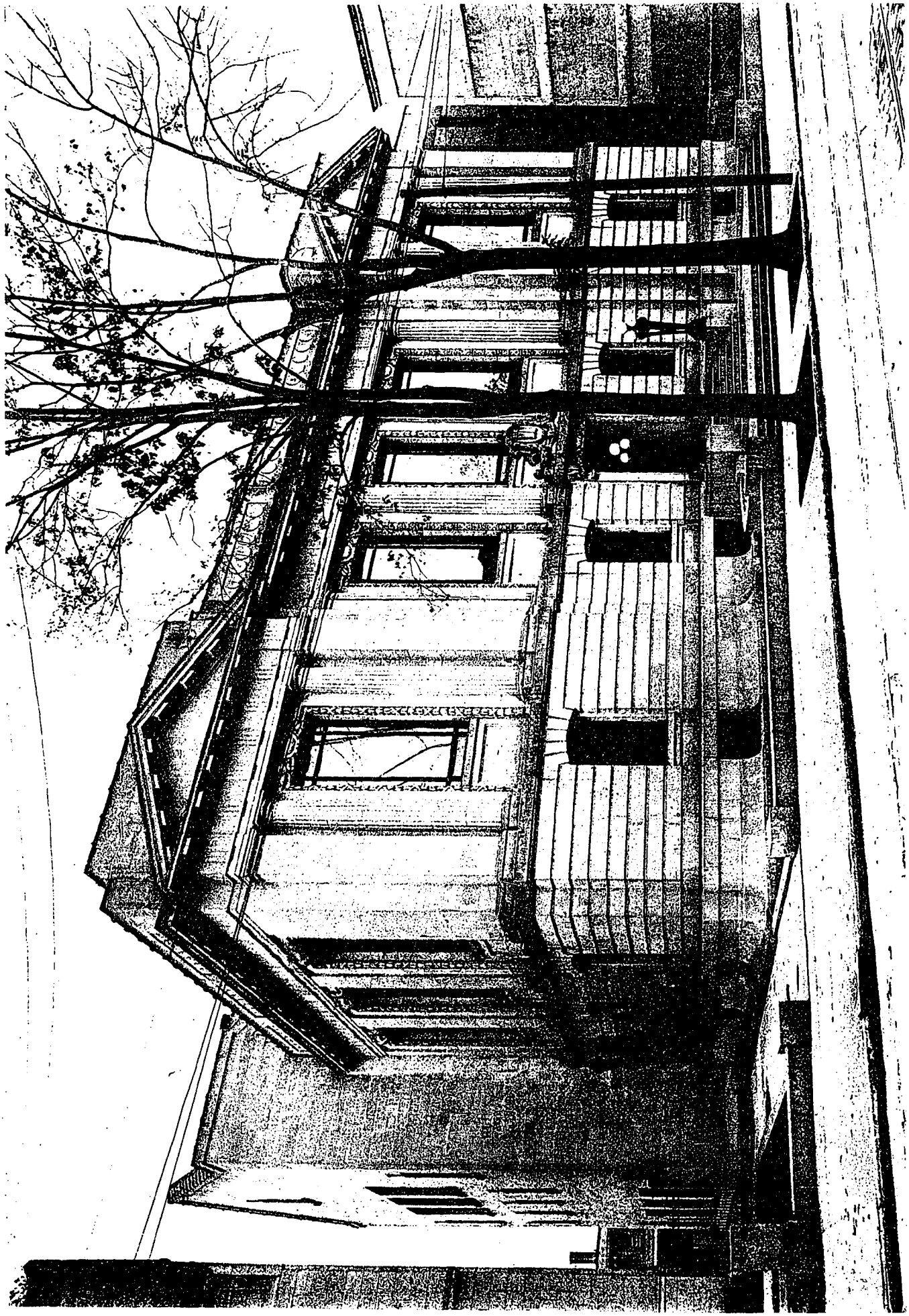
He was of the opinion that if a man came from the States and opened an office there should be some deduction. His overhead, drafting charges and office expenses should be taken into consideration. However, if a man came into Canada, and simply opened an office without doing any of his work here, he should pay at least 25 per cent. of 5 per cent., but if he made all his drawings here there should be some allowance.

Mr. Wickson explained that the American law is different from the Canadian law in that it allows the Canadian architect to go to the United States and practice, but prevents him from taking any of his staff with him, nor could he send anyone as a substitute. If he has any work in the States he must do it himself. The alien labor law gives full protection to the United States, but does not operate effectively here in Canada. There were buildings put up in Toronto which the architects had never seen. The plans were made in the United States and sent up in charge of the head draughtsmen who simply opened an office here. On the other hand Jennings & Ross had some difficulty on the other side of the line. They got the work in the United States, but they could not take a single man in with them. They had to hire all their men there.

FAST CONSTRUCTION WORK

In an interesting article describing the construction of Camp Upton, one of the sixteen great cantonment cities for the National Army of the United States, the "Engineering News-Record" describes the method of building wooden barracks. The barracks are built flat, on the finished floor, and are raised to their vertical position. The standard unit is two storeys high, and measures one hundred and forty feet by forty-three over all. The construction of the sides, as noted above, eliminates the use of scaffolding. Wooden posts are sunk in holes several feet deep, to carry the sills and floor joists, and a rough flooring is then laid. Upon this flooring the two sides of the structure are framed, and upon the studding lying flat on the floor of the building, tar paper and wooden sheathing for the side is nailed. In other words, the sides of the building are put together complete in a horizontal position. When the wall is completed, snubbing lines are attached at intervals along the outer edge. As the wall lies flat on the flooring, workmen are lined along the inner edge every few feet, and, at a given signal, raise the wall up to a vertical position in a manner very similar to the old method of barn-raising so commonly practised in farm districts. When raised to its vertical position it is held by temporary bracing until the other side wall and the end walls can be raised into place in the same way. This scheme of construction is said to be a great time-saver, as it not only does away with the use of scaffolding but ensures more rapid work on the part of the carpenters, who are enabled to do all the framing and nailing of the siding at ground level.

Auguste Rodin, the famous French sculptor, is dead. He was born in Paris in 1840, and his peculiar style did not gain recognition until 1880. His impressionistic and inspirational works are known throughout the world.



BIBLIOTHEQUE SAINT SULPICE, MONTREAL. EUGENE PAYETTE, ARCHITECT.

Bibliotheque Saint Sulpice, Montreal

THE Seminaire de Saint Sulpice decided to build the library building bearing its name in 1911, when the "Cabinet de Lecture Paroissial," then situated on Notre Dame Street had outgrown its housing facilities.

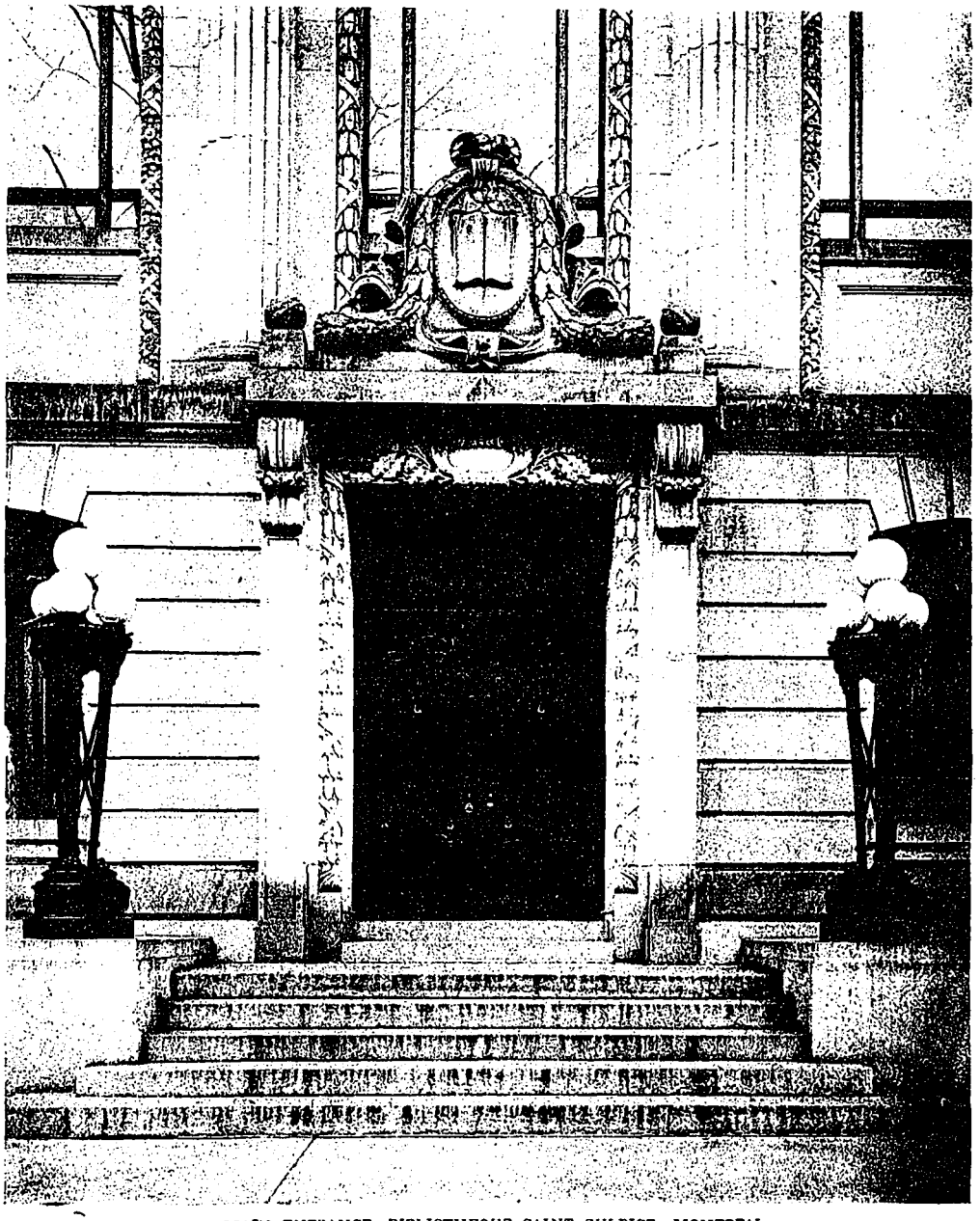
An architectural competition was accordingly held, restricted to Canadian architects; the programme providing for two distinct services each independent of the other, one devoted to a lecture hall and the other to the library proper. Although the institution is free to the public, as most establishments of this kind are, the fact that it is essentially a private enterprise made it necessary to plan the building so that the administration and supervision could be carried out in an economical manner and with as small a staff as possible. This consideration was thought to be of utmost importance by the owners. Other conditions provided that the structure should be fireproof and isolated as much as possible from its neighbors as well as from the janitor's apartment so as to reduce the risk of fire to a minimum.

The dimensions of the lot are 136 feet wide by 161 feet deep to a public lane. The extreme dimensions of the building are 108 feet wide, 144 feet deep, and 67 feet high from the foot path level.

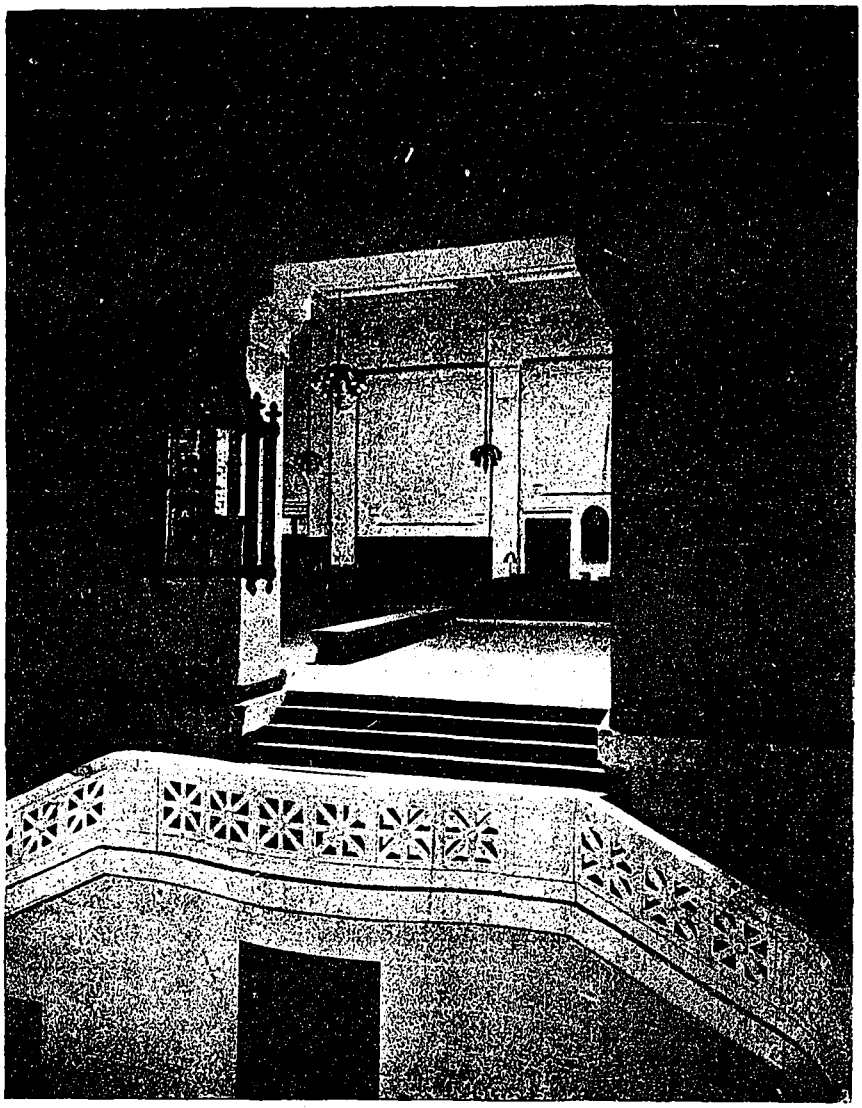
The services of the lecture hall on the basement floor level, access to which is gained by two side entrances, include a foyer 23 x 38 feet, a room devoted to small gatherings of the various literary societies, 21 x 28 feet; office of the director of lectures, of similar dimensions; coat room and toilet and two rooms for the accommodation of artists when the hall is used for concerts. The hall measures 56 x 103 feet exclusive of the stage, and contains nine hundred seats. This room occupies the full height of the basement and the ground floor, measuring 24 feet high.

Entrance to the library proper is direct from the street and entirely separate from the lecture hall just described, in order to insure the readers the necessary quietness. The entrance hall is 38 feet 6 inches wide, 36 feet deep, and 32 feet 6 inches high; while immediately adjoining is an exhibition room 21 x 28 feet, and a reception room of similar dimensions.

The main reading room which is reached by monumental stair-case, has the same horizontal dimensions as the lecture hall below and measures 30 feet in height. At each end of the room there are two tiers of studies. Six studies are in alcoves on the main floor and six are formed by the division of the book cases in the gallery, making twelve studies in all. These are all exposed to view and are therefore of easy



MAIN ENTRANCE, BIBLIOTHEQUE SAINT SULPICE, MONTREAL.



VIEW OF MAIN READING ROOM FROM GALLERY OVER VESTIBULE.

