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DECEMBER, 1915

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# CONSTRUCTION

A · JOURNAL · FOR · THE · ARCHITECTURAL  
ENGINEERING · AND · CONTRACTING  
INTERESTS · OF · CANADA



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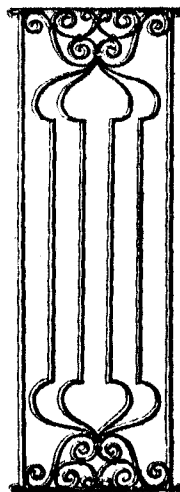
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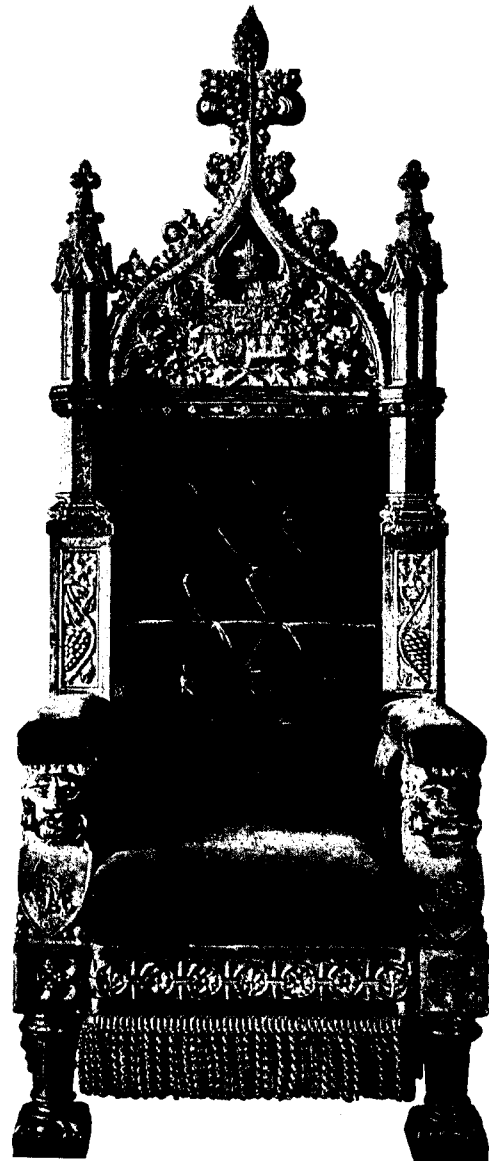
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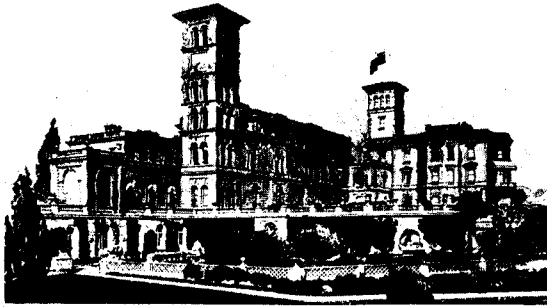
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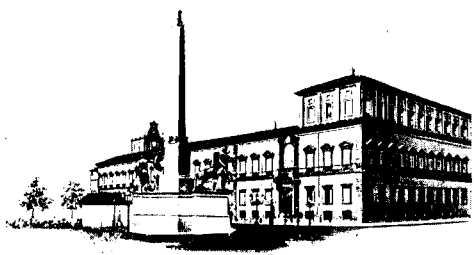
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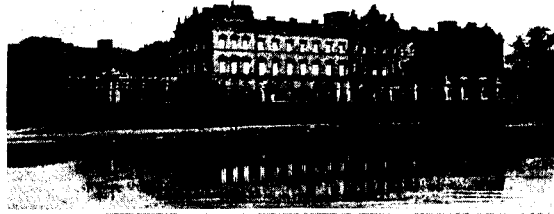
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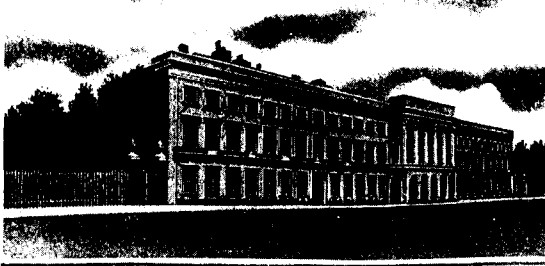
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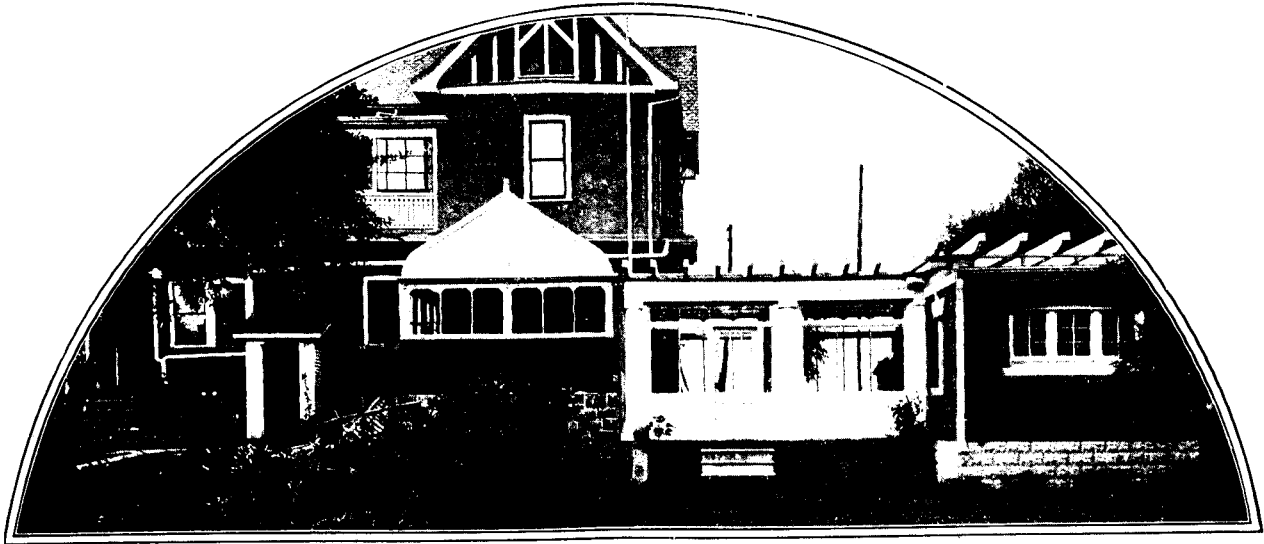
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about garage and greenhouse combinations, she came down to Toronto and talked it over with us.

As a result, she concluded to build the garage and gave us the contract for the greenhouse.

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When we took the photograph Mrs. Gordon spoke most enthusiastically about the pleasure she derived from the greenhouse when it was cold and snowy outside, and a delightful bloom filled Palm Beach temperature inside.

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Let us send you our Two G's Booklet, Glass Gardens—A Peep Into Their Delights.

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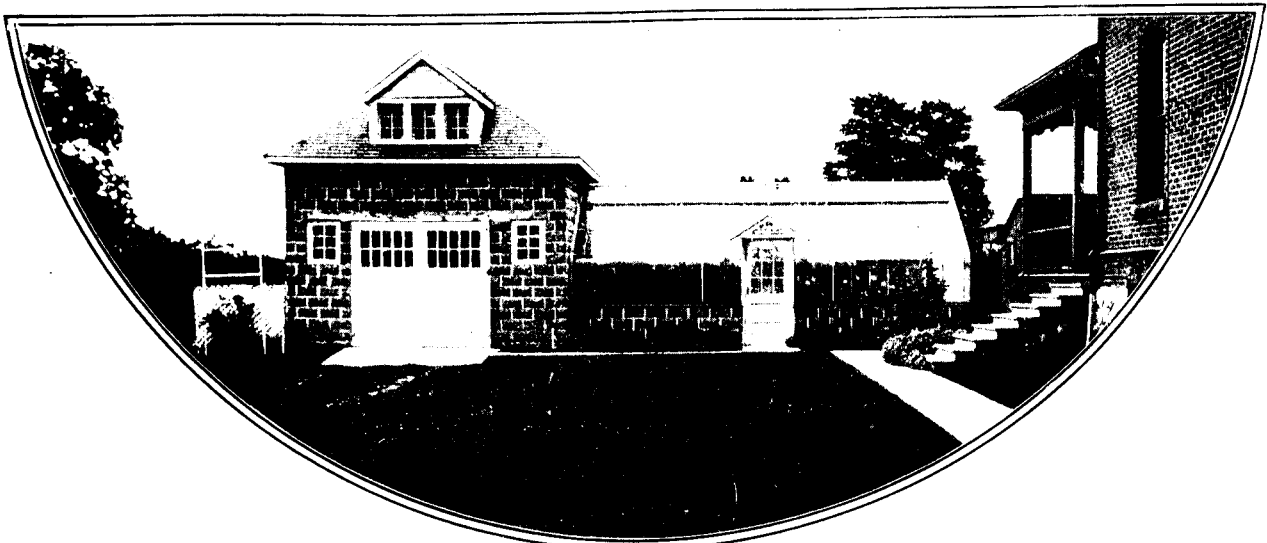
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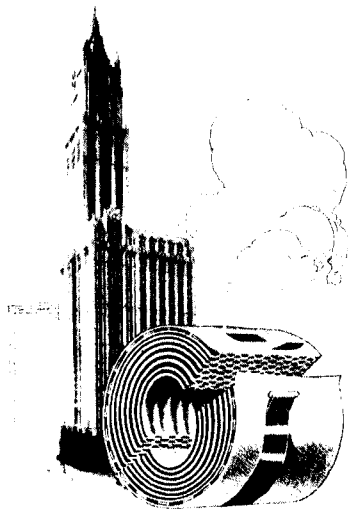


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Wall Bracket at Main Entrance, Knox College, Toronto.

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Of the buildings illustrated in this issue, we designed and supplied the Lighting Equipment for the following:

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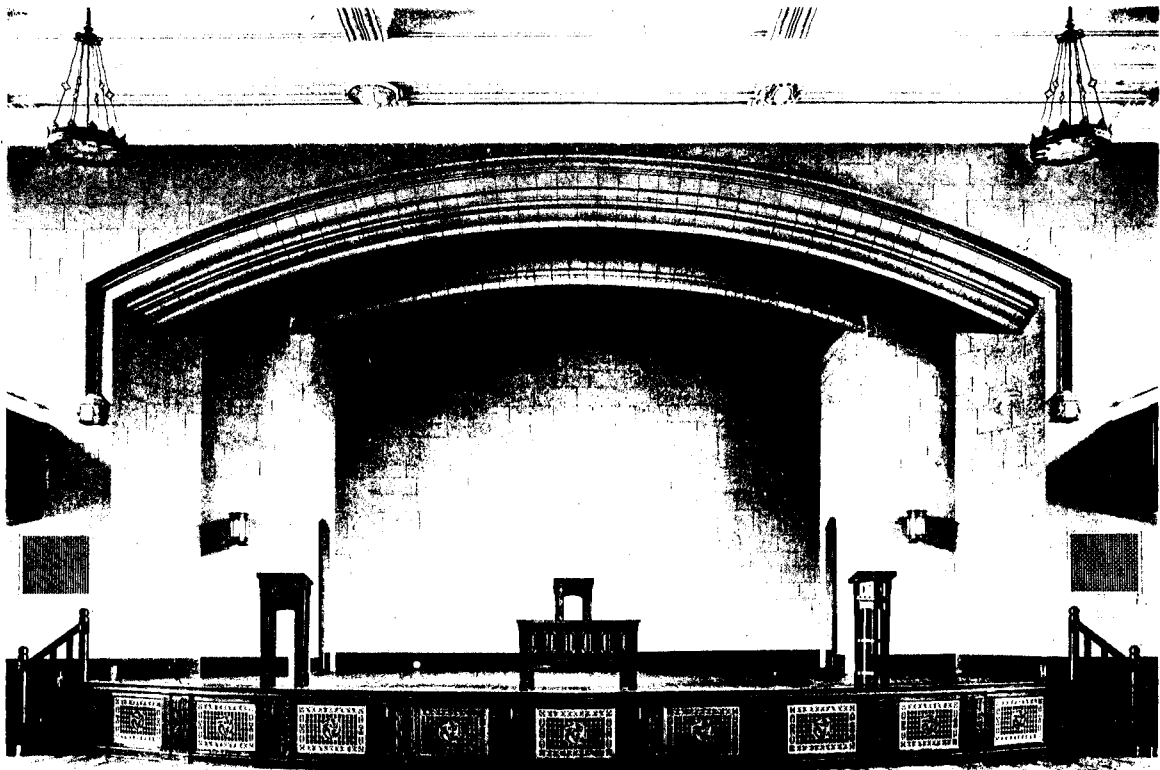
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We Manufactured the Grilles for St. Augustine Seminary

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Interior of New Store of Dunlop the Florist, Toronto. Contractor—James Gow.