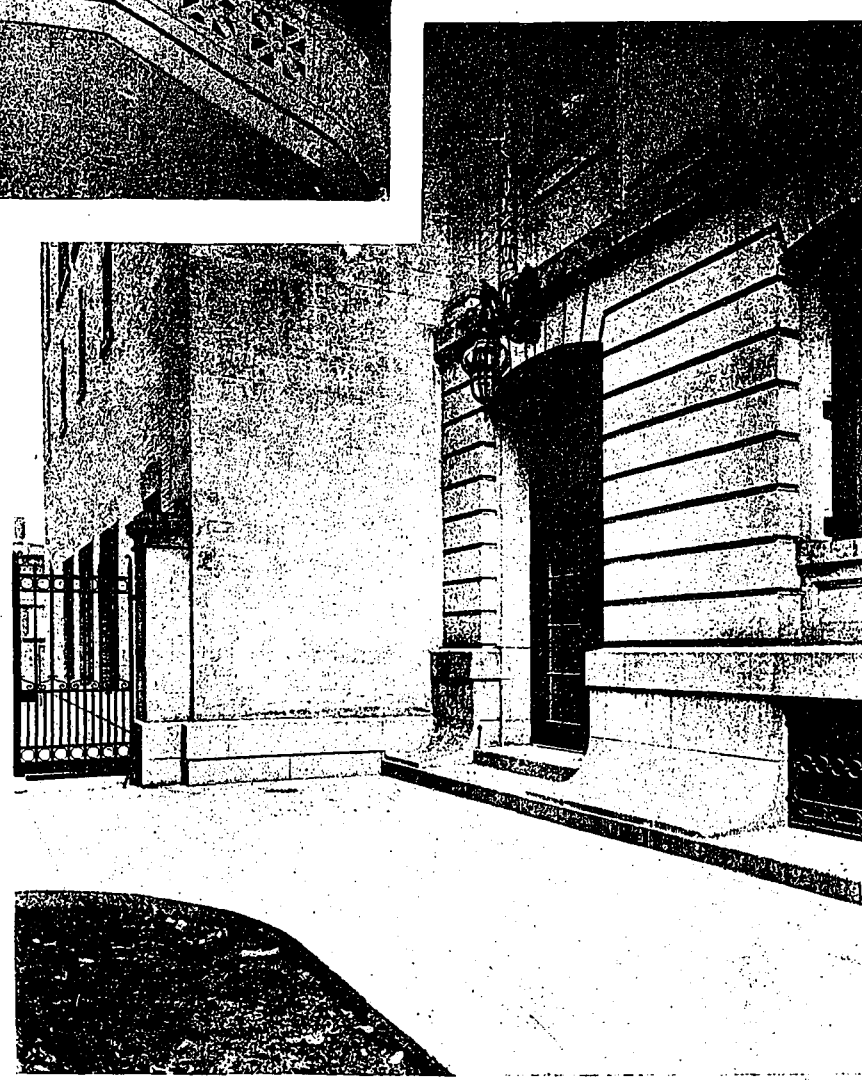
supervision. The counter in the axis of the room, which is reached through a generous aisle flanked on each side by settees, serves for both the circulating department and the distribution of books to be read on the premises. The card catalogue cases are against the rear wall between the librarian's offices and counter. The room designated as No. 5 on the plan is devoted to periodicals and room No. 6 is for references. These rooms are linked by a gallery situated over the vestibule and coat room, and both are 21 x 39 feet, and 20 feet 6 inches high.

At the rear is the stack room with a capacity of two hundred thousand volumes and contains four tiers each seven feet high, the second of which corresponds to the level of the reading room floor. It will be noted that the librarian's office and cataloging room are both situated in the stack, there being one tier under and one tier above same.

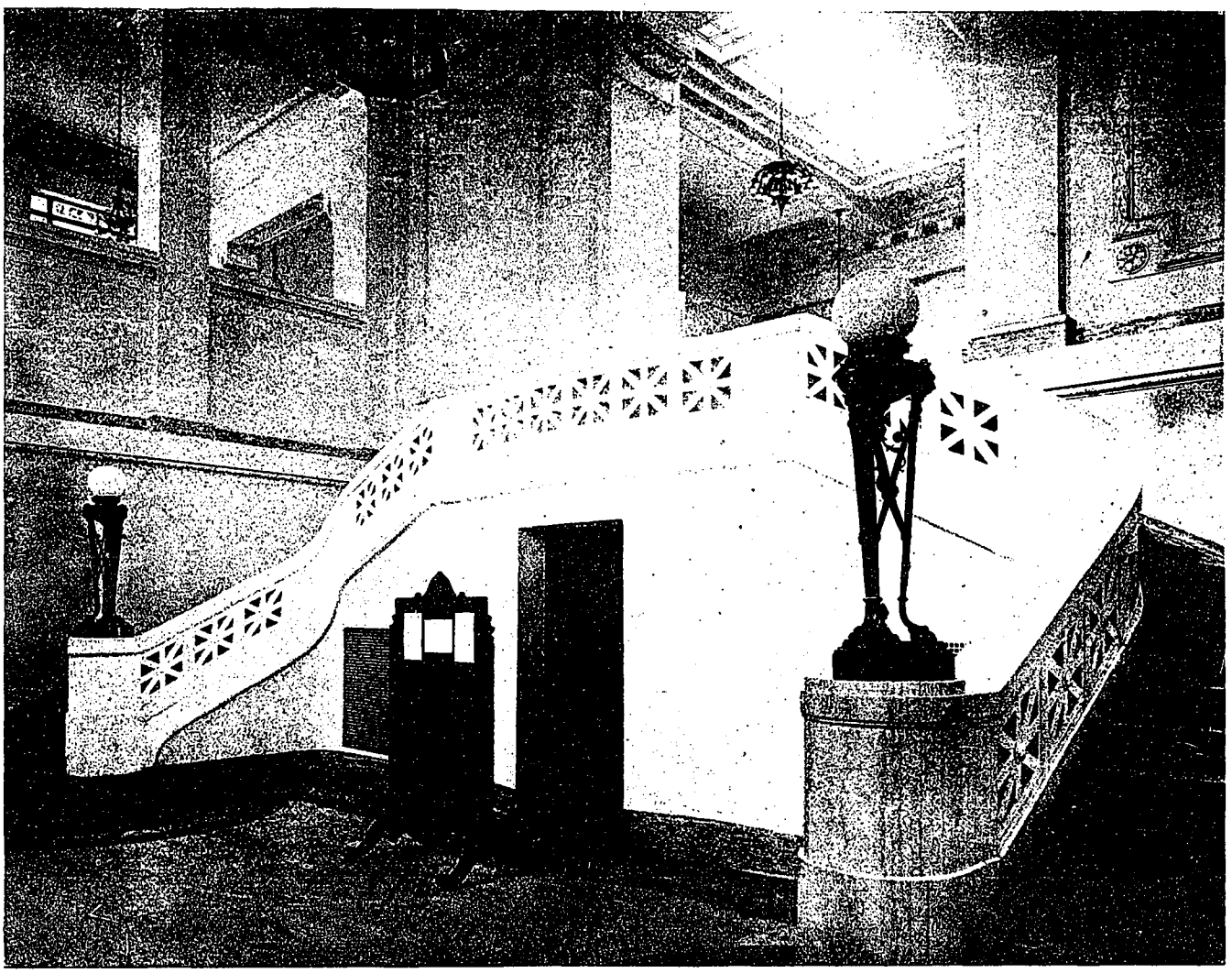
The exterior basement walls are of grey granite and the superstructure of Ohio sandstone.

For the interior a cream colored vitrified brick has been used in the stack room and other accessory services in the basement. The main entrance hall, lecture hall, and reading room have a Caen stone finish, and marble floors except for the field of the latter which is cork tile.

All rooms have art glass windows. The three principal ones, which are in the hall gallery, have allegorical representations of religion, art and science. In the side windows of the periodical room are depicted the coat-of-arms of Dieppe, Honfleur and St. Malo, whose connection with the old French "regime" is well known, and in the front window is the coat-of-arms of France.



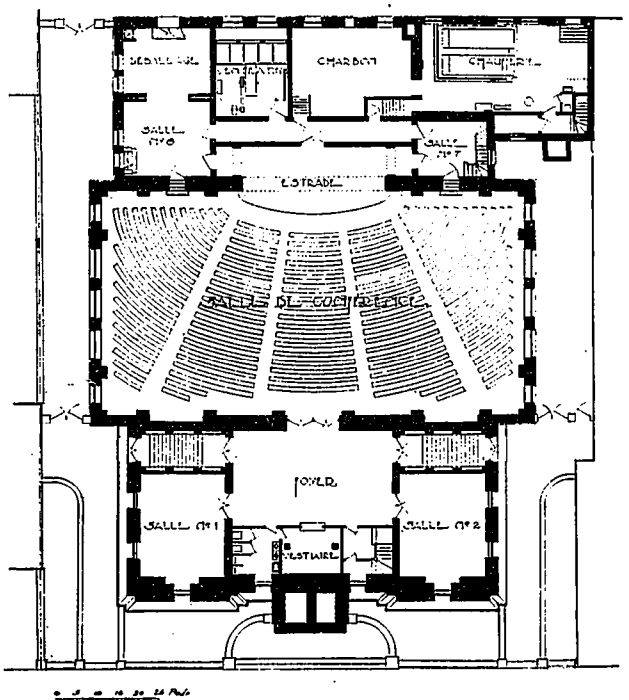
SOUTH ENTRANCE TO LECTURE HALL, BIBLIOTHEQUE SAINT SULPICE, MONTREAL.



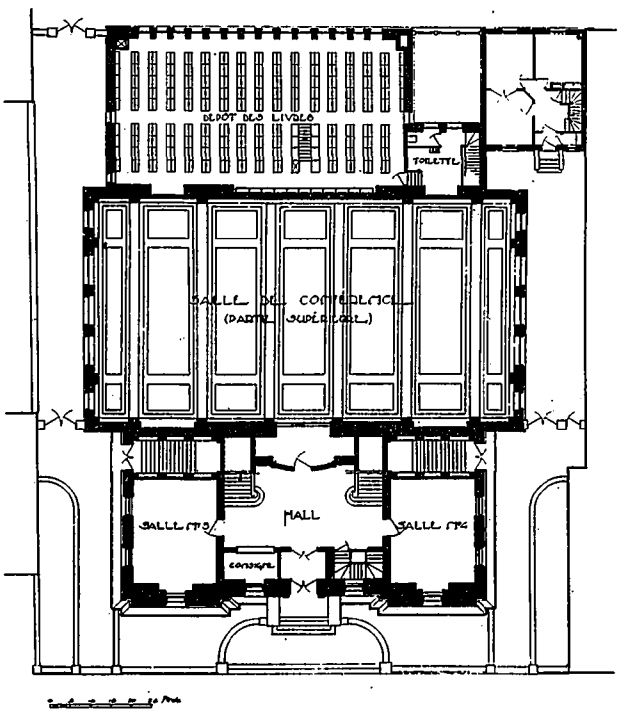
MAIN STAIRCASE TO READING ROOM, BIBLIOTHEQUE SAINT SULPICE, MONTREAL.

The front window of the reference room contains the coat-of-arms of the Province of Quebec, and the side windows those of Montreal, Quebec and Three Rivers, the three principal cities in the province.

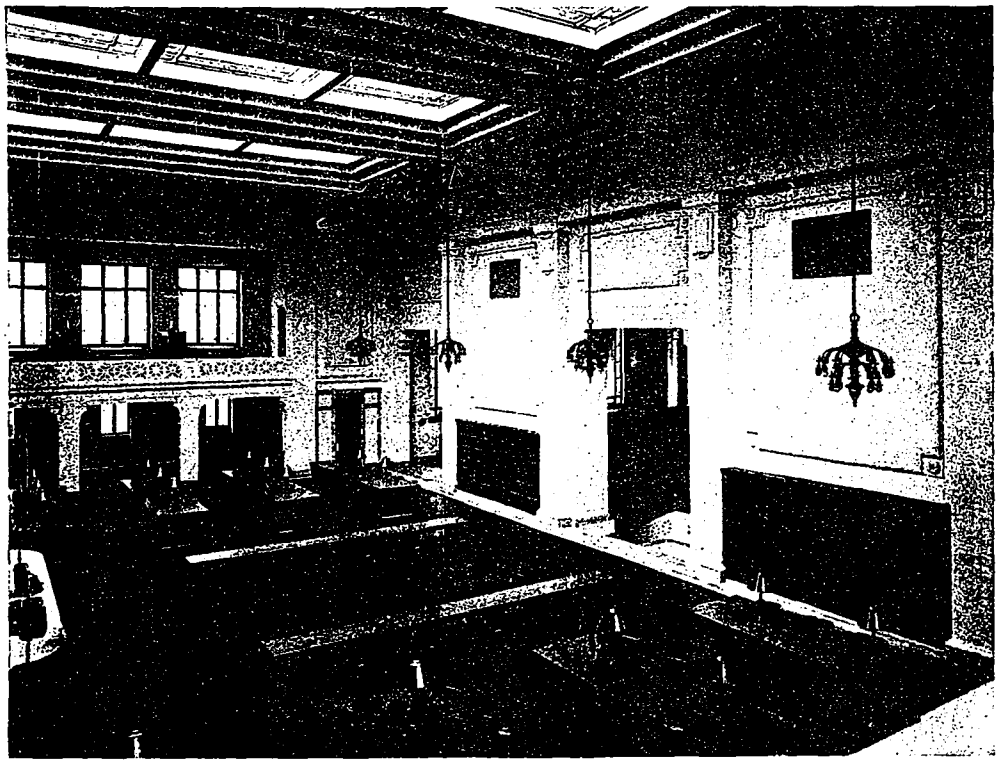
The cubical contents of the building is 900,952 cubic feet, and the cost per cubic foot 36 cents, bringing the total to $324,342.74, including furniture and electric light fixtures, but exclusive of the value of the site.



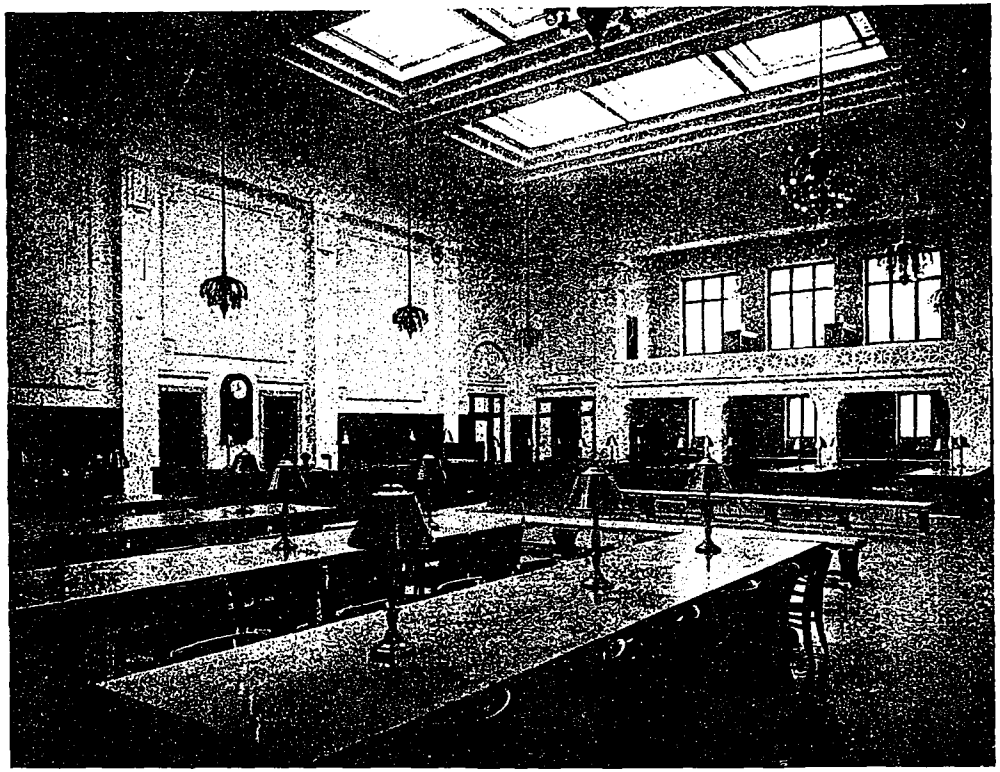
BASEMENT PLAN, BIBLIOTHEQUE SAINT SULPICE, MONTREAL.



GROUND FLOOR PLAN, BIBLIOTHEQUE SAINT SULPICE, MONTREAL.



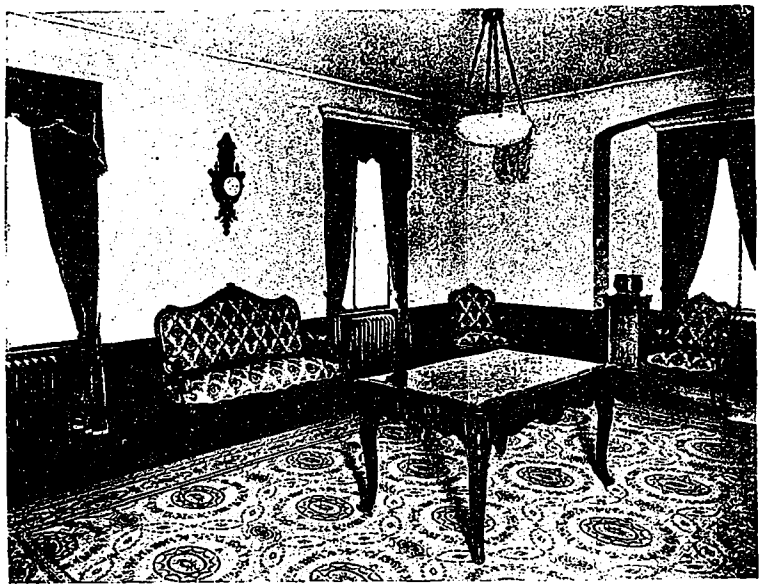
MAIN READING ROOM LOOKING TOWARD ENTRANCE.



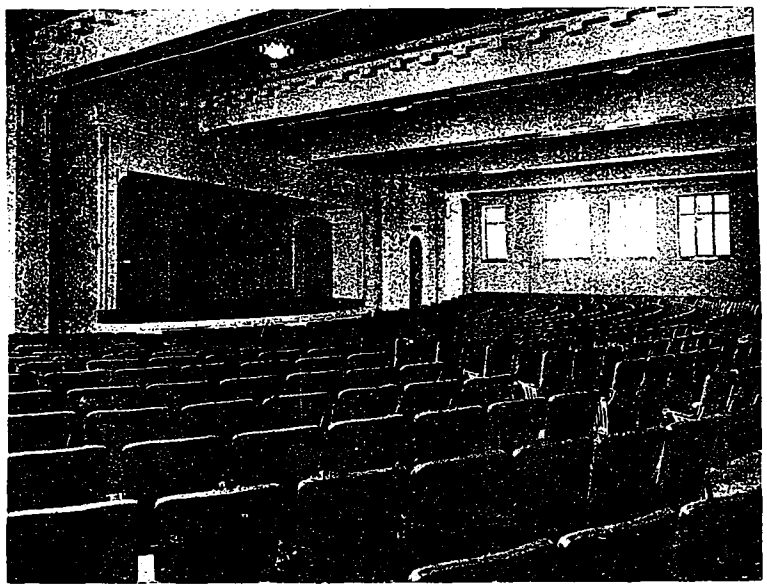
GENERAL VIEW OF MAIN READING ROOM.

BIBLIOTHEQUE SAINT SULPICE, MONTREAL.

EUGENE PAYETTE, ARCHITECT.



RECEPTION ROOM.



LECTURE HALL.

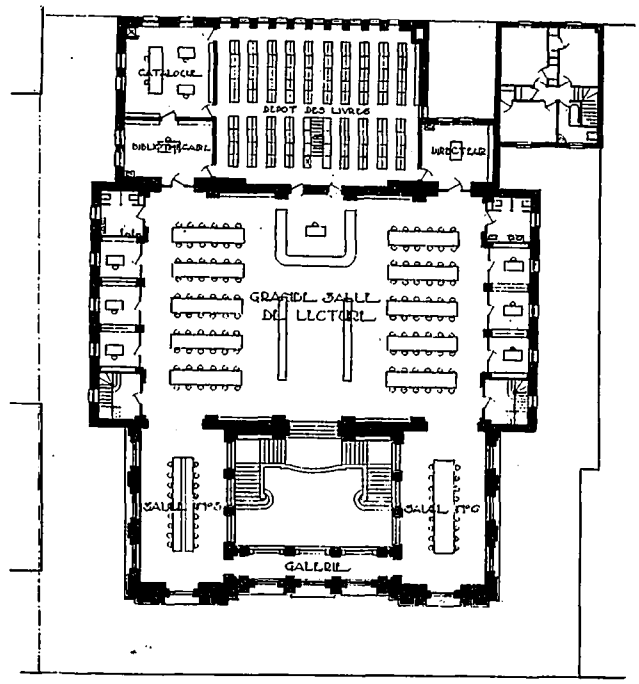
ARTISTIC STUCCO

By JOHN B. ORR.

Stucco is among the oldest in some form or other of man's early attempt at the artistic. With all the possibilities, and despite the fact that there can be found to this day portions of stucco in a good state of preservation after standing the wear of many centuries, there is no other form of building material that has fallen more into disrepute than stucco. The causes can be largely traced to the slipshod methods of procedure that have gradually crept into our building industry. To-day the main point of view or achievement that is looked for is whether a contractor can complete in sixty days what should take three or four times longer. . . . Some contractors govern their cost by these methods and we get the results so often noticeable in modern construction, competition in price instead of competition in value or good work. The good contractor who tries to figure at a price that will permit good work, in many cases is forced out of business, leaving the field open to the cheaper man and cheaper methods. Encouragement and instruction should be given the craft to encourage good work.

HISTORY OF STUCCO.

Stucco was used in building almost as soon as buildings were found to be necessary. It grew from the crude mud huts to the artistic treatment of exteriors to be found in the old world to-day. Stucco is an Italian term usually applied in Italy to an exterior plastering, although we can trace it further back under a different name. The old Egyptians and the classical Greeks used a form of exterior plastering extensively. However, Italy is perhaps regarded as the mother of the plastic art, and responsible to a great extent for the artistic effects of exterior plastering generally known in this country as stucco. In Great Britain stucco is a somewhat indefinite term for various plastic mixtures. Robert Adam adopted stucco as a covering over houses built of brick and cobblestone, and it was used extensively during his period. . . . . The Temple of Apollo, at Delphos, and even the first Parthenon under the ægis of Pallas was plastered with stucco. Vitruvius calls the exterior plastering Tectorium Opus. This was composed of three coats of lime and sand and three coats of lime and marble, the united thickness not being more than one inch. The first coat was of common but very old lime and sand (lime that had been "soured" three or more years); when it was nearly dry a second and third coat was applied and left fairly straight. The work was then laid over with another two coats of lime and marble, and finished with a coat of fine marble powder; this finish of marble powder being trowelled into it



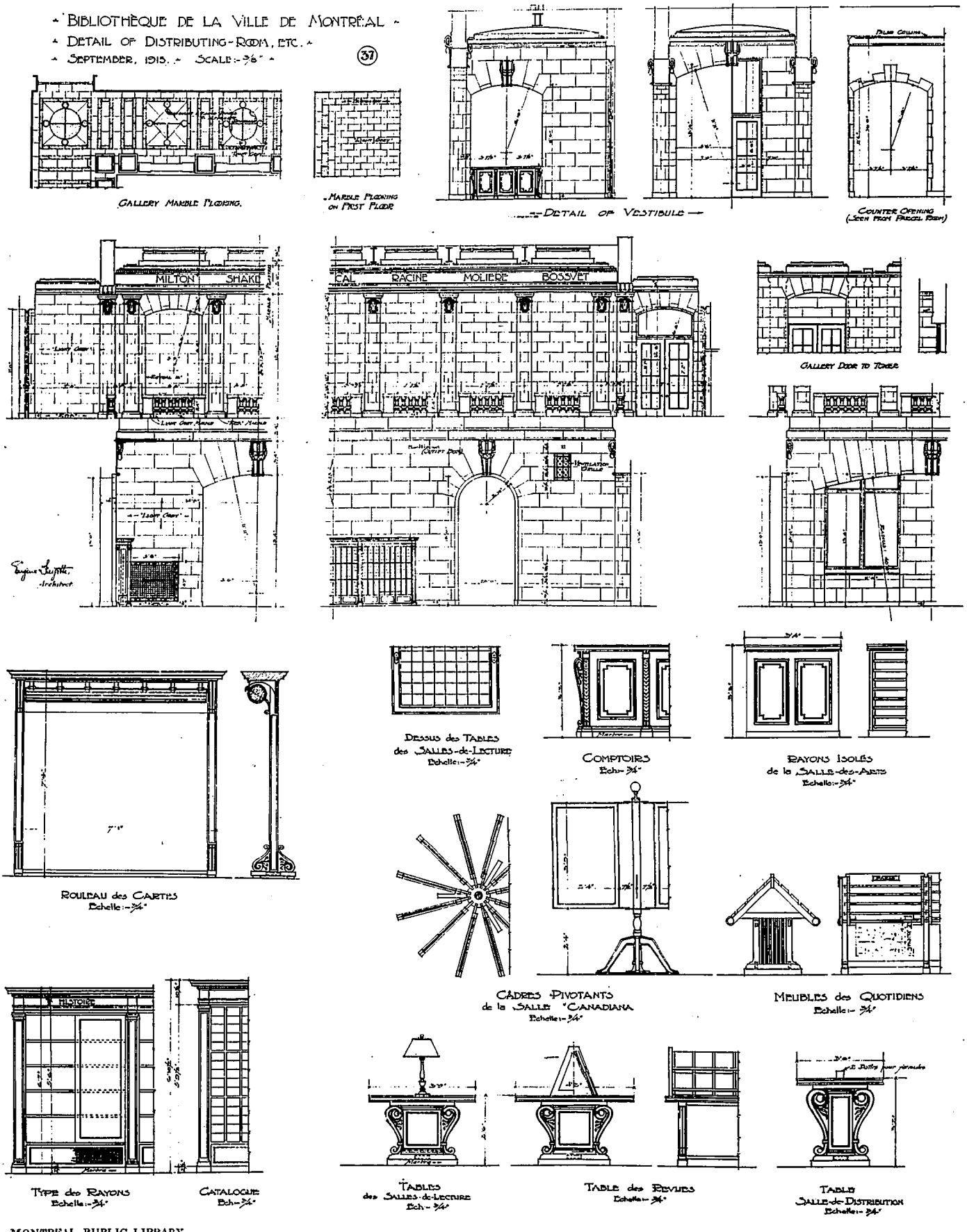
UPPER FLOOR PLAN, BIBLIOTHEQUE SAINT SULPICE, MONTREAL.

before it was dry. The marble mortar was beaten to render it tough and plastic. The successive coats of marble mortar were trowelled into each other before they were dry. The tectorium was then painted in brilliant colors while it was still fresh. In certain conditions the surface was then rubbed with wax and pure oil for the purpose of adding to the brilliancy and endurance of the colors.

Slabs of this tectorium have been found and preserved from the ruins of Pompeii and Herculaneum and are in the Museum of Portici.

STACK ROOM, BIBLIOTHEQUE SAINT SULPICE, MONTREAL.

Specimens also from the same place are in the South Kensington Museum, London. It was found that some of this work was colored integrally, while in others it was colored by the use of a wash which was applied over the surface while it was still fresh. The early workers in stucco had each their different formulas for treating the stucco to make it weatherproof. Pliny mentions fig juice as being used in exterior plaster; elm bark and hot barley water were mixed with the stucco used on Justinian's Church of the Baptist, Constantinople.



MONTREAL PUBLIC LIBRARY.

EUGENE PAYETTE, ARCHITECT.

The New License or Registration Law for Architects Now in Force in the State of Illinois

It Abolishes the Old Board of Examiners and Its Officers, and Puts the Enforcement of the Law into the Hands of a Director of Registration and Education, Who is Not an Architect, and Has the Same Authority over Twenty Other Departments Comprising the Department of Registration and Education; in the Performance of Which Function he is Assisted by Committees of Architects Nominated by the Regular Organizations of Architects Within the State.

By PETER B. WIGHT, F.A.I.A.

From the "Journal of the American Institute of Architects."

THE examination and licensing of architects in the State of Illinois, and the regulation of the practice of architecture as a profession is no longer the legal prerogative of a Board of Examiners consisting of five architects in that State. It is now the duty of *The Department of Registration and Education,* organized on the 1st day of July, 1917, under "An Act" passed by the present General Assembly *"in relation to the civil administration of the State government, and to repeal certain Acts named therein."*

This does not mean that there is any diminution of the effectiveness of the original Architects' License Law, with the various amendments which from time to time have been adopted to facilitate its better enforcement, but that the licensing of architects, and regulation of the practice of architecture as a profession, are to proceed from a higher authority than heretofore; one which should be more highly respected by the architects and the community than has been the case, and which is intended, if possible, to remove it from the taint of party politics, which formerly was possible.

ILLINOIS A PIONEER STATE.

The State of Illinois, as in much other progressive legislation, has been the pioneer in the United States in legislation for good architecture. The first license law was passed June 3, 1897, and had been in force since July 1 of that year, just twenty years, until the new *Civil Administration Code* became in force, July 1, 1917. This code is far-reaching in its effect. It has been agitated just four years, and in the form in which it was adopted has been under consideration for one year last past. It was first prepared by a commission appointed by the General Assembly of 1915, and it was the principal measure advocated by Governor Frank O. Lowden, in his canvass before the people, which resulted in his election in 1916 by a large majority of the popular vote. It was introduced early in the session of 1917, and took precedence of all other legislation. Governor Lowden took personal interest in it, and followed minutely every stage of the proceedings in the General Assembly. The interests of architects in the regulation of their profession, of structural engineers in theirs, and in public works and buildings by both, were of minor consequence in comparison with those of the State's charities, finance, agriculture, mines, public health, trade and commerce, and many other departments. Yet they have received careful attention, and the Governor called upon the organized associations of both architects and engineers to consult with him about the provisions of the Act which were of interest to them, and has accepted all that were reasonable. Hence the influence of both professions was exerted in behalf of its passage.

THE "CONSOLIDATION" BILL.