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*To All Good Men and Women*

## Greeting

*May you and your loved ones  
be blessed with the true  
spirit of the Christmas festival.*

*And may you enjoy an abundant  
prosperity in the year to come.*

---

*The James Robertson Company, Limited*

*Toronto*

*Montreal*

*Winnipeg*

*St. John*



December, 1915

Vol. 8, No. 12

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H. GAGNIER, Limited, Publishers

GRAPHIC ARTS BLDG., TORONTO, CANADA

BRANCH OFFICES

MONTREAL

NEW YORK



INTERIOR OF CHAPEL.  
ST. AUGUSTINE SEMINARY.

A. W. HOLMES, ARCHITECT.

# St. Augustine Seminary, Scarborough

**A Magnificent Building Situated on the Bluff East of Toronto, and Commanding a View of Lake Ontario and the Surrounding Country. It Owes its Being to The Generosity of a Toronto Millionaire**

AT stop twenty-seven on the Kingston road is the main entrance gate and lodge to the beautiful grounds of St. Augustine's Roman Catholic Theological Seminary. The property, comprising one hundred and twenty acres, extends from the Kingston road to the lake, and takes in about the highest part of Scarborough Bluffs, at a distance of five hundred feet from the road, and approached by a concrete roadway and sidewalk, and on the highest part of the property is located the seminary, facing towards the city.

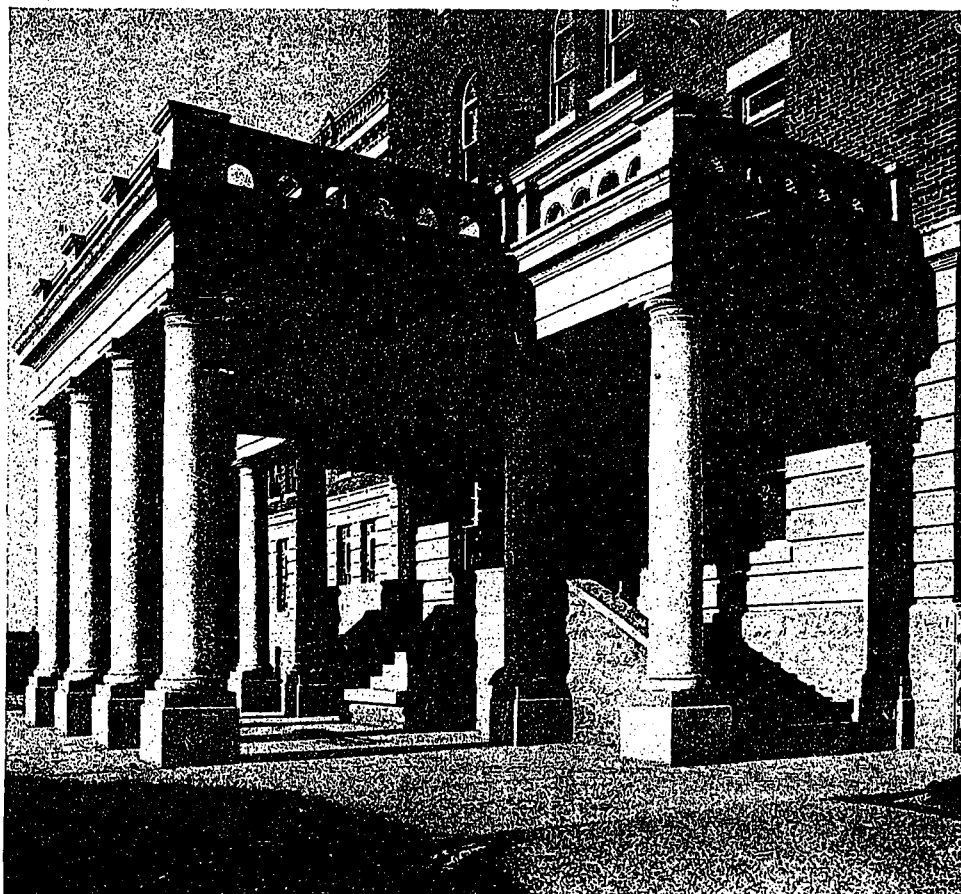
The buildings are completed, with the exception of the wings, running eastward from each end of main building and indicated "future wing" on ground plan. The building complete is arranged for the accommodation of three hundred students and sixteen professors. It is the intention to proceed with one of the wings next spring.

A portico, having granite columns and balustrade, form a covering to the driveway and the granite stairway leading to the principal entrance. Heavy bronze doors lead into the reception hall, which is treated in a somewhat heavy and simple manner, with Ionic pilasters and beamed ceiling, in Caen stone cement finish, and marble mosaic floor. The main staircase hall and corridor adjoining have similar treatment to the reception hall. Professors' rooms and two lecture halls and the stairways occupy the rest of ground floor of the main building. Each professor's suite consists of a study, bedroom, bathroom and wardrobe. The grand stairway in centre extends from the ground floor to third floor, the principal entrance to the chapel being under the central landing at ground floor. The stairways at either end of main building run from basement to top, the north stair well being provided

with an elevator. All stairways are of wrought iron, having slate treads. The first, second and third floors of the main building very only slightly, each containing students' rooms, with a professor's suite at each end of the corridor, and class-rooms. Each student's room is sixteen feet six inches by eleven feet five inches, and contains lavatory and hot and cold water service and a wardrobe. The towers at each end of the building contain the general lavatories for each floor. These are cut off from main building by a lobby, and are fitted up with marble stalls and partitions and tile dadoes and terrazo floors.

From the third floor a stairway leads up to the gallery in dome, and from base of dome are entrances on to the roof, which is used as a promenade.

Chapel.—The chapel, entered from the main staircase hall, is carried out in an Italian character, the floors are of marble mosaic, the walls finished in Caen stone cement, the ribbed and coffered ceiling in "staff."

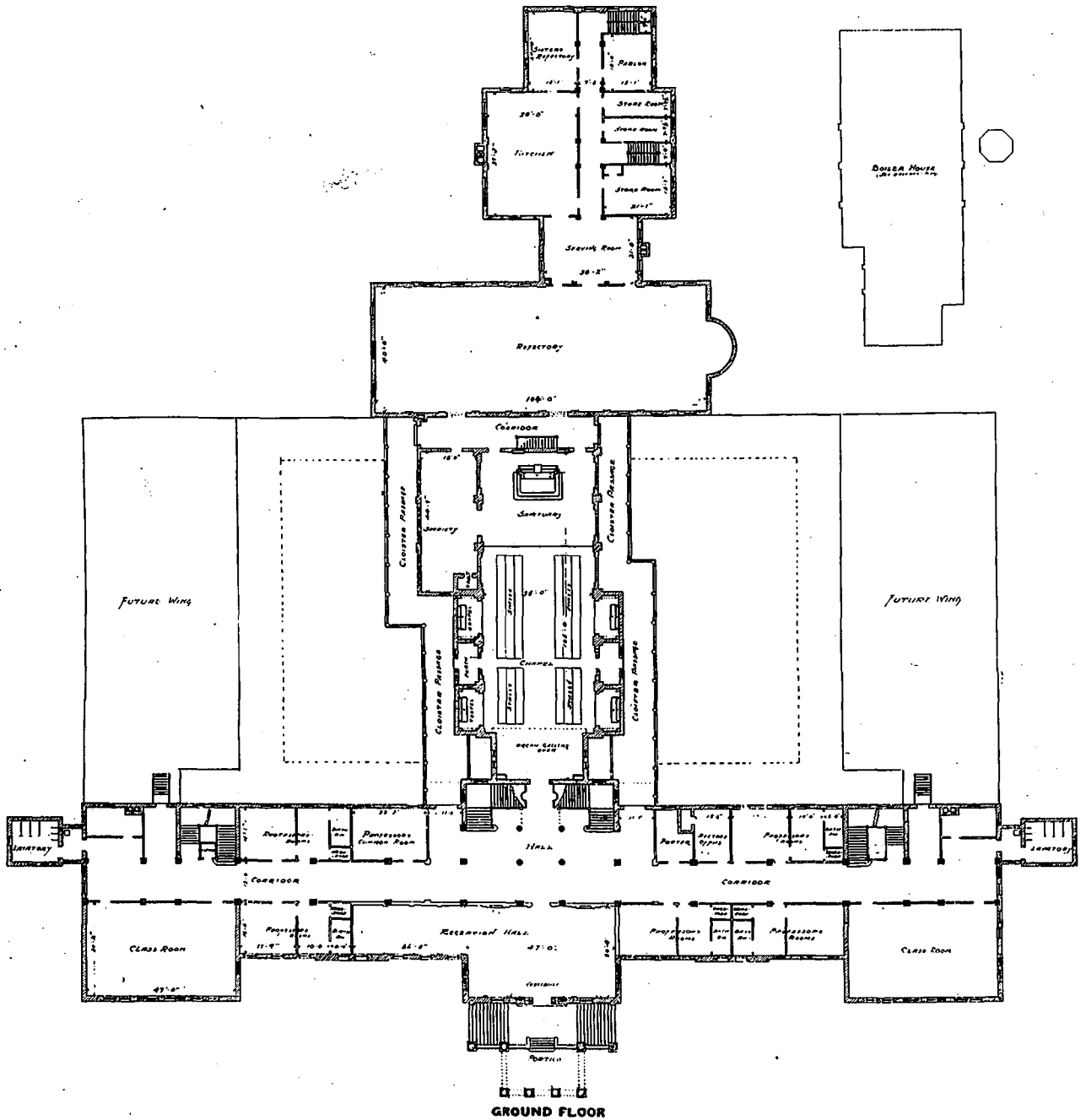


MAIN ENTRANCE, ST. AUGUSTINE SEMINARY.



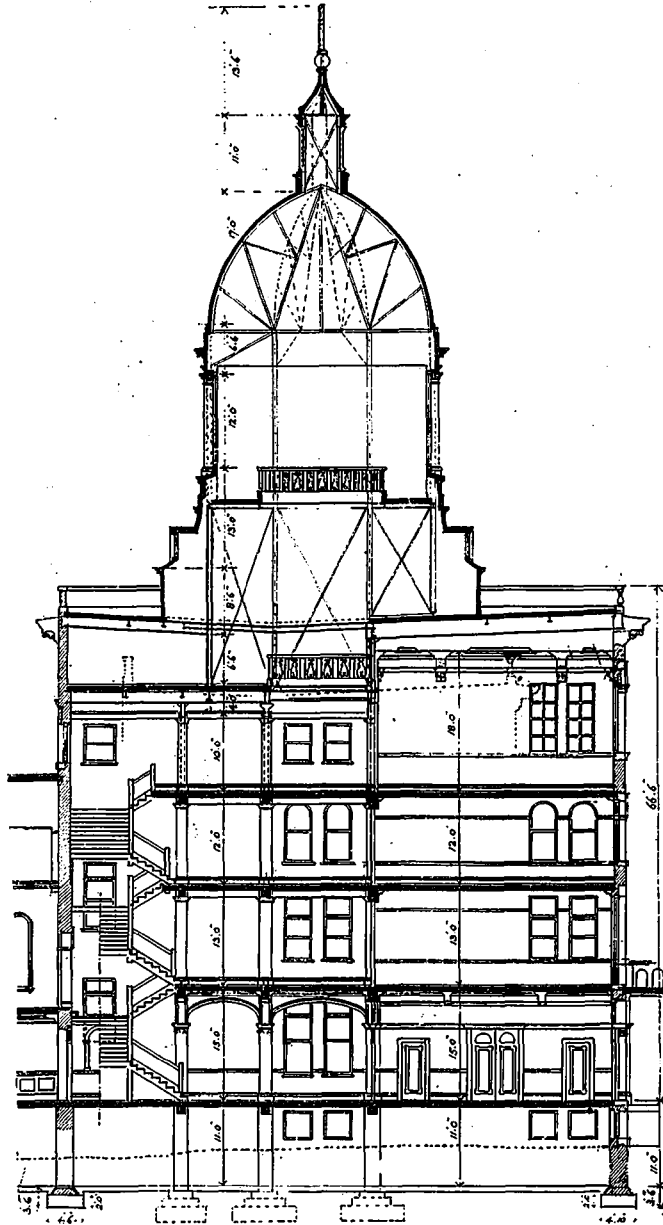
ST. AUGUSTINE SEMINARY, SCARBORO.