The whole scheme was so great and comprehensive that it was evident to all that it was useless for any to seek any special favors. It was known as the "Consolidation" Bill, and its main purpose was to eliminate overlapping authority and to bring together co-related departments of the Government, and all of them more directly into contact with the supreme executive authority which is vested by the Constitution in the Governor himself. A Governor who was not afraid to assume it was at the head of the movement. It may be of interest to know that, in this consolidation, twenty-four Acts and parts of Acts establishing governmental departments were repealed in this Bill; but the Architects' License Law was not repealed. Only the State Board and officers under the Board were abolished, and their authority vested in the director of one of the departments. But this Director of the Department of Registration and Education also has official authority over the business heretofore done by twenty other State boards and minor departments; and he is only one of nine department heads, who constitute the Cabinet of the Governor; and all are responsible to him.

A SKETCH OF THE NEW LAW.

A few extracts from the new law covering anything directly or indirectly relating to architects will probably make this digest more brief than a general description of its requirements. The same might also be said of those relating to structural engineering.

"*Section* 3. Departments of the State government are created as follows: (1) Finance; (2) Agriculture; (3) Labor; (4) Mines and Minerals; (5) Public Works and Buildings—this includes the office of the State Architect; (6) Public Welfare; (7) Public Health; (8) Trade and Commerce; (9) Registration and Education—this includes the registration of structural engineers as well as architects, each under its own Act.

"*Section* 4. Each department shall have an officer at its head who shall be known as a Director, and who shall, subject to the provision of this Act, execute the powers and discharge the duties vested by law in his respective department.

"The following offices are hereby created.....

"Director of Registration and Education, for the Department of Registration and Education." In other parts of the Act, from information furnished by the Governor's office, it appears that the officers of this department are as follows:

Director, Francis W. Shepardson, Chicago, Salary, $5,000.00.
Assistant Director, Ernest A. Wreidt, Chicago, Salary, $3,600.00.
Superintendent of Registration, Fred C. Dodds, Springfield, Salary, $4,200.00.

"*Section* 7. .....

"Neither the Director, Assistant Director, Superintendent of Registration, nor any other executive and administrative officer in the Department of

Registration and Education shall be affiliated with any college or school of medicine, pharmacy, dentistry, nursing, optometry, embalming, barbering, veterinary medicine and surgery, *architecture, or structural engineering*, either as teacher, officer, or stockholder, *nor shall he hold a license or certificate to exercise or practice any of the professions*, trades, or occupations regulated."

From this it will appear that no architect can have any executive authority in enforcing the law, as was the case formerly with the State Board and its officers. The professional relation of architects and the voice of organizations of architects will be explained later on. The same is the case with structural engineers.

"*Section* 16. The director of each department is empowered to prescribe regulations, not inconsistent with law, for the government of his department, the conduct of its employees and clerks, the distribution and performance of its business, and the custody, use, and preservation of the records, papers, books, documents, and property pertaining thereto."

This undoubtedly insures the preservation of all the records, papers, and filed documents of the State Board of Examiners of Architects accumulated during the last twenty years, all of historical value and precious for reference during succeeding years; but, as far as the rules of procedure of the old board, which were authorized by law, are concerned, it remains to be seen how far the Director of twenty-one subsidiary departments, who is not an architect and not technically acquainted with the usages of the profession, will renew and re-establish them for his own governance. They were the result of nineteen years of experience in executing the license law, were last amended in 1916, and published, with the last biennial report, in January of the present year. It will also be noted in the section above quoted that the Director has absolute authority to make such rules independent of the law under which the old board received its authority. It is expected, however, that he will pay due respect to the opinions of his predecessors in exercising this authority.

"*Section* 17. Each department shall maintain a central office in the Capitol building at Springfield, in rooms provided by the Secretary of State."

The former office of the State Board in Chicago was closed July 1, and all its records and property removed to the Capitol building at Springfield.

The following extracts from the new law have a more or less direct bearing upon the Acts of the State Board of Examiners of Architects during the last twenty years, and do not seem to contravert any of them. The court decisions upon the law will doubtless hold as if the whole of the old law were in force.

"*Section* 32. Whenever rights, powers, and duties, which have heretofore been vested in or exercised by any officer, board, commission, institution, or department, or any deputy, inspector, or subordinate officer thereof, are, by this Act transferred, either in whole or in part, to or vested in a department created by this Act, such rights, powers, and duties shall be vested in, and shall be exercised by, the department to which the same are hereby transferred, and not otherwise, and every act done in the exercise of such rights, powers, and duties shall have the same legal effect as if done by the former officer, board, commission, institution or department, or any deputy, inspector, or subordinate officer thereof. Every person and corporation shall be subject to the same obligations and duties and shall have the same rights arising from the exercise of such rights, powers, and duties as if such rights, powers, and duties were exercised by the officer, board, commission, department, or institution, or deputy, inspector, or subordinate thereof, designated in the respective laws which are to be administered by departments created by this Act. Every person and corporation shall be subject to the same penalty or penalties, civil or criminal, for failure to perform any such obligation or duty, or for doing a prohibited act, as if such obligation or duty arose from, or such act were prohibited in, the exercise of such right, power or duty by the officer, board, commission, or institution, or deputy, inspector, or subordinate thereof, designated in the respective laws which are to be administered by departments created by this Act. Every officer and employee shall, for any offense, be subject to the same penalty or penalties, civil or criminal, as are prescribed by existing law for the same offense by any officer or employee whose powers or duties devolved upon him under this Act. All books, records, papers, documents, property, real and personal, unexpended appropriations, and pending business in any way pertaining to the rights, powers, and duties so transferred to or vested in a department created by this Act, shall be delivered and transferred to the department succeeding to such rights, powers, and duties.

"*Section* 33. Wherever reports or notices are now required to be made or given, or papers or documents furnished or served by any person to or upon any officer, board, commission, or institution, or deputy, inspector, or subordinate thereof, abolished by this Act, the same shall be made, given, furnished, or served in the same manner to or upon the department upon which are devolved by this Act the rights, powers, and duties now exercised or discharged by such officer, board, commission, or institution, or deputy, inspector, or subordinate thereof; and every penalty for failure so to do shall continue in effect.

"*Section* 34. This Act shall not affect any act done, ratified, or confirmed, or any right accrued or established, or any action or proceeding had or commenced in a civil or criminal cause before this Act takes effect; but such actions or proceedings may be prosecuted and continued by the department having jurisdiction, under this Act, of the subject matter to which such litigation or proceeding pertains."

The following section provides for the abolition of about one hundred and twenty-five State boards, commissions, and offices comprising more than two hundred officials and two thousand employees. This is the most important feature of the so-called "Consolidation" Act, which is intended to simplify the whole system of State government by retaining those branches which are essential and preventing overlapping authority; abolishing offices long since found to be useless, among which were many sinecures which were only of political importance to those holding them. So far as concerns the architects' and engineers' boards, the boards themselves and the officers under them only, are abolished, and the laws under which they were appointed remain in force, their duties and authority only being transferred to the Director of the twenty-one offices comprised in his department including all of the professions and occupations heretofore regulated by law.

"*Section* 35. The following officers, boards, commissions, arms, and agencies of the State government heretofore created by law, are hereby abolished, viz.:—.....
State Board of Examiners of Architects, State Board of Examiners of Structural Engineers, Secretary of the State Board of Examiners of Structural Engineers, Secretary-Treasurer of the State Board of Examiners of Architects, ...

The following extracts from different sections further pertain to the duties and authority of the

DEPARTMENT OF REGISTRATION AND EDUCATION.

"*Section* 58. The Department of Registration and Education shall have power:—

.....

"(4) To exercise the rights, powers, and duties vested by law in the State Board of Examiners of Architects;
(and of all the other State boards that are not abolished.)

"*Section* 60. The Department of Registration and Education shall, wherever the several laws regulating professions, trades and occupations which are devolved upon the department for administration so require, exercise, in its name, but subject to the provisions of this Act, the following powers:

"1. Conduct examinations to ascertain the qualifications and fitness of applicants to exercise the profession, trade, or occupation for which an examination is held; and pass upon the qualifications of applicants for reciprocal licenses, certificates, and authorities;

"2. Prescribe rules and regulations for a fair and wholly impartial method of examination of candidates to exercise the respective professions, trades, or occupations; .....

"6. Conduct hearings on proceedings to revoke or to refuse renewal of licenses, certificates, or authorities of persons exercising the respective professions, trades, or occupations, and to revoke or to refuse to renew such licenses, certificates, or authorities;

"7. Formulate rules and regulations when required in any act to be administered.

"*None of the above enumerated functions and duties shall be exercised by the department of registration and education, except upon the action and report in writing of persons designated from time to time by the director of registration and education to take such action, and to make such report, for the respective professions, trades, and occupations as follows:*

.....

"*For the Architects, five persons, one of whom shall be a member of the faculty of the University of Illinois, and the other four of whom shall be architects residing in this State, who have been engaged in the practice of architecture at least ten years.*

.....

"The action or report in writing of a majority of the persons designated for any trade, occupation, or profession, shall be sufficient authority upon which the director of registration and education may act.

"In making the designation of persons to act for the several professions, trades, and occupations *the director shall give due consideration to recommendations by members of the respective professions, trades, and occupations and by organizations therein.*

"Whenever the director is satisfied that substantial justice has not been done either in an examination or in the revocation of or refusal to renew a license, certificate, or authority, he may order re-examinations or re-hearings by the same or other examiners.

"*Section* 61. All certificates, licenses, and authorities shall be issued by the department of registration and education, in the name of such department, and with the seal thereof attached." .....

This concludes a compilation of the sections and parts of sections in the Act, directly or indirectly referring to architects, and, in connection with all the clauses in the old law not eliminated by the Act, comprises the license, or registration law of the State of Illinois for architects as now in force.

THE ADMINISTRATION OF THE LAW.

I am advised by the Department of Registration and Education that it has not been determined yet what amount will be paid to the examiners of the various professions, but in the case of the architects it will not be less than $10 per day, as formerly provided for members of the State Board of Examiners of Architects. They will also receive their traveling expenses. There is an appropriation sufficient to pay for such services. The Director has power to determine the compensation. The Superintendent of Registration will have charge of all of the administration work in connection with the examining and licensing of the professions, trades, and businesses now being licensed by the State. He is subject to the orders of the Director of Registration and Education, who is the supreme authority in his department. The Superintendent of Registration simply is the head of a division in the Department and is subordinate to the Director.

The Department is authorized to establish branch offices in other parts of the State should it be necessary. Employees will all be under Civil Service rules.

Annual reports to the Governor, of all departments, will be made in December of each year.

CONCLUSION.

It must now be a comfort to those who hug to their breasts the delusive idea that the registration of architects is something more respectable and honorable than licensing them, to know that the architects of Illinois are now *registered* under this act. That is, they are *registered* because they were *licensed;* the license "permitted" them to be registered in the Department of Registration and Education. This is the proper use of the terms. But whether this is a licensing or registration law is a matter of little importance. The law confirms the acts of the old licensing board, and puts all architects under the authority and discipline of State officers. It is simply another step in the progressive legislation of 1897 which first gave architects a legal status in this country. Many of the States have followed, or tried to follow the lead of Illinois, but few of them have succeeded in doing it all. In several States such laws were introduced in Legislatures during the present year. Some were for licensing, some for registration. Some passed and some did not. Now their advocates will have another chance to sit up and make another study of Illinois' experience. New York got its registration law amended but it did not succeed in its main purpose, and get around the opinion of its own attorney-general, that a man who had called himself an architect could continue to do so, and could not be compelled to register. The law there only enables a man to be protected by calling himself a "Registered Architect," after he is registered. I can not see why anyone should want to call himself a "Registered Architect" if he did not want to be registered or could not get registered if he wanted to.

The Illinois architects are in good company because the new Department under which they are enrolled is not only a Department of Registration, but of *Education* also. It has authority over all educational matters in the State except the University of Illinois, which has a special and old charter; but the Department is already co-operating with it in certain matters, such as the Geological Survey. Some day this new department may take up the subject of architectural education, as recommended by progressive architects, which the Institute, the Chapters, and the architectural press have recently been discussing so extensively. It may establish colleges of architecture and other fine arts not controlled by the Trustees of the University. But as long as the feeling for co-operation continues its examinations may continue to be held at the University as has been the case for many years last past. It will be noted that one member of the examining committee must still be a member of the Faculty of the University.

The organized architectural associations are recognized in the new law. That means the Illinois Chapter of the Institute, which is a State Chapter, and the Illinois Society of Architects which is also a State organization. It is on their advice and recommendation that the Director of the Department must appoint all committees for conducting examinations for license or instituting trials for violation of the law.

This reform is the result of many years of dissatisfaction with the work of the old board of examiners—though not always expressed with due regard to justice—which never was entirely free from political appointees in its membership, and which for some years last past has lacked the respect and support of the best element in the architectural profession.

As the original law was an experiment, so also is this change, to a certain extent, an experiment. It will have to be tried out practically. The architectural profession now has an opportunity to exert a direct influence upon the enforcement of the law. If it is not a success its failure may lie at the door of the architects of the State and their organizations. Both have advocated its enactment.

Toronto Branch Library

AS a result of its expansive policy which aims to provide library accommodations to meet the needs of all outlying districts, the Toronto Library Board, under the capable direction of Dr. Locke, the Chief Librarian, is steadily adding to its already well developed system of branch buildings. One of its newest structures is the High Park branch, which is typical of the three most recent buildings erected by the Board. The other two, the Wychwood branch, and the library at Kew Beach Gardens, are identical to this building in plan, and vary in elevation only in the material used. While similar in architectural character, they are distinct as a type and represent a departure from the traditional library, both in style and arrangement, being designed after the fashion of the Collegiate Grammar School of the seventeenth century in England.

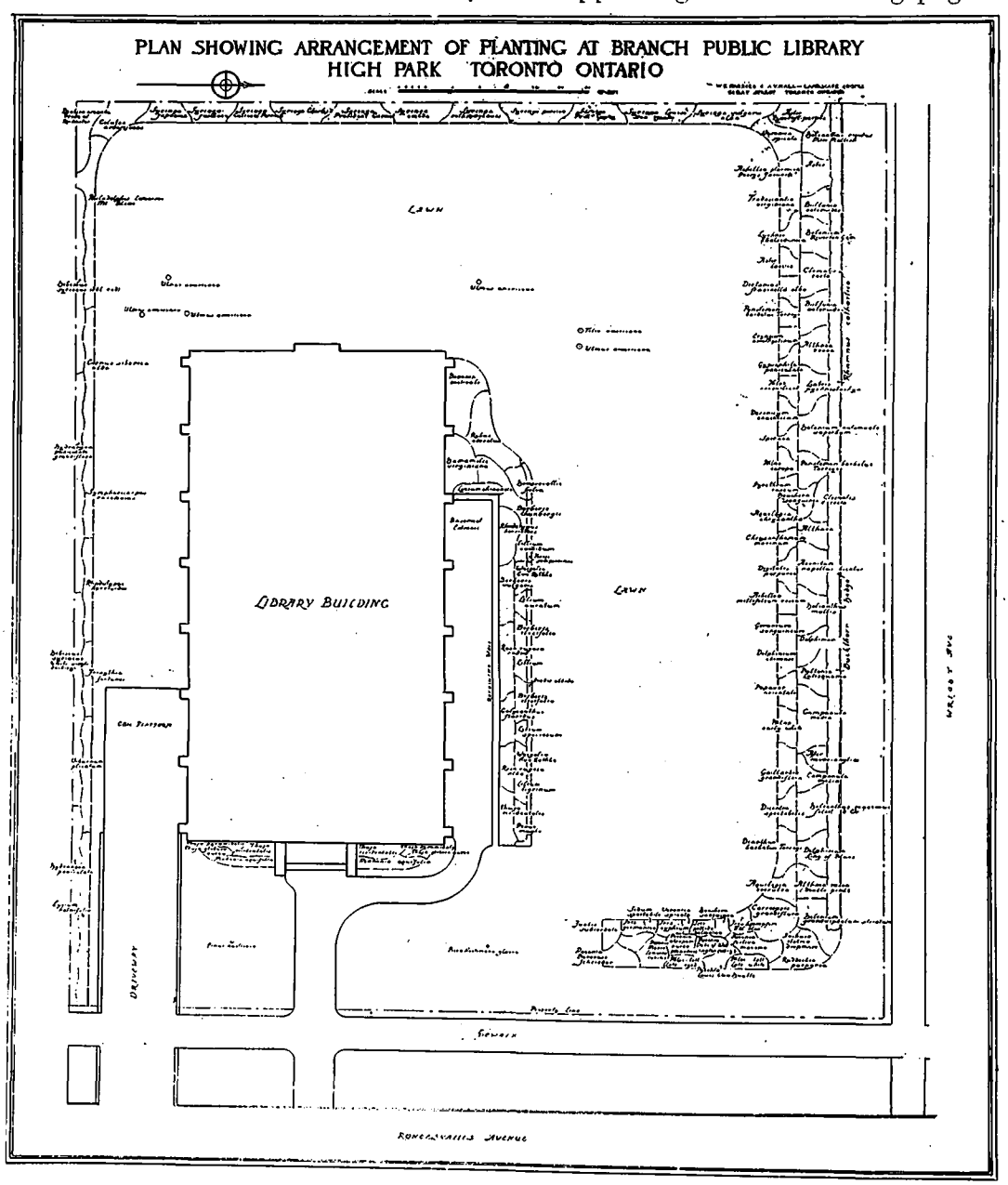
This type of library has been found to afford the maximum accommodation for books and readers at a minimum of expense for maintenance and supervision.