A. W. HOLMES, ARCHITECT.



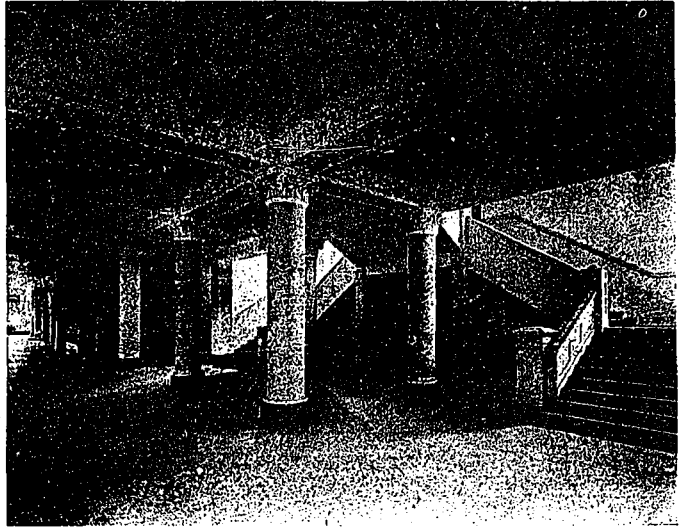
The five altars, and also the reredos of the high altar, and the steps and dadoes of the sanctuary are of marble. The stalls and other furniture are quarter-cut American white oak.

The greater part of the gallery is occupied by a beautiful organ (a gift of Mrs. French), the console of which is placed on the chapel floor adjoining the rear stalls. Exits are provided on each side of the chapel leading on to the cloister passages. Steel trusses support the chapel roof, and also carry the staff ceiling. The roof is reinforced concrete, covered with slate.



SECTION THROUGH MAIN BUILDING, ST. AUGUSTINE SEMINARY.

The refectory is approached from the main building by cloister passages carried along either side of the chapel, from main staircase hall to corridor at rear of chapel. The refectory is one hundred and four feet by forty feet and twenty feet high. The stairway in the corridor leads to the gymnasium, which is the same area as refectory. Adjoining the gymnasium are shower baths and lavatories, etc.



MAIN HALL AND STAIRS, ST. AUGUSTINE SEMINARY.

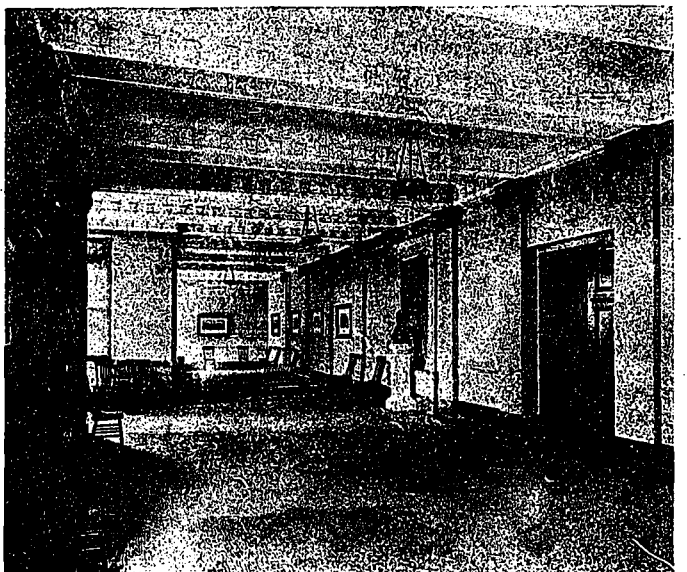
Owing to the formation of the ground levels, the basement storeys of the refectory and kitchen buildings are clear above the grade line. The basement storey of the kitchen contains ice machine and refrigerating plant and store rooms, also laundry department. The ground floor contains the kitchen, which takes in two storeys in height, and sewing room and store rooms, also refectory and parlor for the Sisters.

Lighting is supplied from the city service. All heating pipes, conduits, etc., are carried through a subterranean passage connecting the powerhouse with the main building, as indicated on basement plan.

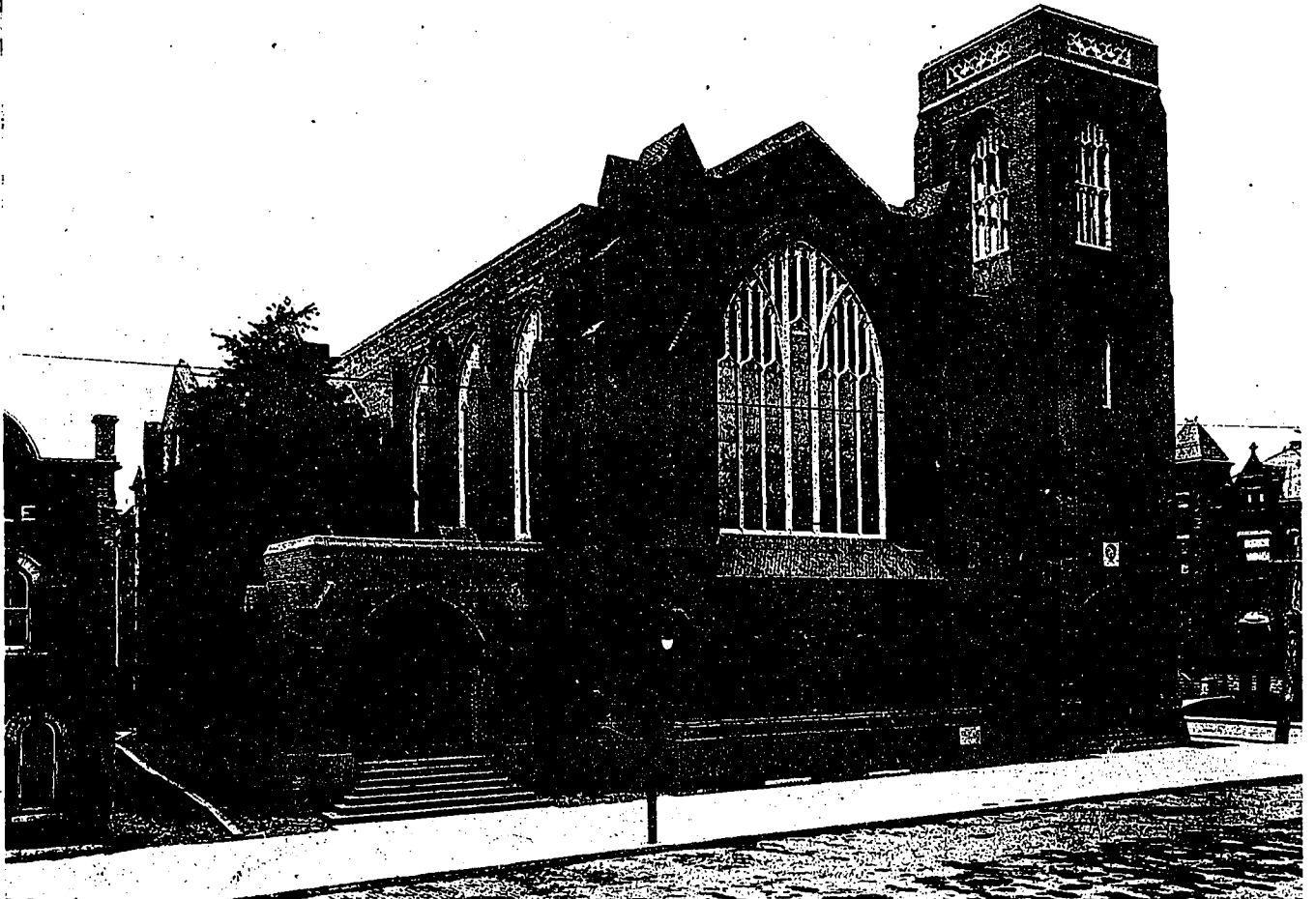
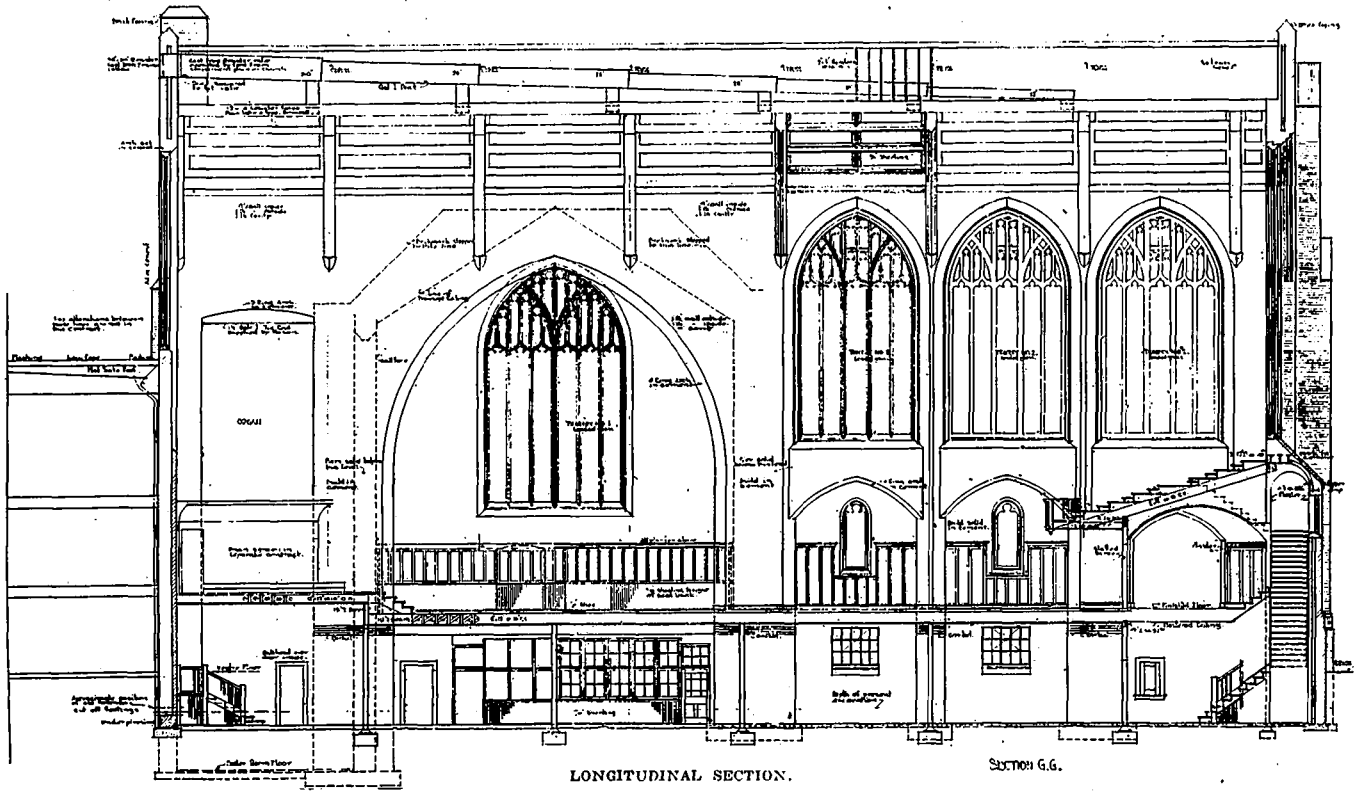
The building is of fireproof construction, the principal materials being brick for all bearing walls, and floors and roofs of reinforced concrete, and partitions of porous terra cotta.