The plan consists mainly of two large rooms, with a compact grouping of the boiler room and minor services. The main reading room occupies the entire upper floor and has open timber trusses supporting the roof, with book shelves placed along the entire length of the two side and end walls. Owing to this arrangement the radiators are of the wall type, being situated immediately over the book cases, with leaded glass windows above admitting an adequate supply of natural light. The furniture consists of a supervising desk and simply designed tables and chairs, giving accommodation to six readers at each table.

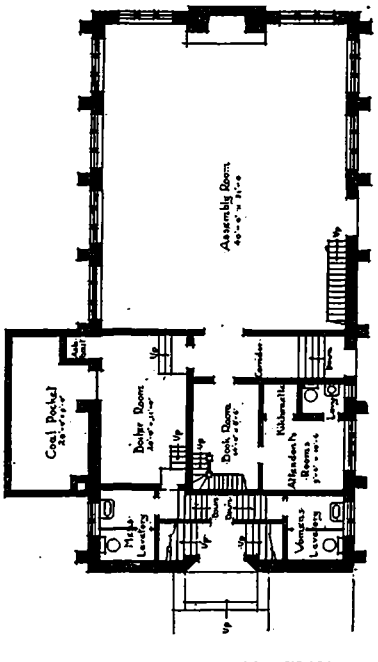
The room designated as Assembly Room on the ground floor plan, while available for the purpose of meetings, is principally used as a children's room, and is similarly furnished to the large room above, with the exception that benches are provided instead of chairs.

Both rooms have large stone fireplaces, and the scheme throughout is simple and restful, providing an atmosphere which is conducive to the purpose for which the building is intended.

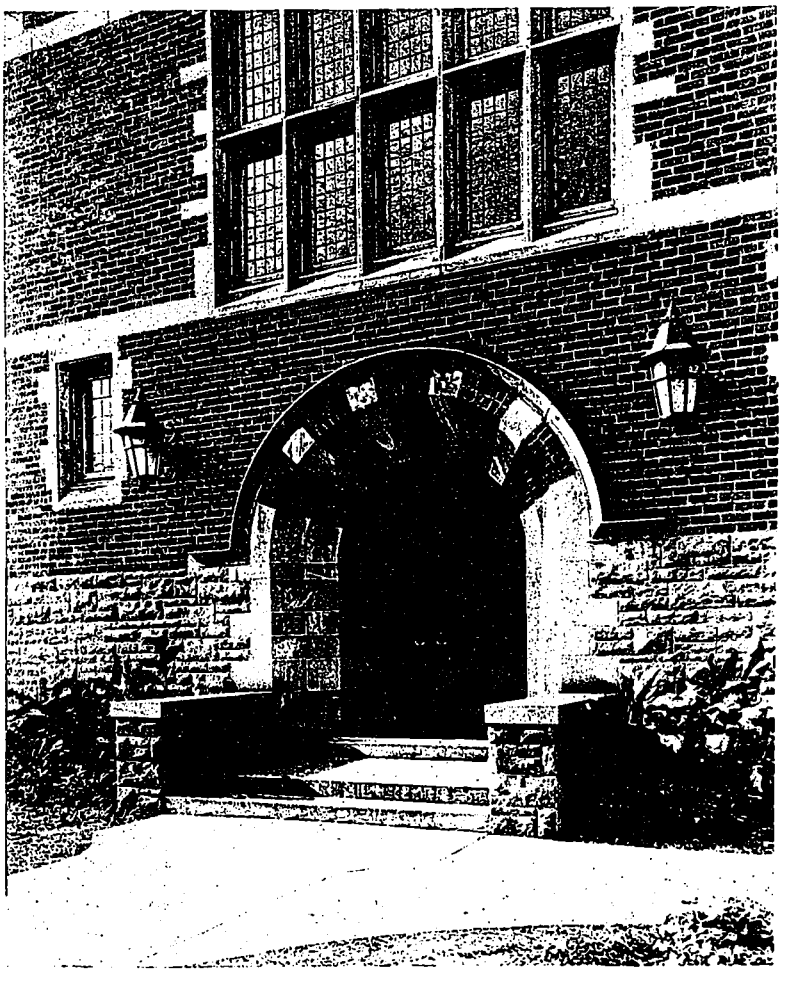
The treatment of the grounds is explained in the plan shown below, and is also referred to verbally in the description of Toronto's branch library sites appearing in the following pages.



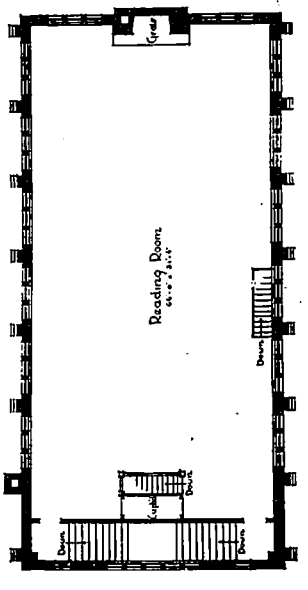
GROUND SCHEME, HIGH PARK BRANCH LIBRARY, W. E. HARRIES AND A. V. HALL, LANDSCAPE ARCHITECTS.



GROUND FLOOR PLAN.



DETAIL OF ENTRANCE.



UPPER FLOOR PLAN.

EDEN SMITH & SONS, ARCHITECTS.

HIGH PARK BRANCH, TORONTO PUBLIC LIBRARY, TYPICAL OF THREE BUILDINGS RECENTLY ERECTED.

Toronto Branch Libraries Ground Treatment

ALFRED V. HALL, Landscape Architect

WHEN the homes of the several branches of the Toronto public libraries were nearing completion, it was felt that if an individual treatment were possible for each site, the effect would be especially pleasing, as the buildings themselves were so similar. The physical nature of the surroundings helped to make such treatment possible.

GERRARD STREET BRANCH.

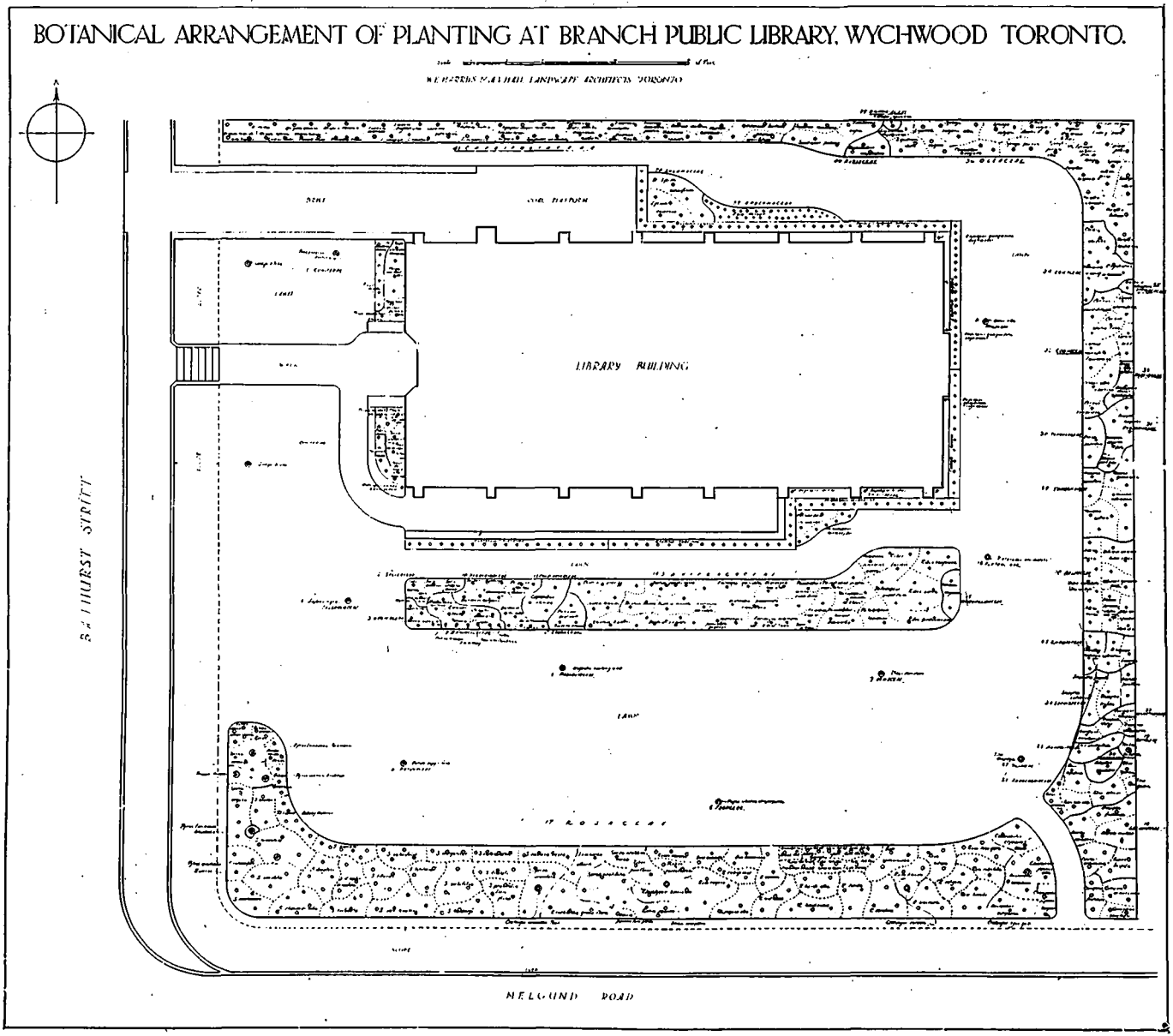
The site selected for this branch was small, and the greater part of it was required for the building. This limitation necessitated small shrub plantations as a background for the bulbs and bedding plants, from which the maximum amount of color could be obtained in the minimum space.

BEACHES BRANCH.

The lot on which the Beaches branch is located was small, but it is directly adjoining the Kew Beach Park. The natural treatment was to keep the grounds as part of the park by extending the park plantations of flowering shrubs around its boundaries, and the base of the building, thereby connecting in appearance the two branches of recreative life.

DOVERCOURT BRANCH.

This building was erected on a fair-sized corner lot, and was placed close to the restriction line on both sides. With this location a simple garden was made possible, consisting of a turf panel framed by a gravel path. Seats were placed along this path, and a border of shrubs and annuals were established between it and the boundary fence. The fence was of simple design, formed of 6-inch board pickets, with space



GROUND SCHEME, WYCHWOOD BRANCH LIBRARY, TORONTO. W. E. HARRIS AND A. V. HALL, LANDSCAPE ARCHITECTS.

between the pickets on the street side, and a close board fence on the two sides adjoining neighboring properties. Along the top of these projecting pickets in the closed fence, wires were carried, which served the double purpose of supporting a mass of Virginia creeper, and discouraging trespassers. In addition to the screen thus given it was necessary to plant Lombardy poplars in the border to hide the unpleasant elevation of the adjoining building.

This secluded garden provides a place where the children may take their books in good weather and enjoy additional freedom under care of one of the librarians or governesses.

MAIN READING ROOM, HIGH PARK BRANCH, TORONTO PUBLIC LIBRARY.

HIGH PARK BRANCH.

The Library Board was fortunate in securing a larger lot for the site of this branch, on which were several good-sized trees. The plan for the grounds provides for the maximum of unbroken lawn, and the feature of the planting is the long perennial border which parallels the street on two sides. A buckthorn hedge on the property line serves as a background, and discourages passage across the border. A narrow plantation of shrubs was placed along the one boundary fence to soften its formidable appearance from the lawn. Dwarf varieties of evergreens were used, in as far as practicable, around the entrance and steps, and the base of the building, to provide foliage in the winter, with groups of spring and summer bulbs planted among them to provide color in their turn.

WYCHWOOD BRANCH.

The site provided for the Wychwood branch is in the corner of a vacant block, and the suggestion of botanic arrangement of planting on library grounds seemed logical to the Board. This arrangement is being used frequently on the grounds of public buildings such as schools and libraries, where it is of distinct educational value, and on those of hospitals, government and private grounds, where it is a matter of more general interest.

The plan for this planting at this site was to be primarily for decoration, and the size of the lot restricted the bed area so that only one or two specimens of some varieties could be used. It was possible however, to represent forty-one

CHILDREN'S READING ROOM, HIGH PARK BRANCH, TORONTO PUBLIC LIBRARY.

botanical families, seventy-six sub-families, and two hundred and seventy-six varieties of these. Aside from the ordinary considerations of locating the shrubs with reference to their ultimate size, color of the flower, the season of bloom, and preference for sun or shade, care was taken to have the native variety represented, and each botanic family grouped together. This arrangement makes it possible for the student to find his subjects for study easily, for the visitor to be impressed at a glance with the wide range of varieties, and marked differences that often occur between the varieties of the same family; and to give the public the opportunity to see shrubs that they may wish for their own grounds labelled with both the common and the scientific names, thus making it easy to order what they desire.

It was possible to have the dwarf evergreens represented and grouped around the entrance, the viburnums and honeysuckles in the partial shade of the north fence, and the types commonly used for hedges in the hedge along the long area wall. The rose family, which is the largest family of shrubs, and is represented here by sixty-seven varieties, ranging from the astible alphabetically to the spirea, fills the bed the length of the south side of the property.

The botanical arrangement offers many difficulties, not only in the planning and planting, owing to the difficulty of obtaining the less common varieties true to name, and of replacing those that fail the first season, but also in maintenance, for ultimately, in such a small area, there will be only one representation of each variety, and that should be in its correct relative location after rearrangement. A gardener of more than average ability is required to care for it from year to year.