Sanitary fireproof composition flooring has been used extensively.

The dome, thirty feet in diameter, is of steel and concrete, and covered with copper. The total cost of the building amounted to over four hundred and fifty thousand dollars.



ENTRANCE HALL, ST. AUGUSTINE SEMINARY.



SOUTH VIEW, KNOX PRESBYTERIAN CHURCH, STRATFORD.

LINDSAY, BRYDON & GREIG, ARCHITECTS.



# Knox Presbyterian Church, Stratford

One of The Best Examples of a Modern Church to be Found Outside of The Large Cities

THE new Knox Church, Stratford, has been built to take the place of the original building, which was, unfortunately, struck by lightning and burned beyond repair.

The new building is cuneiform on plan, with a nave forty-five feet clear in width transepts, chancel, narthex and small gallery over the narthex.

The entrances are wide, each doorway having two pairs of double swivel doors, and at the dedication services, when the congregations were more than the actual capacity of the building, *i.e.*, one thousand two hundred, the place was cleared in seven minutes. The narthex and porches are very commodious, and allow plenty of crush space and room for standing around.

The main floor of the church is divided into side aisles, which are passages only, with no seats in them; and centre aisle and the transepts. The view of the pulpit is clear from every point, and the choir is as well seen as necessary. The flooring is of maple.

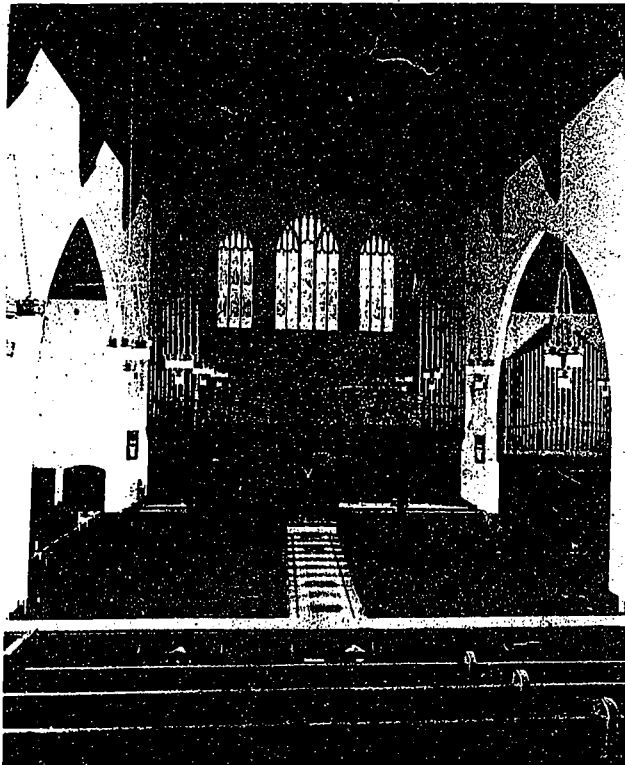
The gallery is specially comfortable, being kept as low as possible to give proper length to the interior and to shorten the stairs. The stairs start up from either end of the narthex and meet in the centre of the gallery under the great window.

The chancel contains choir stalls for sixty choristers, pulpit, font, communion table, minister's chair, which has a rich drape over the back, and elders' seats. On both sides the organ is grouped over projecting organ cases. The console is behind the elders' seats in the centre of the chancel. The organ chamber is to one side of the chancel, with large arches, both to the chancel and the transept. The pipes on the side of the chancel next the organ chambers are speaking pipes, but those on the opposite side are for future solo organ.

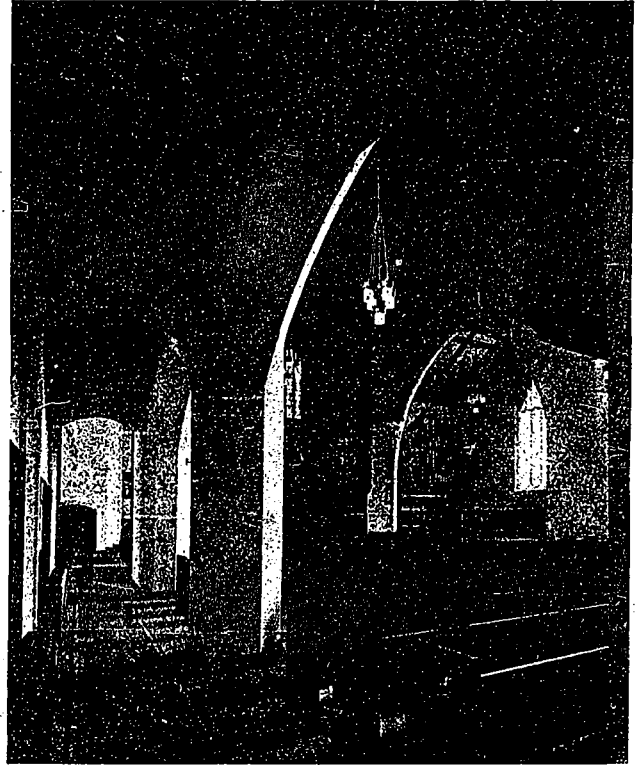
The choir vestries are under the organ chamber, but on level with the chancel floor, the access being very easy. The minister's vestry is below the choir vestries.

The basement accommodates the banqueting hall, kitchen, heating chamber, large coat room and men's and women's lavatories and fireproof vault. It is entered from the Sunday school and from the church narthex. The lighting is excellent. Service from the kitchen is convenient—as those serving the tables do not require to enter the kitchen, but lift the trays from the service screen.

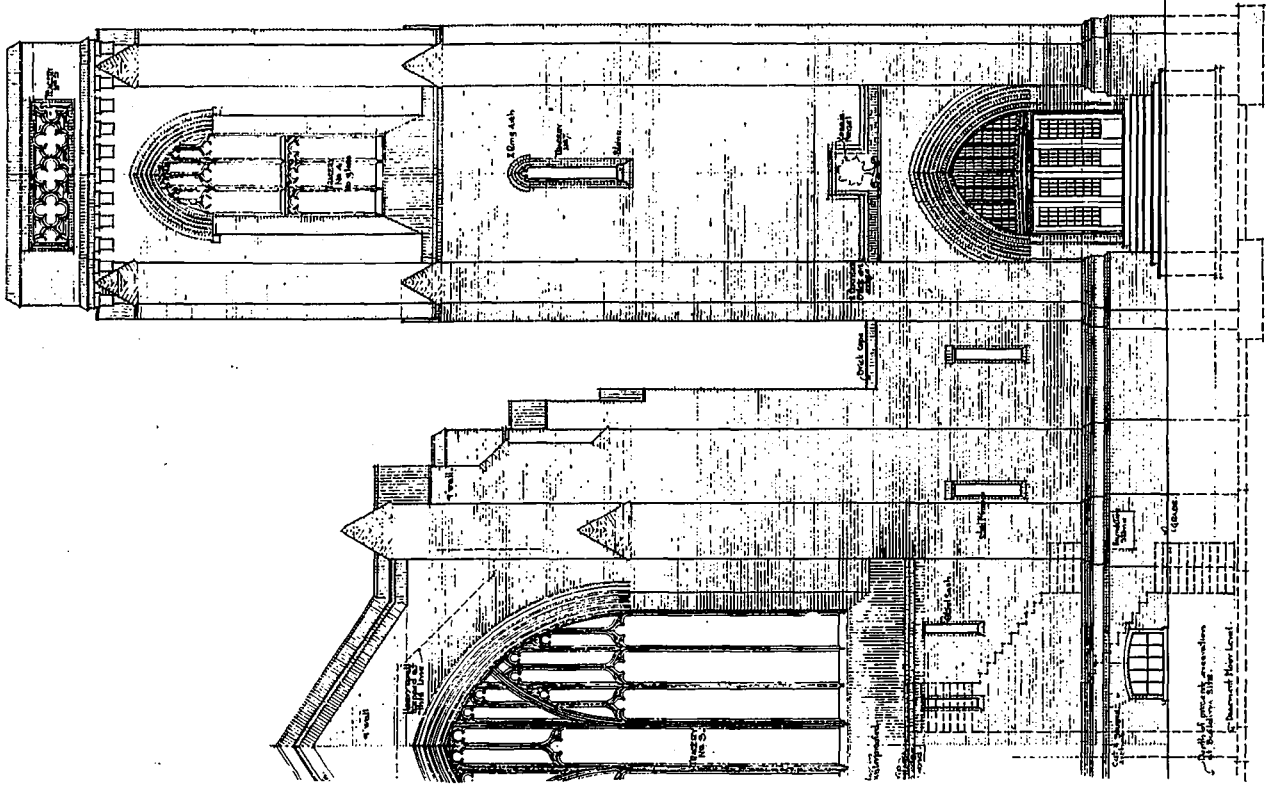
The heating chamber is under the vestries, and is arranged to heat the Sunday school in the future as well, the two boilers installed having



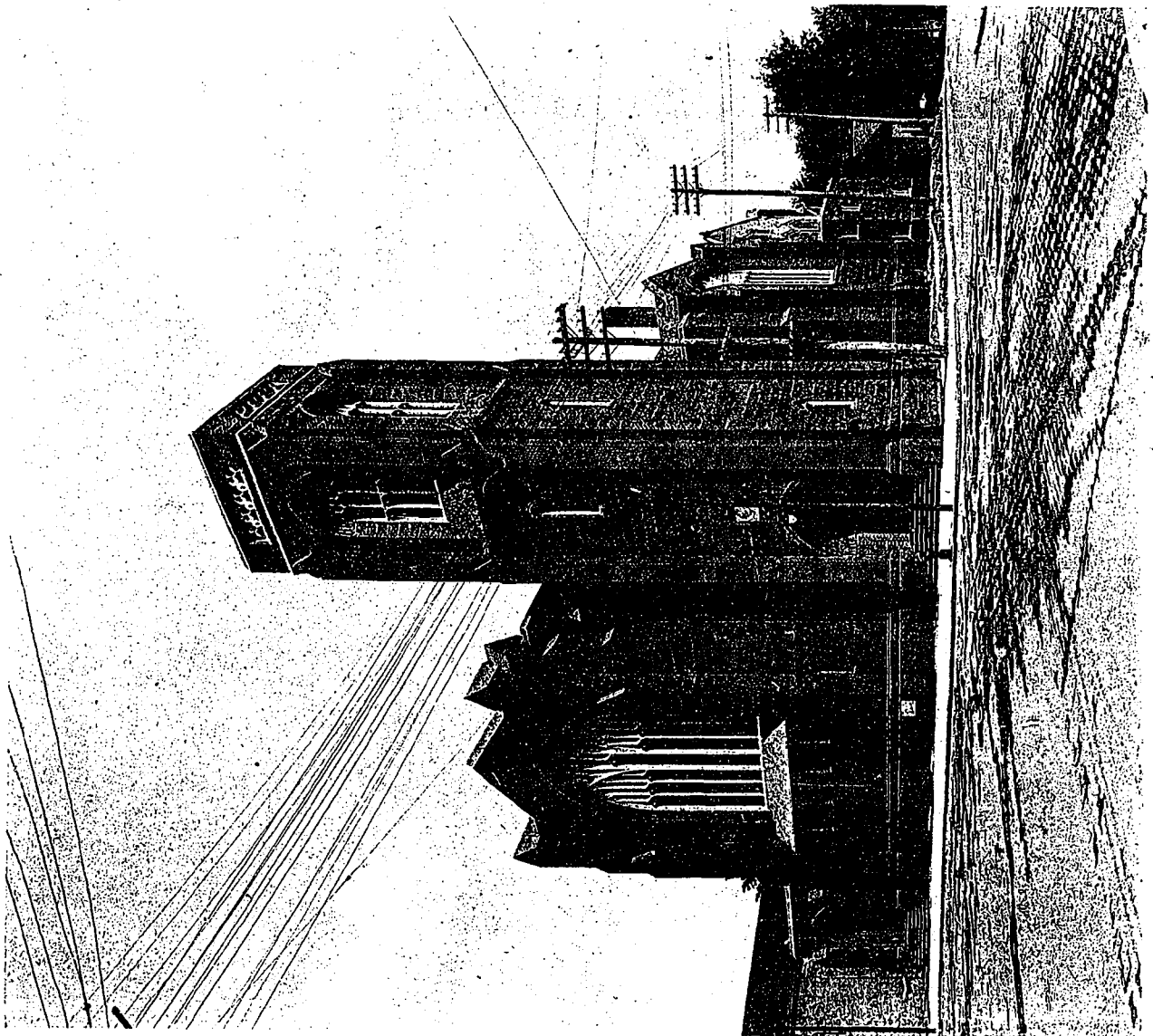
NAVE, KNOX PRESBYTERIAN CHURCH, STRATFORD.



SIDE AISLE, KNOX PRESBYTERIAN CHURCH, STRATFORD.

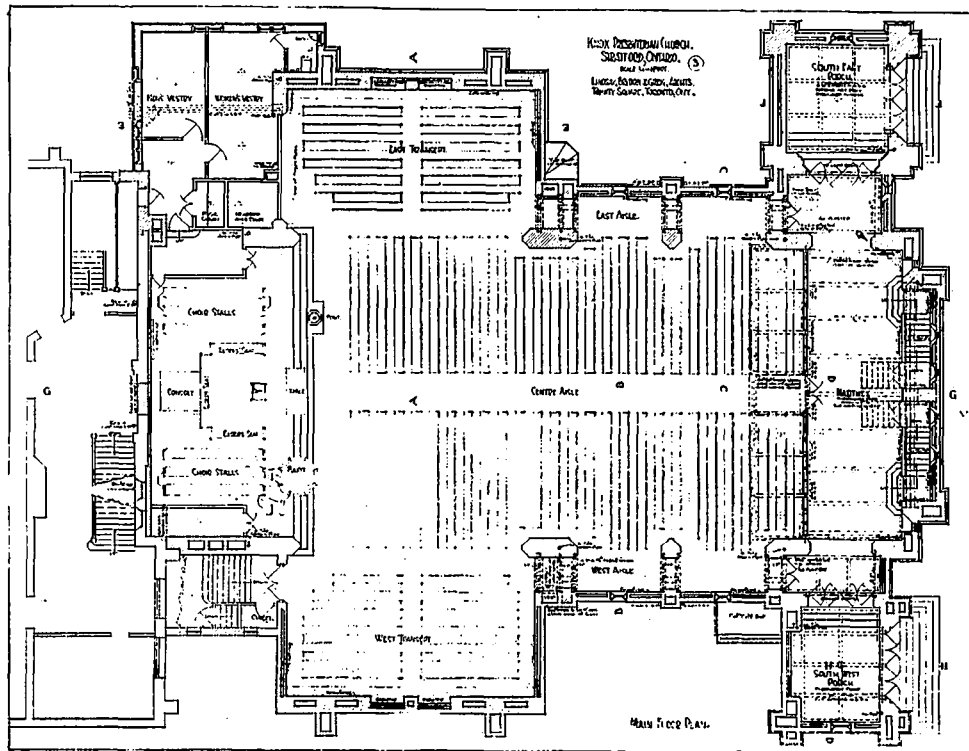


SOUTH ELEVATION.



KNOX PRESBYTERIAN CHURCH, STRATFORD.

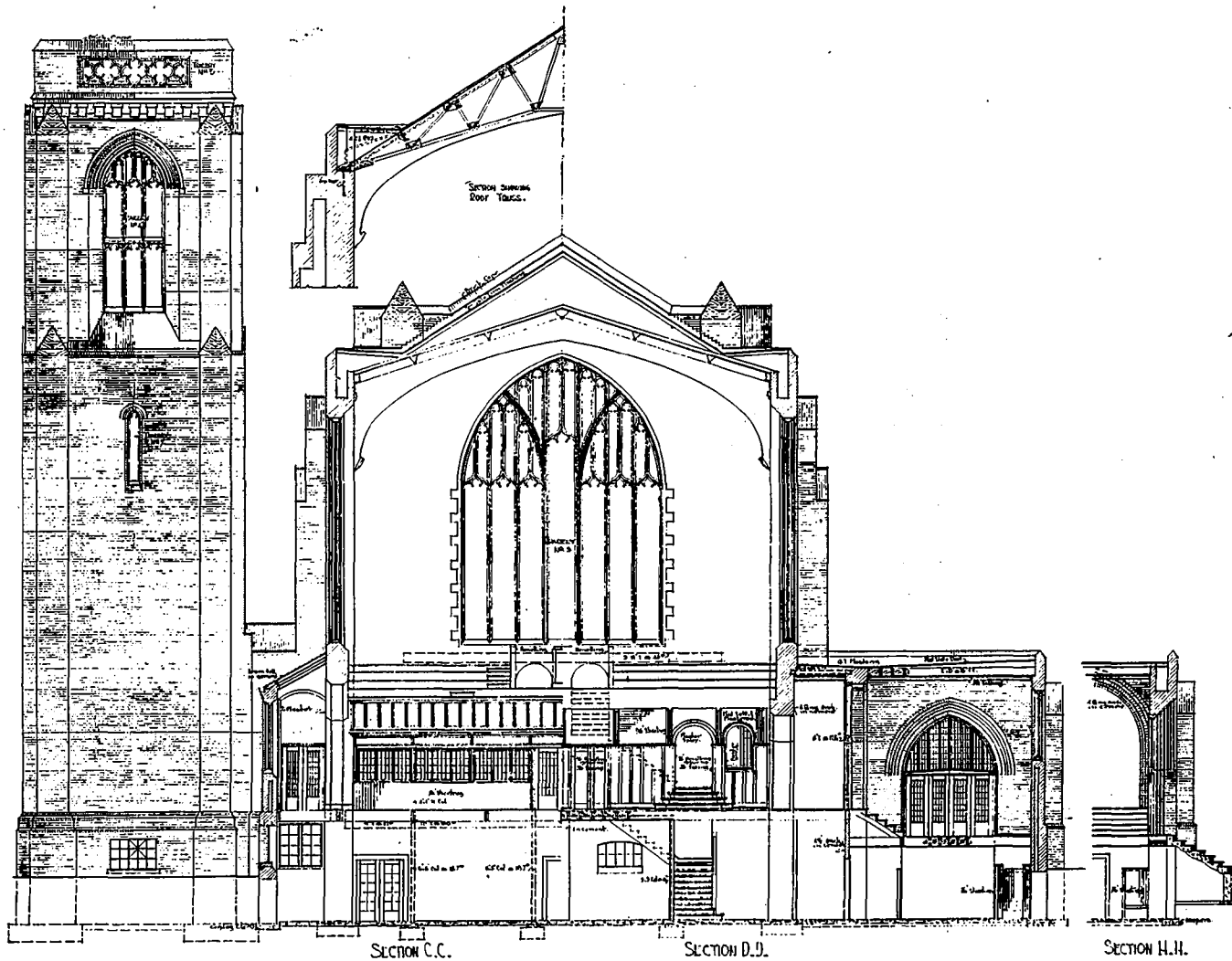
LINDSAY, BRYDON & GREIG, ARCHITECTS.



KNOX  
PRESBYTERIAN  
CHURCH,  
STRATFORD.

LINDSAY,  
BRYDON  
&  
GREIG,  
ARCHITECTS.

MAIN FLOOR PLAN,



sufficient capacity required for this purpose.

The heating is by a modulation system by direct and indirect radiation. The indirect radiators heat the basement when they are not required in the church.

The lighting of the church is by specially designed fixtures hung on chains on both sides of the nave. The basement is lighted by indirect fixtures.

The style of architecture is rectilinear type, suitable to brick and cement stone, the effect being obtained more from mass than detail.

The details of the tracery are kept open, so that the casting is simplified; no attempt is made to imitate cut stone moulding.

The windows at present filled with white glass actually over-light the interior, but when they are all filled with stained glass the lighting will be pleasantly subdued.

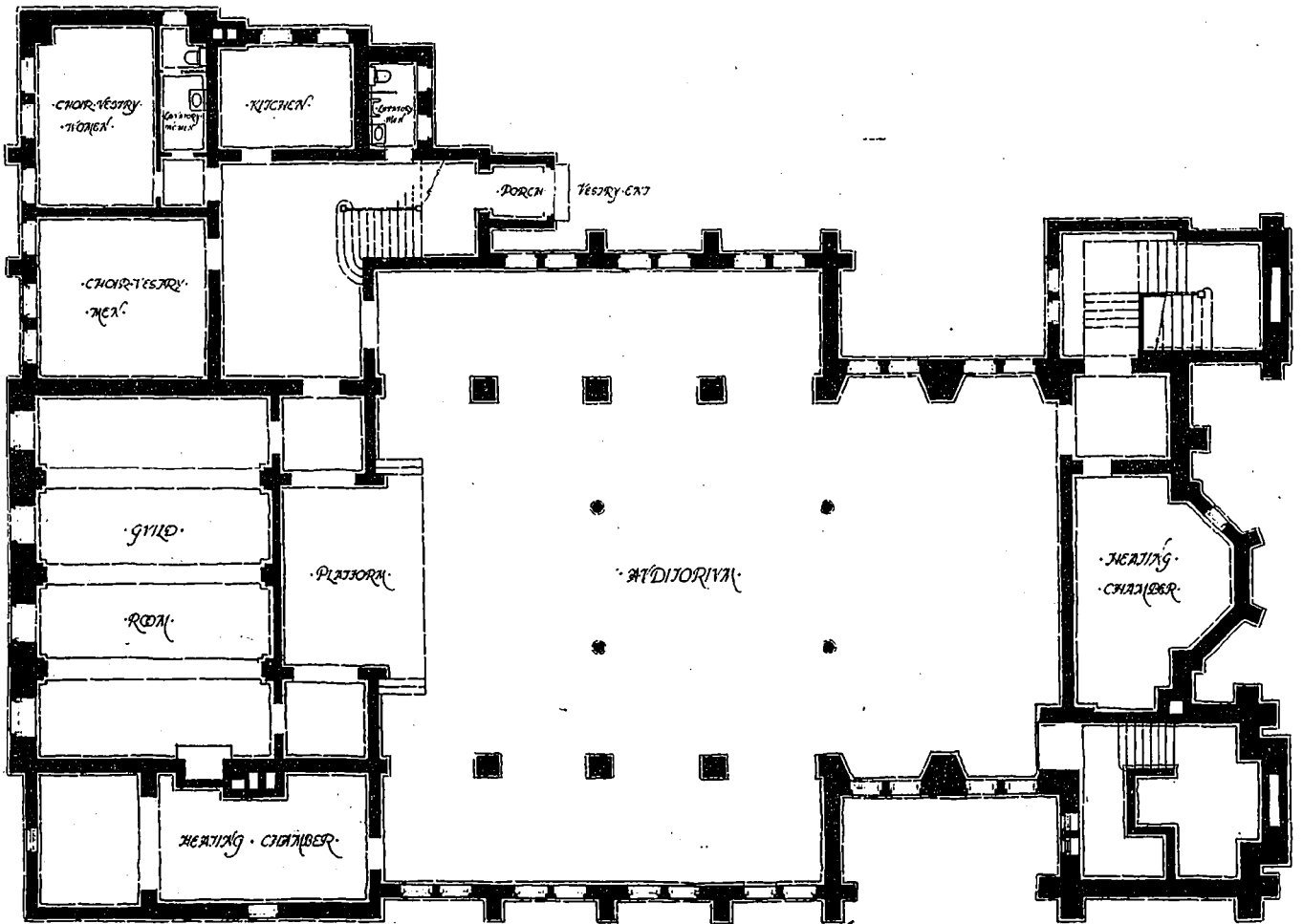
The great window over the gallery and the three windows over the chancel are at present filled with stained glass, the subjects being the "Ascension," the "Sermon on the Mount" and the Old and New Testament Prophets, prospec-

tively, and a complete scheme has been drawn up for future decoration of the other windows.