In spite of the difficulties involved there is no treatment of public grounds by means of shrubs or perennials that is so distinctly worth while from the standpoint of education, or more interesting to the general public, once they know of it, than plantations botanically arranged.

FOUNDATIONS OF MONTREAL LIBRARY

The foundations for the Montreal Public Library were carried to bed rock, and consisted altogether of sixty-five circular concrete piers, five feet in diameter, and three piers of smaller size, making a total of sixty-eight piers carried to rock.

Generally speaking, the soil through which the piers were carried consisted of filled material and fine sand, gravel and hardpan, in layers of various thicknesses. Aside from the filling at the surface, there appeared to be no general stratification of the material, except that it was usual to find a few feet of hard pan immediately over the rock. The level of the rock itself varied between comparatively wide limits, the deepest pier being about sixty-five feet six inches, and the shallowest forty-seven feet, both measured from sidewalk level. As is general on the Island of Montreal, the rock surface was often found to be badly seamed and shattered, so that in many cases it was necessary to remove several feet of shattered rock before reaching a satisfactory foundation.

Owing to the monumental nature of the building, and to the fact that the interior contained a great deal of fine marble work, it was most essential that the foundations be so constructed that there would be absolutely no settlement, and on this account particular care was taken to secure sound rock; all loose material being carefully removed before concreting.

The piers were sunk by what is known as the "well" method; that is, the excavation as it proceeded was lined with vertical timber sheeting placed in sections about four feet deep, and held in place by means of iron bands. As the concreting proceeded, the iron bands were salvaged and used over again, but, owing to the fact that the piers passed through many layers of running sand, it was considered inadvisable to attempt to salvage the timber lagging, and it was therefore left in place, serving as a form for the concrete.

The basement walls of the building rested directly on the outside rows of piers and were themselves reinforced and converted into continuous girders to carry the weight of the walls between the adjoining piers. At one or two points where openings through the walls interfered with the girder action, steel spandrel beams were used, but generally speaking, the walls themselves reinforced to act as spandrels, resulting in a considerable saving in cost due to the elimination of the usual heavy steel girders.

All of the foundation work, including the basement walls and the retaining walls, was carried out under the supervision of The Foundation Company Limited, of Montreal, and notwithstanding the fact that the construction was carried on throughout the winter, exceeedingly good progress was made. The work on the foundations was commenced on November 4th, 1914, and the excavation for the piers proper was commenced on November 16th. The last pier was completed on March 6th, 1915; all of the sixty-eight piers being constructed in approximately ninety days, exclusive of Sundays and holidays, or at the rate of somewhat better than two piers every three days.

Fire losses in Canada and the United States during the month of October $26,384,450, as compared with $17,701,385 for the same month of last year.

Commercial Buildings and Air Raid Attacks

THE question as to the capability of modern commercial buildings to resist the attacks of bombs dropped during enemy air-raids, says "The Builder," London, has again been raised by the renewal of enemy aerial activity over the heart of London during the last few months.

The bombs dropped are generally of two varieties, "high explosive" and "incendiary."

The damage done by the latter is comparatively negligible, except where they are dropped upon very old buildings which are chiefly constructed of timber.

When a high explosive bomb is dropped from a considerable height and falls upon the roof of a building constructed of a relatively strong and resisting material, such as concrete or reinforced concrete, the magnitude of the explosive effects depends almost entirely upon the percussion fuse; if this fuse is so delicately constructed that immediately the nose of the bomb strikes any comparatively hard and solid obstacle it ignites and explodes the charge of high explosive, the damage generally will be confined to projections above the surface of the roof, such as parapets, chimney stacks, lantern lights, vent pipes, water tanks, etc., etc., and the roof itself may only be slightly damaged at the point where the bomb fell.

On the other hand, should a very short period of time elapse between the moment when the bomb collides with the roof and the moment when the charge explodes, it is almost invariably the case that the bomb will penetrate the roof and possibly one or two floors, the depth of penetration depending, of course, upon the length of the short interval of time between initial collision and explosion.

The bombs dropped during the enemy daylight aeroplanes raids are of necessity much lighter than those dropped during the night Zeppelin raids, but even these lighter bombs, which weigh about 120 lbs., have when dropped upon a roadway, penetrated to a depth of over six feet.

It is the late-exploding or faulty bomb that we have to deal with in modern building construction, but it is extremely doubtful if any economical method of construction can be evolved which will render a structure bomb-proof without adding considerably to the cost; in fact, it does not appear to be a good policy to take into account the effects of bomb attacks when designing, for the simple reason that what would be satisfactory to resist the small bombs of today would certainly not resist the enormous bombs of the future.

Again, the number of buildings damaged in an air-raid is so small compared to the number of the surrounding buildings which escape, that the cost of rebuilding a damaged structure would be considerably less than the enormous cost to building owners should all buildings require to be sufficiently strong to adequately resist bomb attacks.

The design of bomb-resisting structures would also adversely affect the architectural features and aspects of our magnificent buildings and towns, and for that reason alone is to be unhesitatingly condemned.

We have seen the depressing effects of scientifically designed structures to resist the effects of Nature's causes in the new earthquake buildings of Jamaica; and yet Belgium, the cockpit of Europe, a country which has experienced more wars and the depredations due to war than any other country, is one of the richest—if not the richest—in examples of old and inspiring architectural treasures, and even up to the present in this war the damage done to her priceless buildings of antiquity is only local and on the whole not considerable.

It may be of interest to give a few figures to demonstrate what we should have to contend with if we had to design buildings strong enough to withstand present-day bomb attacks.

The average weight of the bombs dropped during the recent air raids is, as stated, about 120 lbs., and the estimated height from which they were dropped is about 13,000 feet.

The accumulated work developed by the bomb during its fall is equal to 120 lbs. multiplied by 13,000 feet, which equals the enormous figure of 1,560,000 foot lbs., neglecting the reduction due to resistance to bomb caused by wind, air, and to the bomb being dropped with an initial horizontal impetus, which resistance is designedly very small. This accumulated work is equivalent to that of a bomb weighing 696 tons dropping one foot.

The velocity of the bomb at the moment of impact would be about 915 feet per second, or about 624 miles per hour.

An interesting example of a case where the bomb dropped exploded at the instant of impact, occurred during the raid of July 7, 1917.

The bomb fell upon a roof constructed of reinforced concrete, blew portions of the parapets into the areas of and upon the buildings of adjoining owners, disintegrated the concrete for a space of about 6 feet by 8 feet (the fall of this concrete causing a hole about 15 inches square in the floor immediately under), perforated a water-tank on the roof like a seive, punched holes through the handrailing on the parapets, ventilating pipes and chimneys, shattered the glass in the roof skylights, and caused the whole building to rock and thereby develop cracks at the right angle connections of party and ex-

ternal walls. The lintel joists, being bound to the roof by continuity rods, were bent laterally, but not displaced, and some of the rods were forced down and round at an angle of 180 degrees, and the impact of the rods in bending made indentations in the ceiling of the roof in the centre of the slab.

None of the rods were damaged by the explosion beyond being bent, and in some cases the hooked ends being opened out.

The most important conclusion to remember from this example is that the roof did *not stop* the bomb, but exploded it, and thus the inmates of the building had a fortunate escape; had the bomb been "late exploding," without doubt the destruction would have been much more serious.

EDUCATION OF THE ARCHITECT

(From The American Architect)

English architects during the past year have in their deliberative bodies, particularly the Royal Institute, given much time and serious discussion to the problems pertaining to architectural educational methods.

With perhaps more thorough and well grounded methods than exist in any country excepting France, there appears to be a very decided tendency toward a careful consideration of every suggestion that will serve to further improve the form of education for the practice of architecture.

There is apparent a strong feeling towards the adoption of some course that will make it possible to discourage the continuance of study on the part of students who have shown that they lack the essentials of success in the profession of architecture and to find a way to place such "misfits" in another course of study more suited to their abilities.

When a student is for one reason or another drawn into a profession for which he is obviously unsuited, it not only serves his own interests but those of the profession as well if he can be induced to seek other fields in which he would be more qualified to work.

Every man knows how difficult it will be to accomplish this purpose. The discussions in the Council of the R. I. B. A. take this condition into full account, but there does not appear to have been advanced any method that would successfully accomplish this transplantation of professional misfits.

Professor Lanchester, the Chairman of a recent R. I. B. A. conference, expressed the opinion that in a certain sense the education for the profession of architecture could not begin too early, that the development of the faculty of observation, essential in every phase of art education, should be nurtured and developed as soon as it appears. Trained observation is undoubtedly the basis of all success in the practice of any form of art, but unfortunately this faculty is too often dwarfed or smothered by educational methods that, although honestly devised, often rob the student of a power, the cultivation of which is the very essence of his future success.

Professor Lanchester's contention that the cultivation of the highest power of observation is the first and greatest essential in architectural education is undoubtedly correct, as is also his opinion that specialized training may come comparatively late. It is the introduction of such specialization in the early years of an art education that hampers the future progress of the student.

Mr. A. E. Richardson, in the course of one of these conferences, advanced the opinion that the investigation of history as an aid to accomplishment in the practice of building should proceed on the lines of adaptation of modern needs. He contended that it was the "family likeness" of all building evolved during the past three thousand years that should be brought to the attention of the student. He also urged that marked developments, such as the classics of Greece and Rome, the idylls of the Renaissance, and the modern classics of Europe and America should receive fuller attention than they do at present.

To quote from Mr. Richardson's remarks: "This attention is essential if we are to advance either in construction or design, and just as the parallels of the classics in literature offer consolation to us in these times, so the buildings of the past can be referred to, to inspire confidence for the future."

Throughout all the arguments advanced during these important conferences, there constantly appears the desire to give highest training to the development of the power of observation. In short, this would seem to be the great essential. It is believed that no system of education in any phase of art excels that produced in France, where it is the custom for students to be taken to great modern buildings "there to observe the mysteries and workings in being of those buildings," and to learn by actual observation the reason for specific things that have been introduced into the plan, or that are suggested in the design.

Reference has been made heretofore to the method of instruction in art pursued in Paris more than seventy years ago by Boisbaudran. The fact that the first and greatest essential of this feature was the training of the memory in art, and that there came from his atelier a great many men who achieved the highest position in their profession, would seem to prove that any form of education in art that fails to recognize the necessity for the development of every power of observation and the retention of things observed, is lacking in the essentials of well grounded preparation to insure future success.

CONSTRUCTION

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Technical Training and Opportnnities

In his very interesting and carefully thought-out paper on "Why the Practice of Technical Professions in Canada Should be Regulated by Law," Mr. J. P. Hynes presents an argument which strongly advocates for progressive measures of polity in reference to the subject which he discusses.

The contention put forth that the opportunities for technical practice in Canada should be conserved for resident practitioners and those whom the Government through its system of education aims to qualify for such work, is something which on both logic and economic grounds is entitled to full support.

Obviously one of the fundamental objects of the state is to provide an educational system which will in all lines of endeavor qualify men to meet the community's needs. The more involved or complex its social and economic life becomes the more does each province owe it to itself to train and equip men who can intelligently and successfully grapple with the problems that arise. Along with this object it is the duty of the Government to see that the opportunities for practice within its jurisdiction are protected from undue outside encroachment in order that its system of education might give practical and efficient results. That architecture, engineering and other branches of technology come fully within this meaning, is evident in the fact that they are basic branches of service necessary to the community's progress and development.

Unfortunately, however, as regards these professions, Canada finds herself in a somewhat anomolous position. While educational facilities for technical training, and which now in Ontario and most other provinces include a university course for architectural training, have been established, nothing has been provided in the way of legislation to give the member of these professions a legal status. As a result the tendency has been not only to lower the standard of practice by subjecting resident practitioners to unwarranted and unfair alien competition, but also owing to this condition to place the graduates of Canadian universities under the necessity of exploiting their educational advantages elsewhere, thus depriving the community of the services of those who have been specially trained to do a particular work.

In view of this situation, Mr. Hynes' plan is both remedial and progressive. While the suggestion he puts forth refers to the Province of Ontario, its principle can be applied generally to all other provinces.

The proposal is to have the Government establish in the Department of Education a Registrar who shall register all present resident practitioners of technology in the Province, and after the date of the first registration, all graduates in technology from the universities of the Province and such others who, on becoming residents of the Province, comply with the provisions set out in an Act which would control the practice of technology in all its branches.

While this recommendation may not be generally accepted, it is nevertheless the growing concensus of opinion that it offers the only sure way out of the present unsatisfactory state, and would have the effect of placing the control of technical practice where it rightfully belongs.

This much at least is certain, that education in itself is only means to an end. The end must exist in the way of opportunities which it is the duty of the Government to conserve. Unless technical professions are given by legal protection the same encouragement to high attainment as is given to medicine and some of the other professions, and likewise are accorded full advantages to practice which are inherently theirs, the Government fails in the fulfilment of an important economic obligation and operates against its own educational facilities in providing the best results.

Canadian Building and Construction News

BUSINESS BUILDINGS.

Hamilton, Ont.—Work is being carried out on the erection of a one-story brick and concrete office building, to cost $5,000, for Proctor & Gamble Company, soap manufacturers, Burlington street.

London, Ont.—The Huron & Erie Mortgage Corporation, 442 Richmond street, have purchased a site on Market square, with a view to having plans prepared for a bank and office building, to cost $25,000.

Ottawa, Ont.—General alterations, including the installation of a new front, are being made to the store building of Beament & Johnston, Sparks street, to cost $4,000. W. E. Noffke, Central Chambers, is the architect, and W. G. Adamson, 126 Sparks street, the general contractor.

Ottawa, Ont.—The following contracts have been awarded in connection with a new $65,000 office building now being erected on Sparks street for R. L. Blackburn, Union Bank Building: Brick, Prairie Brick Company, Montreal; fireproofing, McFarlane-Douglas Co., Ltd., 250 Slater street; elevators, Otis-Fensom Elevator Co., 254 Queen street. Millson & Burgess are the architects.

Ottawa, Ont.—The following contracts have been awarded for a brick store building, costing $5,000, to be built on Rideau street, for Miss Tormey, Laurier avenue east: General contractor, S. F. Smith, 448 McLeod street; mason, E. B. Spence, 12 Foster street; steel work, Dominion Bridge Company; sheet metal, McFarlane-Douglas Co., 250 Slater street; heating and plumbing, W. G. Edge, Booth Building; plastering, Murphy & Morrow, Billing avenue; electric wiring, E. Tresidder, 58 Fifth avenue; painting and glazing, Geo. Higman & Sons, 188 Rideau street.

Penetanguishene, Ont.—Plans have been completed for a one-story brick office building, to be erected for J. B. Jennings; cost, $4,000. Work on the structure will not likely be started until spring. Charles P. Band, C.P.R. Building, Toronto, is the architect.

Toronto, Ont.—The Aberdeen Chambers, corner of Victoria and Adelaide streets, owned by Stinson & Hollwey, have been damaged by fire to the extent of $10,000.

Toronto, Ont.—Frank Stollery has taken a new lease on the southwest corner of Yonge and Bloor streets for a period of twenty-one years, and intends to erect a block of stores and offices to cost $100,000, in about a year's time.

Toronto, Ont.—F. W. Woolworth Co., Ltd., 4 Queen street east, have commenced operations on the erection of a two-story brick building, 40 x 110 feet, to contain store and offices, on Danforth avenue; cost, $15,000. S. & L. S. Yolles, 67 Baldwin street, are the architects and general contractors.

CHURCHES AND SCHOOLS.

Barrie, Ont.—Tenders will be received by the Board of Education until November 20th, for the whole work or separate trades required (1) for the erection of a new collegiate, to cost approximately $85,000, according to plans prepared by Architects Ellis & Ellis, Manning Chambers, Toronto; (2) for the reconstruction of the old collegiate at an approximate cost of $80,000, according to plans prepared by W. W. LaChance, Hamilton.

Courville, Que.—Work is in progress on the rebuilding of the Catholic Church which was destroyed by fire last January. It will not be necessary to rebuild the walls, as these are in good condition. The rest of the work will consist of reinforced concrete, cut stone, fireproofing, asbestos roofing, electric lighting, and hot water heating. Cost, $55,000. Joseph Goselin, Levis, Quebec, is the contractor.

Guelph, Ont.—The following contracts have been awarded for the erection of a chapel, to cost $3,500, on Eramosa road, for the Brethren Congregation, 200 Cardigan street: Painting and glazing, Reynolds & Son, Quebec street; plastering, J. J. Mahoney, Kent street; heating, plumbing and electric wiring, Stevenson & Malcolm, Wyndham street. W. A. Cowan, Kathleen street, is the architect.

Hamilton, Ont.—The following contracts have been awarded for the erection of a $15,000 brick addition to St. Joseph's Convent, Park street north: Mason, S. Howard, 231 Mary street; carpenter, Murray & Connor, 31 Lamoureaux street. Scott & Wardell, Sun Life Building, are the architects.

London, Ont.—Work has started on the erection of a soldiers' school, to be built at the Byron Sanitarium for the Military Hospitals Commission. Cost, $10,000. Watt & Blackwell, Bank of Toronto Building, and John Hayman & Sons, 432 Wellington street, are the general contractors.

St. Flavie, Que.—Plans have been completed in reference to a new heating system in connection with the restoration of the Roman Catholic Church, of this place. Mr. Pierre Levesque, 115 St. John Street, Quebec, is the architect.

St. Perpetue, Que.—Plans have been completed by Architect Pierre Levesque, 115 St. John Street, Quebec, Que., for church decorations and the installation of the heating system in connection with the Roman Catholic Church at this place. Estimated cost, $22,000. Rev. J. E. Rochette, Pastor.

Toronto, Ont.—The Board of Trustees of St. Monica's Church, Ashdale avenue, have decided to start operations shortly on the erection of an addition for Sunday school purposes.

Toronto, Ont.—The Modern Spiritualist Church, 124 Hallam street, has received tenders for the erection of a brick building, with a seating capacity of five hundred, to be built at 847 Dovercourt road.

Toronto, Ont.—Work is about to start on the erection of a brick Sunday school building at North Toronto, for the Salvation Army, to cost $6,500. Brigadier Gideon Miller, Salvation Army Headquarters, 64 Albert street, is the architect.

Toronto, Ont.—The general contract for the erection of a brick Sunday school building for the Salvation Army has been awarded to H. Freeman, 127 Oakwood avenue. Brigadier Gideon Miller, Salvation Army Headquarters, 64 Albert street, is the architect.

Walkerville, Ont.—Plans are being prepared for a hall and residence to be built for the Salvation Army, Clarence street. Cost $7,000.

Windsor, Ont.—The Board of Education has received competitive plans for a new school building, to cost $150,000.

CIVIL ENGINEERING.

Ottawa, Ont.—The Board of Control has instructed the Works Commissioner to prepare estimates for a new foot bridge over Rideau Canal, to replace the swing bridge leading to Ottawa East.

CLUBS, HOSPITALS, THEATRES AND HOTELS.

Kingston, Ont.—Plans have been prepared for the establishing of an additional building for the Military Hospitals Commission.

Kingston, Ont.—The Kingston Health Association has voted a sum for the erection of two small cottages on the Hotel Dieu grounds, for the care of tubercular patients.

London, Ont.—The following contracts have been awarded in connection with the erection of a $40,000 addition to the Rescue Home and Hospital of the Salvation Army, on Riverview street: General contractor, R. G. Wilson, 193 College street; carpenter, M. Southam; electric wiring, Benson & Wilcocks, 264 Dundas street; heating and plumbing, Noble & Rich, 237 Queen street east.

Toronto, Ont.—The Women's College Hospital and Dispensary have decided to erect an additional story to their new twenty-two room hospital building now being erected on Rusholme road. Gordon & Helliwell, Confederation Life Building, are the architects; Thompson Bros., Ryrie Building, mason contractors.

Toronto, Ont.—Plans have been completed and tenders invited for improvements to the King Edward Hotel, to cost $150,000. The property was recently purchased by the United States Hotel Company, in which Lt.-Col. Dinnick, 84 King street east, is interested. Work will consist mostly of renovations to the interior. Esenwein & Johnston, Ellicott Square, Buffalo, N.Y., are the architects.

Wellington, Ont.—The summer hotel (Alexandria Hotel) owned by Manley Sine, has been destroyed by fire; loss $9,000.

MISCELLANEOUS.

Galt, Ont.—Tenders have been received for a new building to be erected at Galt for the Merchants Bank of Canada. Hogle & Davis, 80 St. Francis Xavier street, Montreal, are the architects.

London, Ont.—The British Bank of North America has acquired a site on Market Square, with the intention, it is understood, of erecting a new bank and office building, to cost $50,000.

Ottawa, Ont.—Tenders have closed for installing an elevator in connection with the new city workshop.

Ottawa, Ont.—Tenders have closed for a new library building to be built from plans by Architect J. P. MacLaren, 104 Sparks street. The building will be of brick and stone construction, modernly equipped, and will cost about $20,000.

Toronto, Ont.—It is understood that the new lavatories at the Exhibition Grounds, which were postponed this year, will be built this coming spring. The work will cost $35,000. G. W. Gouinlock, 796 Yonge street, is the architect.

Toronto, Ont.—E. R. French, 57 Sunnyside avenue, has been awarded the general contract for the erection of a brick garage on Laplante avenue, for C. Lee, 18 Toronto street. Cost $12,000. J. A. Thatcher, 37 Cowan avenue, is the architect.

Toronto, Ont.—Architect D. C. Cotton, 54 Adelaide street east, has completed plans for a two-story garage, 55 x 125 feet, to be built at the corner of Shaw street and St. Clair avenue, for W. J. Barnett. The structure will be of brick and tile. Cost $15,000.

PLANTS, FACTORIES AND WAREHOUSES.

Arnprior, Ont.—Work is in progress on a one-story factory, 300 x 300 feet, of reinforced concrete, for the Arnprior Cabinet Company, Limited. Work is being done by day labor under supervision of owner. Richards & Aora, 126 Sparks street, Ottawa, are the architects.

Aylmer, Ont.—A. W. Pierce intends to immediately rebuild his large feed warehouse, which was recently destroyed by fire at a loss of $100,000.

Brantford, Ont.—Schultz Brothers Company, Ltd., have been awarded the contract for the erection of a four-story brick addition to Pratt & Letchworth Company's factory. Cost $3,500.

Brantford, Ont.—Work is in progress on a three-story, 40 x 60, brick warehouse, to be erected on South Market street for the Massey-Harris Company. Schultz Bros. have the general contract. Cost $50,000.

Brantford, Ont.—Architect W. C. Tilley, Temple Building, has awarded the following contracts for alterations to a factory on Bridge street for the Kitchen Overall & Shirt Company, 11 Queen street east: Mason, Thos. Harper, 14 Jarvis street; carpenter, H. W. Turner, 237 Wellington street. Work will consist mainly of new window frames and sashes and hardwood floors. Cost $8,000.

Georgetown, Ont.—One of the main buildings of the Provincial Paper Mill Company's plant at this place has been destroyed by fire, entailing a loss of $25,000. It is understood that the company will rebuild at once.

Hamilton, Ont.—Architect G. J. Hutton, Bank of Hamilton Building, has awarded the contract for the erection of a clearing house for the Frost Wire Fence Company, Sherman avenue, to W. H. Secord & Son, Brantford, Ont. The building will be of brick, steel and concrete, and cost $25,000.

Hastings, Ont.—The tannery of the Hastings Tanning Company, which is controlled by the Breithaupt Tanning Company, of Kitchener, Ont., has been destroyed by fire. Loss, including stock, $150,000.

London, Ont.—H. Hayman, 848 Dufferin avenue, has been awarded the general contract for the erection of a reinforced concrete blacksmith shop, for E. Leonard & Sons, York street, to cost $25,000. A. C. McBridge, 402½ Richmond street, is the architect.

Ottawa, Ont.—The following contracts have been awarded in connection with the ice plant now being built on Cooper street for the Ottawa Dairy Company, Somerset street: General contract, A. J. Garvock, 126 Lewis street; sheet metal, McFarlane-Douglas Co., Ltd., 250 Slater street; J. A. Ewart, Booth Building, is the architect.

Petrolia, Ont.—Work is in progress on a two-story concrete factory at Petrolia for the Colonial Knitting Company, Elmira, Ont. R. Kirkpatrick, Petrolia, is the general contractor.

Strathroy, Ont.—The Dominion Canners, Ltd., head office Hamilton, Ont., are preparing plans for a new factory to be built at Strathroy in the spring, at a cost of $100,000.

Temiskaming, Ont.—It is understood the Riordon Pulp & Paper Company, Limited, will shortly start the election of a sulphite plant, comprising several buildings, to cost $500,000.

Toronto, Ont.—The Bawden Machine Company, 163 Sterling road, is erecting a factory addition of frame and galvanized iron, to cost $4,000.

Toronto, Ont.—Plans have been completed for a one-story brick factory, to be built on Trafalgar street, for W. S. & F. G. Mahaffey, 16 Plymouth avenue.

Toronto, Ont.—Work is in progress on the erection of a brick printing office at 128 Broadview avenue, for Thompson Bros., 725 Queen street east. Cost $4,000.

Toronto, Ont.—Excavating has been completed for a warehouse to be built on Coxwell avenue, near Gerrard street, for the T. Eaton Company, Limited, at a cost of $65,000.

Toronto, Ont.—Work has started on a brick and mill factory to be erected at the corner of Grange and Spadina avenue, at a cost of $70,000, for L. Davis (in trust), Confederation Life Building. J. G. Kent and T. Essery, Confederation Life Building, are the general contractors.

West Lorne, Ont.—Plans have been completed for a one-story brick factory, to be erected for B. Weisbrood, West Lorne, Ont. Cost, $15,000.

PUBLIC BUILDINGS.

Brockville, Ont.—Work is in progress on a new hospital addition at this place. Mr. A. Stuart Allister is the architect. The contractors are as follows: general contractor and carpenter, F. B. Kerr; masonry and concrete, H. Watson; heating, H. S. Wright; plumbing, Geo. Ross & Co.; all Brockville firms. Plastering is being done by John Mander, Smith's Falls, Ont. Cost of work, $1,000.

London, Ont.—Moran & Son, Maitland street, have been awarded the contract for a one-story concrete addition to be erected in connection with the city incinerator plant on Waterloo street. Cost $3,000.

Ottawa, Ont.—Tenders have been received by the Department of Public Works for an extension to the East Block Departmental Building, to be used as a macerating plant.

Ottawa, Ont.—W. D. Edge, Booth Building, has been awarded the contract for installing a new heating system and plumbing at the Isolation Hospital. W. E. Noffke, Central Chambers, is the architect.

Sarnia, Ont.—Plans have been completed for a municipal incinerator plant, to cost $25,000. James, Loudon & Hertzberg, Excelsior Life Building, are the architects.

Unionville, Ont.—The town of Unionville is contemplating the erection of a new town hall and market building.

RESIDENCES.

Brantford, Ont.—A. J. Cromar, 448 Colborne street, has the general contract for alterations to apartments on Brant avenue, for Leslie S. Hall, 197 Darling street. Cost $4,000. Frank Nicholl, Temple Building, is the architect.

Galt, Ont.—P. Nichol has the general contract for the erection of a $3,800 brick residence for A. A. Beeton.

Hamilton, Ont.—Chas. Widdey, 972 King street east, is erecting a brick residence on Balsam avenue. Cost $3,000.

Hamilton, Ont.—Bell Bros., 445 Wilson street, are erecting a brick residence, to cost $4,500, on Belmont street, for W. J. Peppiatt, 37 James street south.

Hamilton, Ont.—Wm. Hill, 77 Mountain avenue, has been awarded the contract for a brick residence, to be built on Leinster avenue, for C. Lambert, 221 Balsam avenue. Cost $6,000.

Hamilton, Ont.—Tenders have been received for a four-story brick apartment house, to be erected on Queen street, for W. T. Dyment. Cost $30,000. F. W. Warren, Bank of Hamilton Building, is the architect.

Hamilton, Ont.—The following contracts have been awarded for the erection of a $6,000 brick residence on Gage avenue, for Martin & Martin, Sun Life Building: Mason, Mr. Klingbeil, Stevens street; carpenter, H. Thombs, 13 Whitfield avenue.

Hamilton, Ont.—Work is in progress on the erection of a $3,500 brick residence on Proctor boulevard, for F. Guest, 757 King street east, the following are the contractors: General contractor, J. M. Farewell, 53 Proctor boulevard; mason, Wood Bros., 159 Kensington avenue; carpenter, R. Spicer, 52 Proctor boulevard.

Hamilton, Ont.—The following contracts have been awarded for the erection of a $4,000 brick residence on Leinster avenue, for Horace Smith, 20 Lorne avenue: Mason, W. Smith, 233 Maple avenue; carpenter, M. Carver, 67 Aikman avenue; heating, J. Radigan, 46 Ferguson street; plumbing, Mr. Luxon, 451 Wilson street.

Hamilton, Ont.—The following contracts have been awarded for the erection of a $5,000 brick residence on Robert street, for Mrs. Munn, 33 Homewood street: General contractor, F. Babbige, 688 Concession street; plastering, J. Brown, Mountain Top; electric wiring, Jack Bros., 14 Wellington street; heating and plumbing, C. S. Avery, 24 Ashley street.

Hamilton, Ont.—The following contracts have been awarded in connection with a $4,000 brick residence to be built on Leinster avenue for Myles Carver, 67 Aikman avenue: Mason, W. Smith, 233 Maple avenue; heating, J. Radigan, 46 Ferguson avenue; plumbing, Mr. Luxon, 451 Wilson street; sheet metal, M. Smith, 11 Arthur avenue; plastering, W. Watson, Main street; painting, A. Warren, Catharine street; electric wiring, J. Dynes, 20 Avalon place.

Hamilton, Ont.—Work has started on a two-story brick residence, to be built on Carrick avenue for C. H. Roper, 81 Carrick avenue. Isbister Bros., 142 Emerald street, have the mason contract, and J. Poag & Son, Westinghouse avenue, are doing the carpenter work; cost $4,500. A brick residence, to cost $3,500, is being erected by Howard Bros., 164 Rosslyn avenue, for Mr. Trick, 3 Walnut street. The following contracts have also been awarded for the erection of a brick residence, to cost $5,000, on St. Clair avenue, for J. McNaught, 477 Wilson street: Sheet metal, Arthur Smith, 11 Arthur avenue; plastering, H. Tremolla, 729 Shannon street east; electric wiring, F. Thornton, 174 Balmoral avenue; plumbing, J. Kerr, 32 Sherman street north; heating, R. H. Low, 15 Bay street north. The same contractors are doing the trades for the $5,000 residence also being built for J. McNaught, 477 Wilson street, on Rosslyn avenue. The McClary Company, York street, have the heating contract.