The interior is finished in chestnut, stained a rich brown. The ceiling is entirely wood, in the church and also in the narthex. The walls are panelled eight feet high, and the chancel paneling and organ screens are eleven feet high, forming a sounding board. The seats and chancel furniture are to special detail of quartered oak, fumed. The narthex and porch floors are of fireproof composition.

The general effect of the exterior is massive; the high walls and deep buttresses give the dignity necessary to a building which occupies the principal corner in Ontario street. The whole building dominates the surrounding neighborhood, and can be seen well from the railway as a distinct landmark, the rich tapestry brick being thrown up in relief against the yellow brick common in the neighborhood.

The acoustics are a happy medium, the interior has the ring or resonance necessary for music, and yet the preacher is well heard, there being no echo; no kind of correction has been found necessary.



BASEMENT PLAN.

# Church of St. Mary The Virgin

THE Church of St. Mary the Virgin, on Westmoreland avenue, Toronto, is a brick church, in which there has been throughout an adherence to brick design, without any attempt to imitate the effects of Gothic design in stone. For this reason there is no tracery in the windows.

Large windows were needed in the east and west ends, as there is no clerestory and the side lighting comes chiefly from the outer walls of aisles. In the absence of tracery, this large window area at the east and west ends has been got by grouping single windows in threes; and in the side walls they have been grouped in pairs.

The jambs of windows and all openings are enriched only with bevelled brick, usually double recessed. There is no other enrichment to the brickwork, except, on the outside, dark headers taken from near the fire. With the help of excellent brick and workmanship, there is a certain dignity and richness in the mass of the brickwork, and in the constantly recurring bevelled edges, which is not unworthy of monumental design.

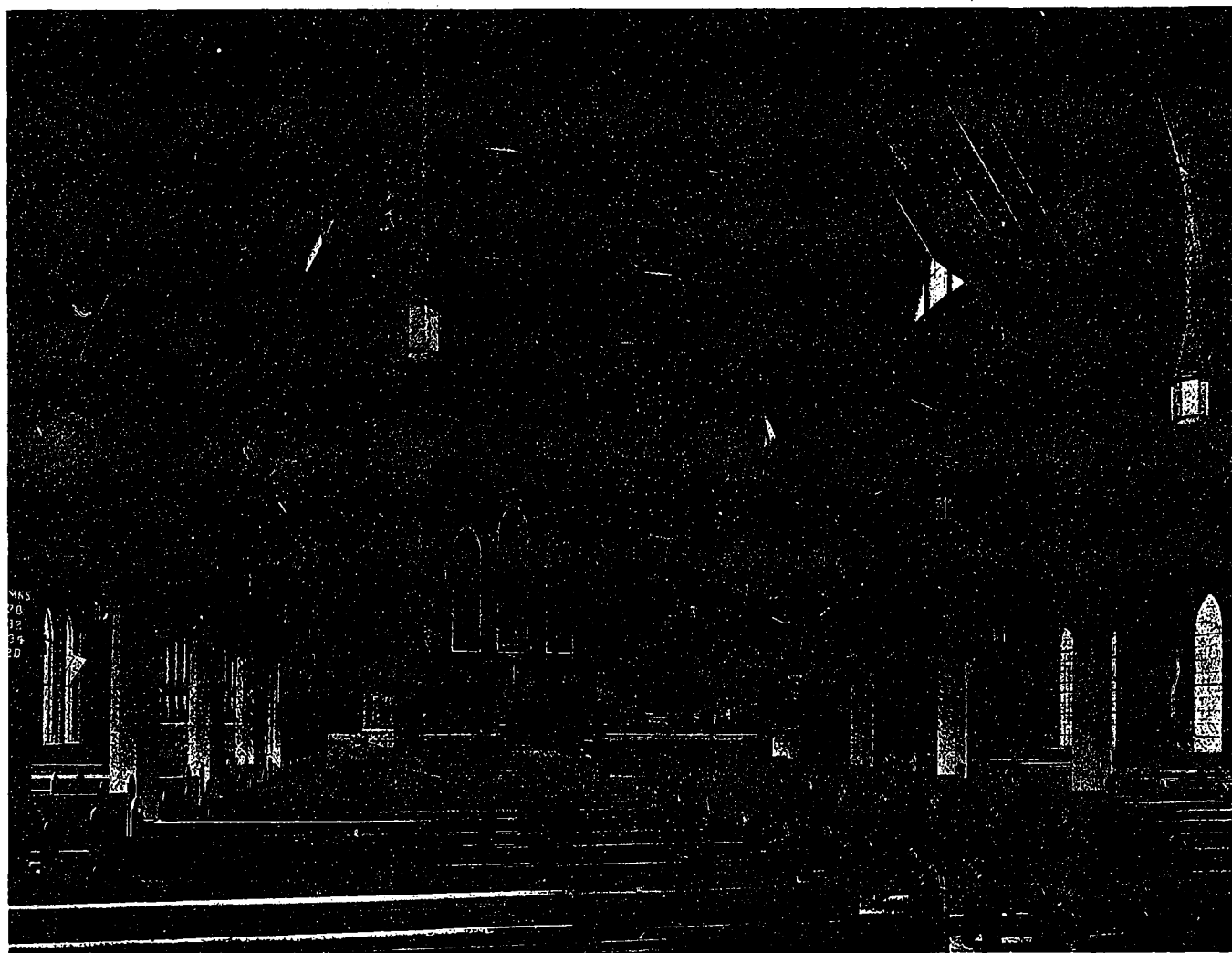
There is, of course, plenty of stone in the proper places: Stone steps, stone sills and drips and springers, stone buttress caps, copings and kneelers; stone columns on the inside, and stone corbels for the trusses. These latter are left rough, to be carved, some day, with heads of the Apostles. In a general way, however, though there is stone wherever durable construction requires it, there is none at all that is intended merely for enrichment.

The roof is of Douglas fir, stained dark with solignum stain.

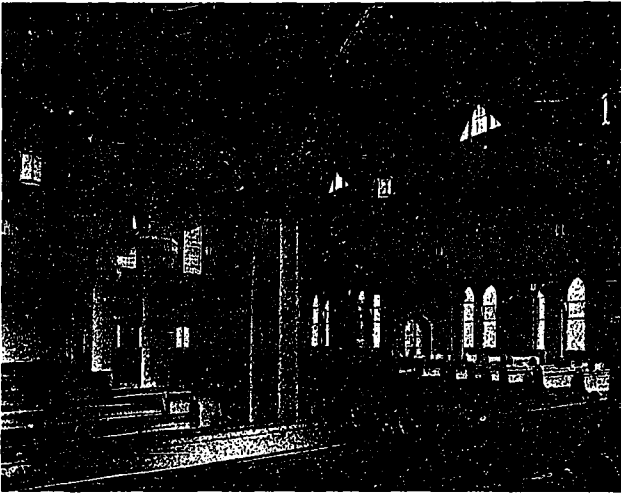
The windows are glazed with white rolled cathedral glass, leaded in rectangles. External colors of sky, clouds, trees and brick walls diversify the tone of this glass; but the prevailing tone is white, and is repeated down the body of the church by the ground glass of the electric light lantern pendants.

As the seating is of the same color as the roof, there are but three main colors in the interior—red brick, brown woodwork and yellowish white glass. The stone is also red, from New Brunswick.

In order to get a high basement, twelve feet



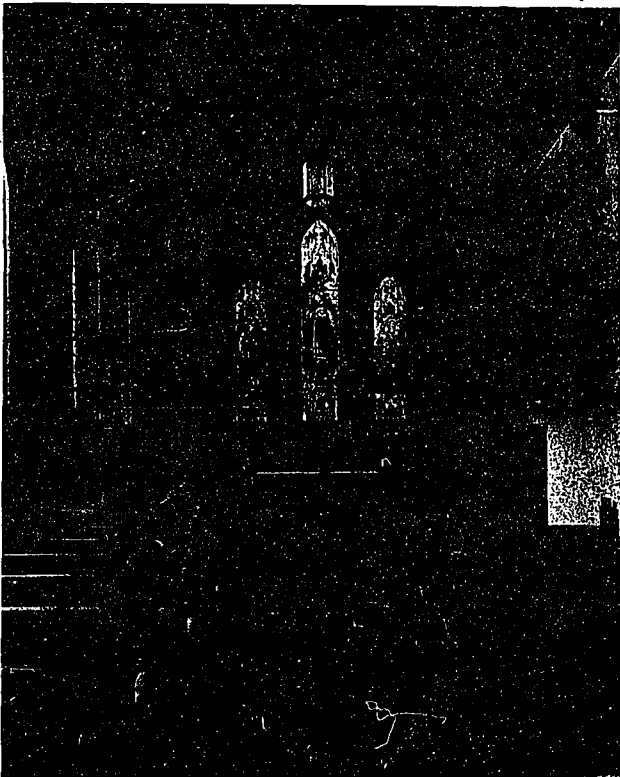
INTERIOR VIEW, LOOKING WEST, CHURCH OF ST. MARY THE VIRGIN.



INTERIOR, LOOKING EAST, CHURCH OF ST. MARY THE VIRGIN.

in the clear, the floor of the church is eight feet above the grade line, requiring an ascent of fourteen steps to reach it. These steps have been kept inside, partly for convenience and economy, and to allow the building to extend to the front as far as possible, but chiefly that the height of the church floor might not be "accused" on the outside. The entrance doors being only two steps high, the church has the look of close connection with the ground which we are accustomed to see in old churches, and to desire in modern churches in order that the single purpose of the church may be manifest in its exterior appearance.

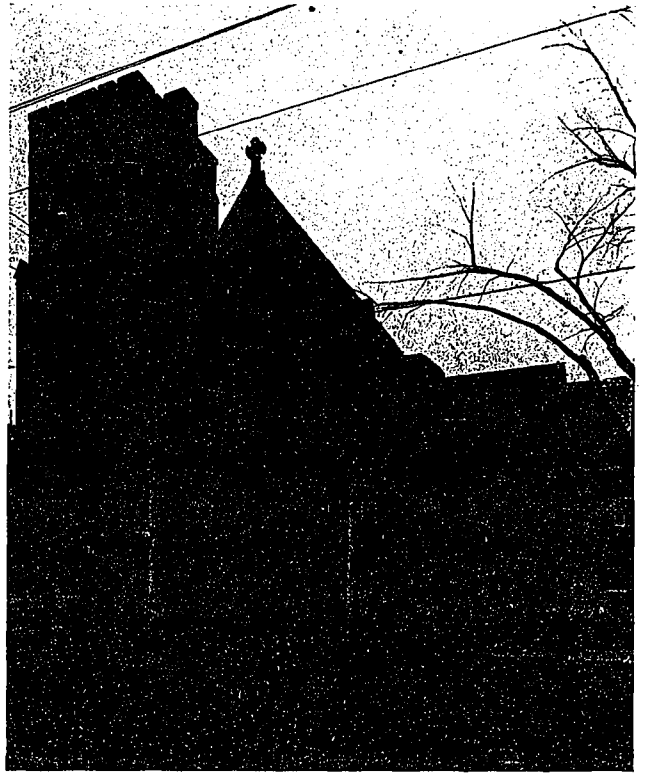
The mediæval parish church in England was just as "institutional" as our churches of any denomination are in Canada. They had the full equivalent of the modern guilds, clubs, festivals, and even sales of work (chiefly then of things



CHAPEL OF ST. MARY THE VIRGIN.

to eat), and the place of our civic holidays, labor days, etc., was filled by an abundance of holy days in which the social life of the parish centred in the church. But they had not discovered the high basement. When they had a basement at all, they buried the dead in it, but not the living. The floor of the church—which really was a floor, not being hampered by fixed seats—must have served for such assemblies, and a devotion that, if less profound, was more all-embracing, sanctified all that was done in the name of the church.

Our greater complexity is symbolized by the inhabited basement. The exterior of the church



EXTERIOR VIEW, CHURCH OF ST. MARY THE VIRGIN.

suffers as a consequence in unity of design.