Lindsay, Ont.—Work is in progress on the erection of a residence for Mr. Rhoda Slight, Cambridge street, to cost $3,500. Williams Bros. have the general contract.

Lindsay, Ont.—The following contracts have been awarded for the erection of a brick residence, to cost $3,000, for L. G. Williams: Carpenter, D. Sharp; plastering, Reeves & Way; painting and glazing, W. E. Godwin, Wellington street; heating, Boxall & Matthie, Kent street; electric wiring, W. E. Reesor. Excavation has also been completed for a $3,500 brick residence to be built by Thomas Arnold.

London, Ont.—Jas. Orme, 1010 Waterloo street, is erecting a brick residence, to cost $5,000, on Huron street.

London, Ont.—Jas. MacDonald, Duchess avenue, has the contract for the erection of a two-story brick residence, to cost $3,000, on Ridout street, for Mrs. Eggelton, 382 Ridout street.

Ottawa, Ont.—Plans have been completed for a two-story stucco residence, 29 x 31 feet, to be built on Willard street, for W. Fryer, 5 Glen avenue.

Ottawa, Ont.—Ferguson & Lambert, 643 King Edward avenue, have been awarded the general contract for the erection of a brick apartment house on Daly avenue, for Dr. Robert Law, 190 Laurier avenue east. Cost $13,000. J. A. Ewart, Booth Building, is the architect.

Ottawa, Ont.—Architects Richards & Abra, 126 Sparks street, have awarded the following contracts for the erection of a brick addition to a residence on Gloucester street, for Dr. A. E. Mahood, 171 Metcalfe street: General contractor, S. F. Smith, 448 McLeod street; mason, Wm. Campbell, 70 Spruce street; sheet metal, McFarlane-Douglas Co., Limited, 250 Slater street; heating and plumbing, W. G. Edge, Booth Building; plastering, Murphy & Morrow, Billing avenue; electric wiring, E. Tresidder, 58 Fifth avenue.

Toronto, Ont.—G. T. Death, 244 Sheldrake boulevard, has started work on a brick residence, to cost $3,500.

Toronto, Ont.—H. Lucas, 72 Bathgate avenue, is erecting seven brick houses, to cost $9,000, on Rhodes avenue, near Danforth avenue.

Toronto, Ont.—Muir & Lumb, 38 Hazelwood avenue, have started work on the erection of a brick residence on Strathmore boulevard. Cost $3,000.

Toronto, Ont.—Plans have been completed for a two-story brick residence, to be erected on Woodside avenue by J. Carlisle, 25 Woodside avenue. Cost $3,500.

Toronto, Ont.—Work has started on the erection of a brick bungalow on Kingswood road, for Morris Reid, Queen and Balsam streets. Cost $3,000. H. J. Chown, 220 Scarboro road, is the architect.

Toronto, Ont.—Henry Allen, 297 Huron street, has the general contract for the erection of a brick residence in Lawrence Park, to cost $4,500. W. Bredin Galbraith, Bank of Hamilton Building, is the architect.

Toronto, Ont.—Architects Oborn & Ellis, 22 College street, have completed plans for a residence, to be erected at the corner of Thorne and Burlington avenue, for P. L. Spears, 20 Biggar avenue. Cost $5,000. Owner is looking after all trades.

Toronto, Ont.—Architect P. H. Finney, 79 Adelaide street east, has completed plans for an eight-suite apartment house, to be erected at the corner of Gerrard street and Normandy boulevard, for W. A. McEachren & Sons, Ltd., Royal Bank Building. The structure will be three storys, 29 x 90, of brick construction, and will cost $20,000.

Toronto, Ont.—Plans have been completed for a brick residence and garage to be built on Sellers avenue for Wm. Naylor, 1970 Dufferin street. Cost $3,500. J. A. Trebilcock, 153½ Queen street east, has started work on the erection of a brick residence and garage on High Park avenue. Cost $6,000. Wm. Johns, 1 Leed street, will erect a $3,000 brick residence on Cuthbert crescent.

Toronto, Ont.—Work is in progress on the erection of two pair of brick houses on Bathgate avenue, for L. H. Lankin, 124 Hampton avenue. The owner is the general contractor, and J. T. Bowes, 45 Harcourt avenue, has the plumbing and heating contracts. A brick residence to cost $4,000 is being built on Greenwood avenue by the John Price Estate, 100 Greenwood avenue.

Toronto, Ont.—Jas. Skelton, 70 Laughton avenue, has started work on the erection of a brick residence on Dinnick crescent, to cost $4,500. J. Craig, 128 Hilton avenue, is erecting a garage and residence of brick construction at the corner of Alberta and St. Clair avenue. Cost $15,000. Plans have been completed for a residence to be built on Drury avenue for F. Hill, 18 Willard avenue. Cost $3,800.

Toronto, Ont.—A. J. Fish, 134 Millicent street, is erecting a two-story brick residence on St. Clarens avenue. Cost $3,000. A. & A. Grant, general contractors, 837 Logan avenue, have started work on a residence and garage of brick construction on Jackman avenue. Cost $3,500. Architect W. G. Hunt, Confederation Life Building, has completed plans for a brick residence to be built on Neville Park boulevard, for J. A. Hearst, 203 Willow avenue. Cost $6,000. The same architect has also completed plans for six brick houses to be built on Kew Beach avenue for the Crown Realty Company. Plans have been drawn for the erection of a brick residence on Weybourne crescent, for F. W. Hill, 226A Havelock street. Cost $4,000.

A LARGE ORDER FOR MARINE WORK.

It is understood that the firm of MacKinnon, Holmes & Co., Limited, have recently received from the Imperial authorities a large order for marine work which will keep their plant in operation for many months to come.

CATALOGUES and BOOKLETS

THE PURSUIT OF SAFETY.

"The Pursuit of Safety," issued by the Automatic Sprinkler Company of America, is a valuable booklet which according to its letter of introduction, "approaches the subject of automatic sprinkler protection for protection sake." It is pictorially interesting, splendidly printed and is more in the nature of a carefully prepared treatise on fire loss and prevention than a trade catalogue. The company maintains branches in most of the large cities and has its head office at 123 William Street, New York City.

CANADIAN STEEL CASEMENTS.

A very practical idea is incorporated in the new catalogue which the Trussed Concrete Steel Company of Walkerville has just published on "Canadian Steel Casements." Aside from the excellent quality of its printing and illustrations, it is compiled in loose leaf form in order that the various details which are accurately drawn full size may be removed temporarily for the purpose of transferring same to the architects drawings. This gives it a most practical purpose and makes the catalogue of special value to any one specifying windows of the casement type. The catalogue contains thirty-two pages, 9 x 12 inches, of details and photographic subjects showing different style casements and examples of work already installed. Other sheets will be supplied to be added to the catalogue as new features develop or the occasion requires.

GLASS GARDEN SUGGESTIONS.

"Glass Garden Suggestions" is the appropriate title of an artistic booklet of thirty-two pages recently issued by the Glass Gardens Limited, of Toronto, Georgetown and Montreal. It contains a number of illustrations of green houses and conservatories which this company has recently built including the greenhouses erected at Spencewood for the Lieutenant-Governor of Quebec, as well as a number of successful examples representing completed glass gardens and conservatories of both commercial and residential types. There is also a large amount of general information of value and a chapter devoted to the question of proper heating. The booklet is attractively printed on a light green tinted book stock bound in a dark green kraft paper cover, and in view of the increasing interest which is being taken in "hot house" culture offers a large number of very valuable suggestions.

SWIMMING POOLS.

An attractive booklet entitled "Swimming Pools," has been issued by The Associated Tile Manufacturers, Beaver Falls, Pa. This booklet contains 32 pages of valuable information representing the latest and best practice in the design and construction of swimming and wading pools. The data furnished covers proper shapes and dimensions, together with methods of construction and details of waterproofing, drainage, overflow troughs, curbs and gangways. Reference is also made to various accessories such as steps and ladders, diving boards and shower baths.

The subjects of artistic merit, markings and color schemes are discussed and illustrated by numerous photographs of recent and notable installations. This booklet is distributed gratis to architects and prospective builders and will form a valuable addition to the reference library.

PRACTICAL STRUCTURAL DESIGN.

Practical Structural Design. By Ernest McCullough, C. E. 303 pages, size 6¼ x 9 inches. Bound in cloth. Published by the U. P. C. Book Co., Inc. Price, $2.50. In this text and reference work, which is especially adapted to the needs of self tutored men, the field of structural design is well covered. The principles of moments, reactions, shearing stresses, elastic limit, modulus of rupture, etc., are clearly described. Practical problems in the design of girders, beams, trusses, etc., are presented, and the application of graphic statics to wind forces, stresses occurring in trusses, stresses in columns, stresses in structures, application of the radius of gyration, eccentric loading, wind bracing, etc., are all lucidly treated.

The author is a man of wide practical experience, and in his writing has the happy faculty of so expressing his thoughts as to enable the merest tyro to readily grasp his meaning. He is a licensed structural engineeer and licensed architect in the State of Illinois, and is a member of the American Society of Civil Engineers. His high professional standing and well-known literary ability bespeak for the work a warm welcome at the hands of those seeking information of the character presented.

HOW HOUSES ARE EASILY WIRED FOR ELECTRICITY.

It is seldom any is built now-a-days without being wired for electricity. There are instances, however, where this does not happpen to be the case, and there are also many houses which were built before electricity became so generally used and which are without this great convenience. Just how these places can be made comfortable and modern is told in an interesting little booklet on "How Houses are Easily Wired for Electricity," issued by the Toronto Hydro-Electric System, 220 Yonge Street, Toronto. This booklet explains the simple method of how an entirely concealed system of wiring can be installed without marring the walls or doing any damage whatever, and without any disorder or confusion to the owner. It also contains the following summary showing the various household conveniences for which electricity can be used, and which suggest a number of items which can be considered by the architect or builder at a time a house is being planned, so that sockets and connections can be provided for every purpose.

An electrically equipped home means less drudgery for the housekeeper,

—And more comfort for the whole family.

An electric iron saves tiresome trips to the stove.

An electric washing machine will do an ordinary washing in two hours at a cost of two cents.

An electric vacuum cleaner thoroughly cleans carpets and draperies without disturbing the orderly arrangement of the house.

An electric heating pad is the only "hot application" that gives a gentle, soothing heat that is constant and even.

An electric toaster insures delicious toast, served hot and crisp as required.

An electric percolator makes coffee in the scientific way.

These little comforts cost only a nominal sum and they help to make home-life happy.

—But they can be enjoyed only in homes that are wired for electricity.

CONTRACTORS and SUB-CONTRACTORS

As Supplied by The Architects of Buildings Featured in This Issue

Saint Sulpice Bibliotheque, Montreal.

Brick, E. F. Dartnell, Ltd.
Boilers, E. Leonard & Sons.
Bronze Doors, B. & S. H. Thompson.
Cabinet and Woodwork, La Cie Pauze & Fils.
Concrete Work, M. Huberdeau.
Electric Fixtures, Tiffany Studios.
Electric Fixtures, Robt. Mitchell Co.
Electric Wiring and Apparatus, R. Moncel Co.
Book Lifts, Otis-Fensom Elevator Co.
Flooring, Armstrong Cork Tile.
Furniture, Bromesgrove Guild, Ltd.
Grilles, Dominion Architectural Iron Works.
Leaded Art Glass, Henri Perdrian, Ltd.
Hardware, Jobbers, Durand Hardware Co.
Hardware, Russell Erwin Company.
Heat Regulating System, Johnson Temperature Regulating Co.
Heating Contractor, T. Lessard & Fils.
Book Stacks, Snead & Company Iron Works.
Marble, LePage Marble Works.
Marble, Vermont Marble Company.
Ornamental Iron (Front Doors), Dominion Architectural Iron Works.
Paints (Interior), Martin Senour Company.
Paints (Waterproof), R. I. W. Damp-proof Paint.
Painting Contractors, Colas & Charest.
Plumbing, Jas. Robertson Company.
Plumbing Contractors, Cadieux & Briard.
Plastering, McNulty Bros.
Radiators, Taylor-Forbes Co.
Roofing, Tile, Ludiwici Caledon Tile Co.
Roofing Contractors, Richardson Simard Co.
Seating, Office Specialty Co.
Granite, Stanstead Granite Co.
Stone Contractors, M. Huberdeau.
Structural Iron and Steel, Structural Steel Co., Ltd.
Terra Cotta, Montreal Terra Cotta Co.
Vacuum Cleaners, Acme Vacuum Cleaner Co.

Montreal Public Library, Montreal.

Brick, E. F. Dartnell, Ltd.
Boilers, Jenckes Machine Company.
Bronze Doors, A. B. Ormsby Co.
Doors and Window Trim, Crittal Casement Company.
Clocks, The Magneta Company.
Concrete Work, John Quinlan Company.
Electric Fixtures, Tiffany Studios.
Electric Wiring and Apparatus, John O'Leary.
Elevators and Hoists, Otis-Fensom Elevator Co.
Foundations, Foundation Company of Canada.
Flooring, Canadian H. W. Johns-Manville Co.
Floor Construction, Seigwart Beam Co., Ltd.
Furniture, Castle & Son.
Grilles, Tuttle & Bailey.
Glass, Leaded Art, Luxfer Prism, Limited.
Hardware, Jobbers, Durand Hardware Co.
Hardware, Russell Erwin Company.
Heat Regulating System, Johnson Temperature Regulating Co.
Heating Contractor, W. J. McGuire Co.
Book Stacks, Snead & Company Iron Works.
Marble, Missisquoi Marble Co.
Ornamental Iron (Front Doors), Dominion Architectural Iron Works.
Paints, Martin Senour Company.
Painting Contractor, Alex. Craig, Limited.
Plumbing, James Robertson Co.
Plumbing Contractors, W. J. McGuire Co.
Plastering, John Quinlan & Company.
Radiators, Taylor-Forbes Company.
Roofing Tile, Ludiwici Caledon Tile Co.
Roofing Contractors, T. Lessard & Fils.
Stone, Queenston Limestone Company.
Stone Contractors, John Quinlan & Co.
Structural Iron and Steel, Phoenix Bridge & Iron Works, Ltd.
Terra Cotta, Montreal Terra Cotta Co.
Vacuum Cleaners, Acme Vacuum Cleaner Co.
Ventilating System, Sturtevant Company.

Roncesvalles Public Library.

Brick, Milton Pressed Brick Co.
Brick Contractors, Davidge & Lunn.
Boilers, Gurney Foundry Co.
Concrete Work, Davidge & Lunn.
Electric Wiring and Apparatus, Toronto Electric Wiring Co.
Flooring, Tile, Venetian Mosaic & Tile Co.
Hardware, Canada Hardware Co.
Interior Fittings, Cabinet, Woodwork and Decoration, Wm. Williamson.
Paints, Benjamin Moore & Company.
Painting Contractor, F. G. Roberts & Co.
Plumbing Contractor, Sheppard & Abbott.
Plastering, E. J. Curry.
Radiators, Gurney Foundry Company.
Roofing, G. M. Bryan.
Stone, Indiana Limestone Co.
Structural Iron and Steel, Reid & Brown.
Tile, Don Valley Brick Co.
Varnish, Berry Bros.
Heating Contractor, A. Welch & Son.