The basement of the church before us now, and indeed the whole church building, consists of two parts, *viz.*, the space under the body of the church and the rooms under the chancel and in the vestry wing. The large assembly room under the main body of the church is heated only by the hot air, which is the main reliance of the church. This heat is only on for Sundays or special occasions. The rooms of the vestry wing on both floors, and the guild room under the chancel, which are cut off from the assembly room by doors, are heated by hot water, and are kept always warm. Here is the part of the church in which the daily services and weekly meetings are held. The guild room and choir vestries are equally available for meetings.

The chapel, for the daily and minor services, is fortunately lifted above the basement, and opportunity has been taken to give it a proportional loftiness which cost prohibited for the large area of the main church.

# St. Ann's Church, Toronto

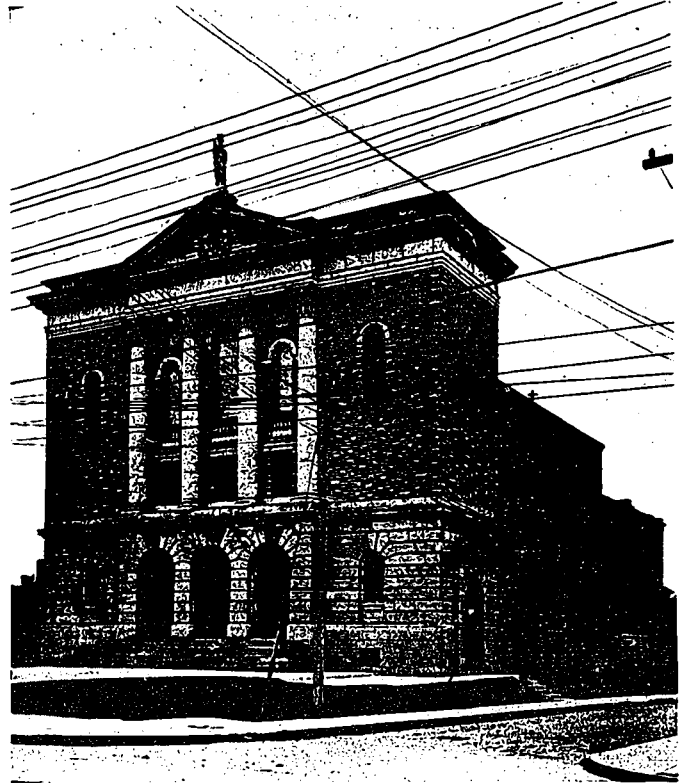
THESE buildings, having the principal elevations facing Gerrard and DeGrassi streets and First avenue, were completed (with the exception of the towers) last year, the church being dedicated by His Grace Archbishop Mc-Neil on July 26th.

The church and rectory are of St. Mary's stone, with Indiana stone dressings to the first storey, and art stone cornices and architraves, etc., above. The character is that of a Roman church of the sixteenth century, and is planned to accommodate eight hundred and fifty. The interior width is sixty feet, the nave thirty feet wide, separated from the aisles by Corinthian colonnades and finishing in a barrel-vault ceiling, divided into bays by heavy ribs, springing from pilasters above the columns. The aisle ceilings are groined and vaulted. The sanctuary and side chapels have apsidal ends, and are furnished with marble altars and statuary. The sacristy is built around the chancel with entrances to sanctuary on either side, and the sacristy entrance on east side communicates with the rectory, which faces First avenue. A lofty basement, of the same area as church, is used as a parish hall. The interior ornamental work is carried out in "staff," and the walls and ceilings finished rough stucco.

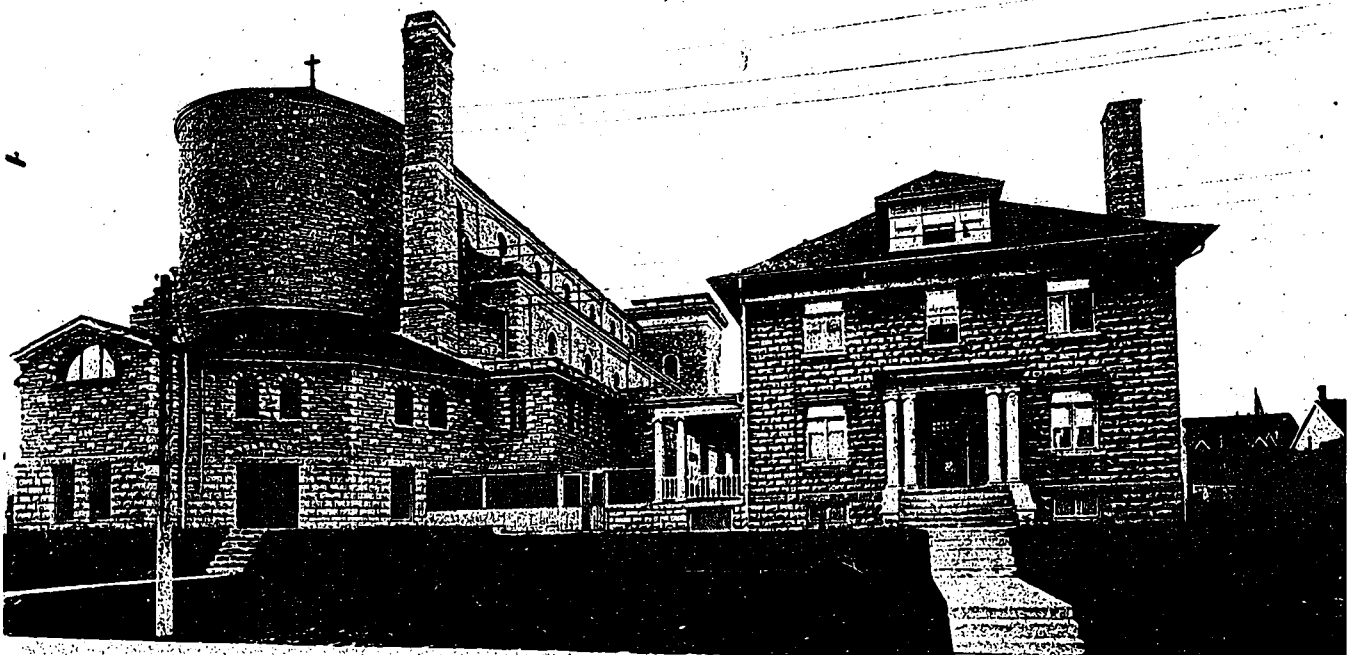
Entered from the narthex is the baptistery, in ground floor of east tower. This is octagonal on plan and finished with dome vault. The west

tower has entrances to church and basement and stairway to organ gallery.

The total cost of the buildings amounted to about one hundred and ten thousand dollars.



FRONT VIEW, ST. ANN'S R. C. CHURCH.



REAR VIEW AND PRESBYTERY, ST. ANN'S R. C. CHURCH.

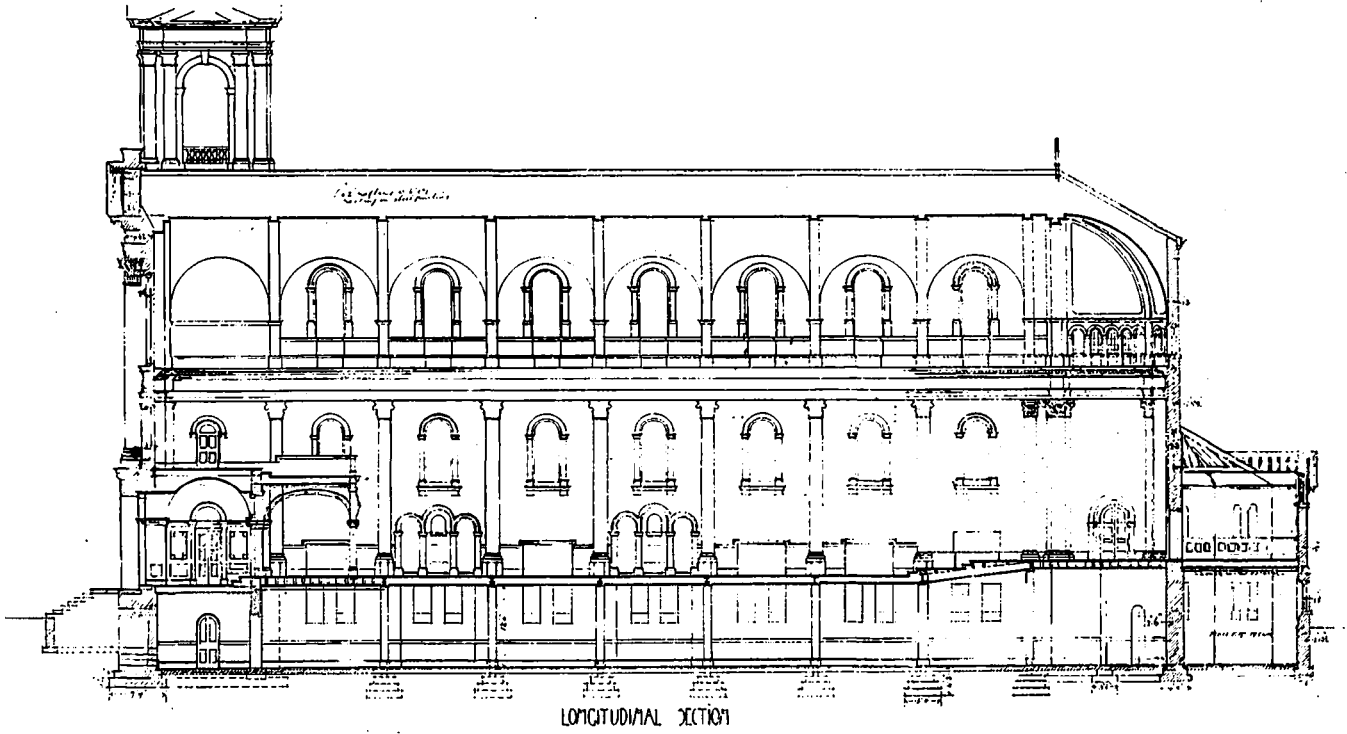


INTERIOR, SHOWING ORGAN LOFT.

ST. ANN'S R.C. CHURCH.

A. W. HOLMES, ARCHITECT.



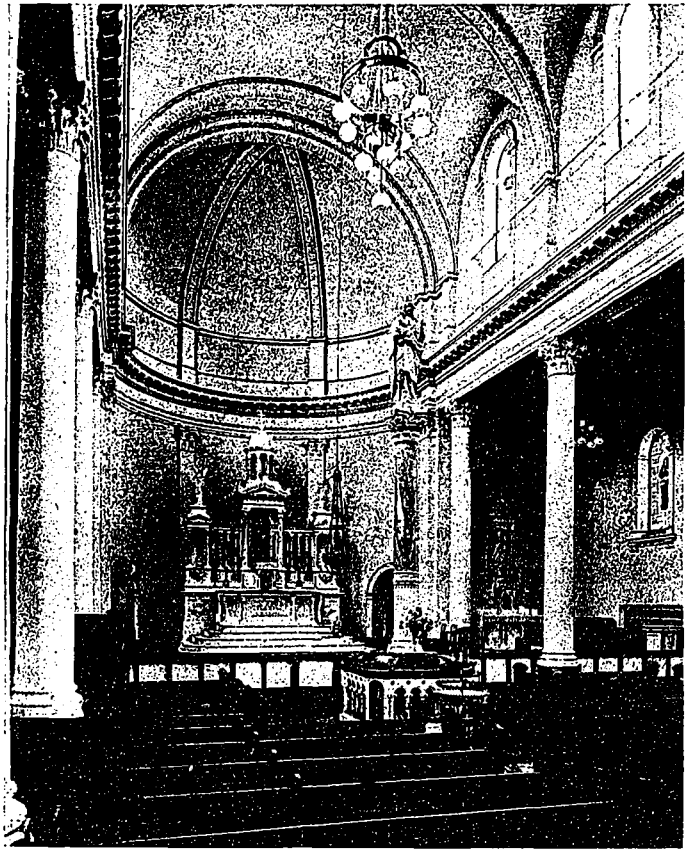
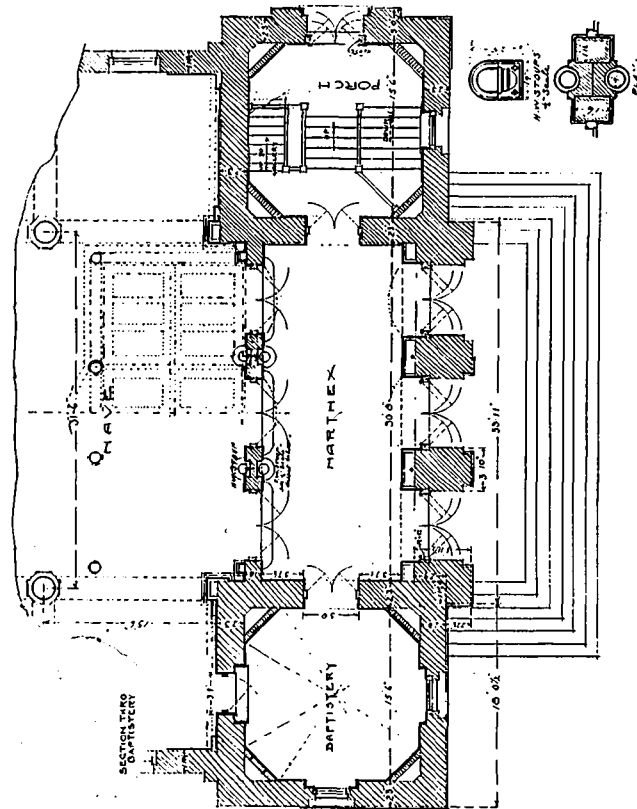


INTERIOR VIEW, ST. ANN'S R. C. CHURCH.

A. W. HOLMES, ARCHITECT.

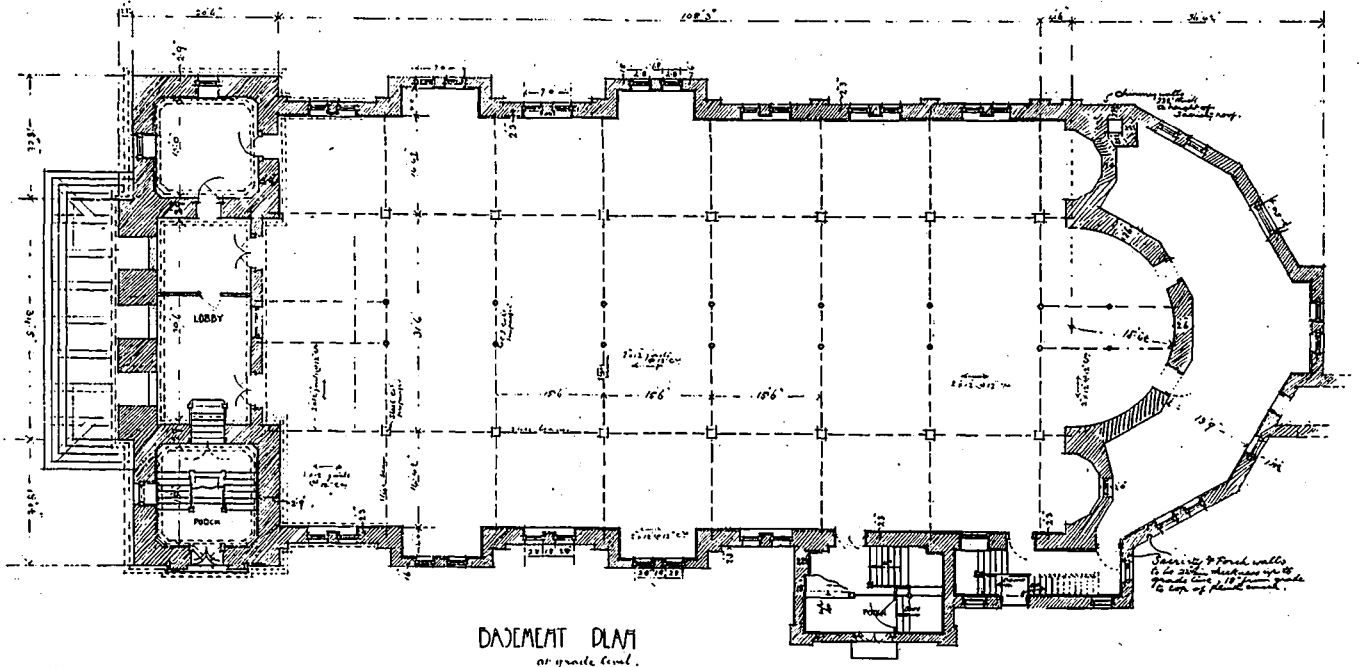
A BROADER use of marble for the exterior of public and semi-public buildings has in the last few years become quite noticeable. An important project showing the employment of this material on which construction work has recently begun is the new Field Museum of Natural History at Chicago, which is being built at a cost of \$5,000,000. The structure will be completed, it is expected, in less than three years, and more than three thousand men will be employed in the work. When finished it will

be the largest marble building in the world. It will consist of three storeys and a basement, and will cover an area of seven hundred feet by three hundred and fifty feet. The floor area of the museum will be six hundred and seventy thousand square feet, of which four hundred thousand square feet will be devoted to exhibition purposes. The remainder will be used for scientific laboratories, lecture halls, offices and a restaurant. The material employed will be native marble.



NARTHEN, BAPTISTRY, NAVE AND PORCH, ST. ANN'S R. C. CHURCH.

VIEW OF ALTAR, ST. ANN'S R. C. CHURCH.



BASEMENT PLAN  
at granite level.

# Kew Beach Presbyterian Church

**K**EW BEACH CHURCH is situated on the east side of Wineva avenue, north of Queen street. The old church, which was converted into a Sunday school, is to the south of the new building.

The plan is a solution of a problem set the architects by the committee, and produced by an inadequate lot, which had the further disadvantage of being very steep. The building contains main auditorium, chancel, gallery, organ loft, choir and minister's vestries, which form a wing connecting to the Sunday school. The structure is of pier construction, with curtain walls, the windows taking up the whole area between the buttresses. The buttresses are not ornamental only, but do their share in carrying the huge roof trusses. The roof trusses rise from the floor level, the supporting column being bolted to concrete abutments. The foundation is of concrete to the main floor, but the brick covers it from the grade level.

The upper walls are entirely of stock brick, faced inside and outside, so that there is no plaster. The walls between the piers are panelled with chestnut. The piers are finished in brick to the floor. All the woodwork, including the furniture, is chestnut stained. The windows are cement stone, with steel sash and leaded glass. All windows are double glazed to prevent

radiation of heat outwards in winter time. The choir is seated antiphonally with the consol central behind a screen. The communion table is in the centre, and the font and pulpit on either side. The organ is over the choir in the end of the church.

The acoustics of the church are perfect, both for music and speaking, and all seats have a clear view of the pulpit and choir.

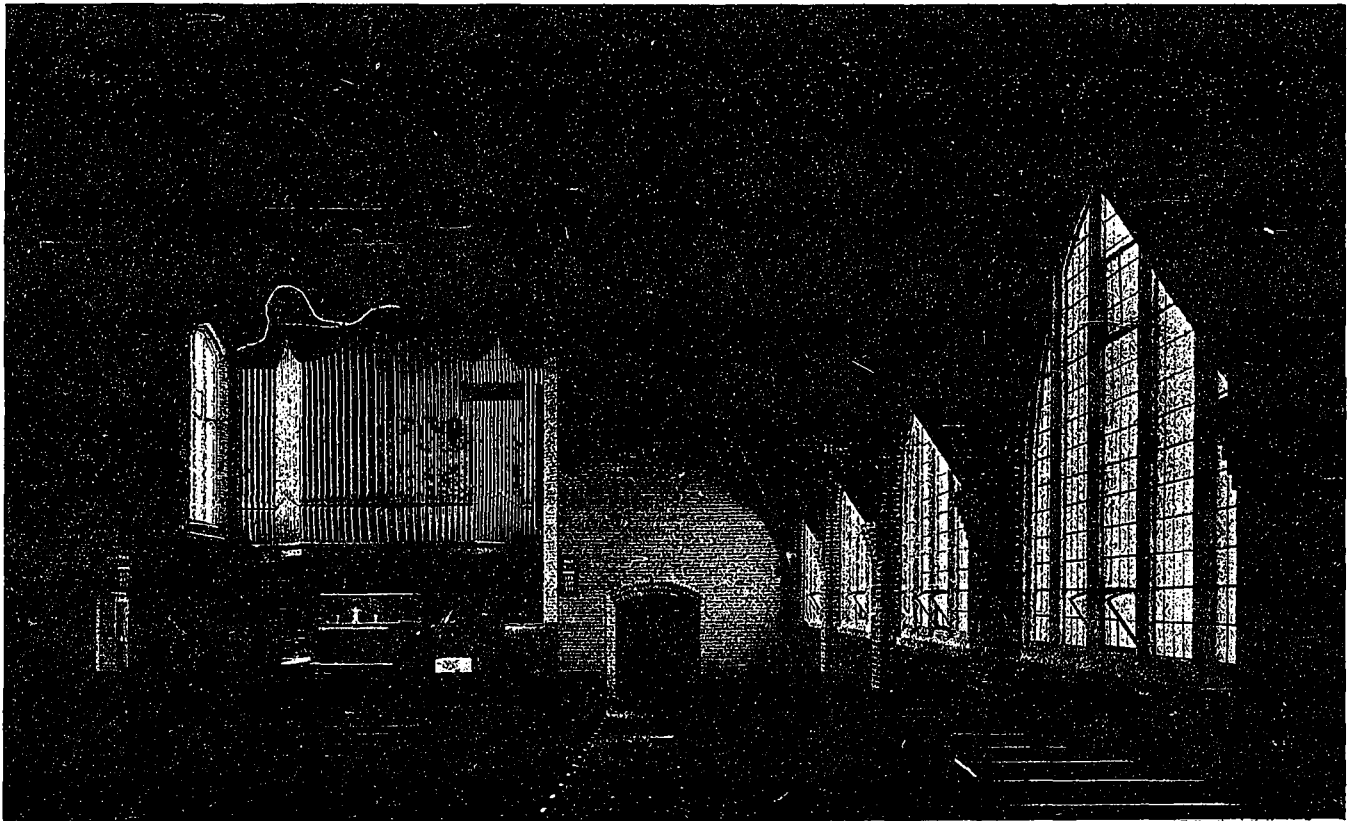
Access to the gallery is from one end of the narthex, which is inside it. The basement is unfinished, but is left for future use, and entrances are arranged from both ends. A small kitchen and men's and women's lavatories are placed in the basement.

The heating is by a system of five hot-air furnaces.

The electric lighting is by a system of direct-indirect fixtures, which is economical and easy on the eyes. This can be better understood by reference to the photographs.

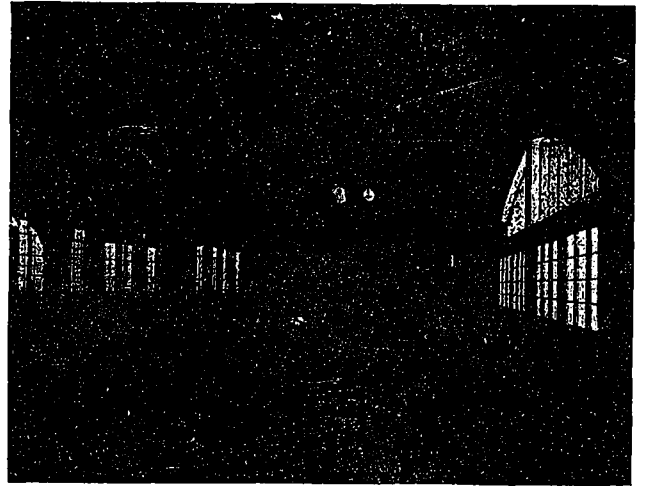
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To test the economic value of the tar sands of Northern Alberta, it is proposed by the Department of Mines of that Province to build sections of country roads in various parts of the Province, using these sands for surfacing material.



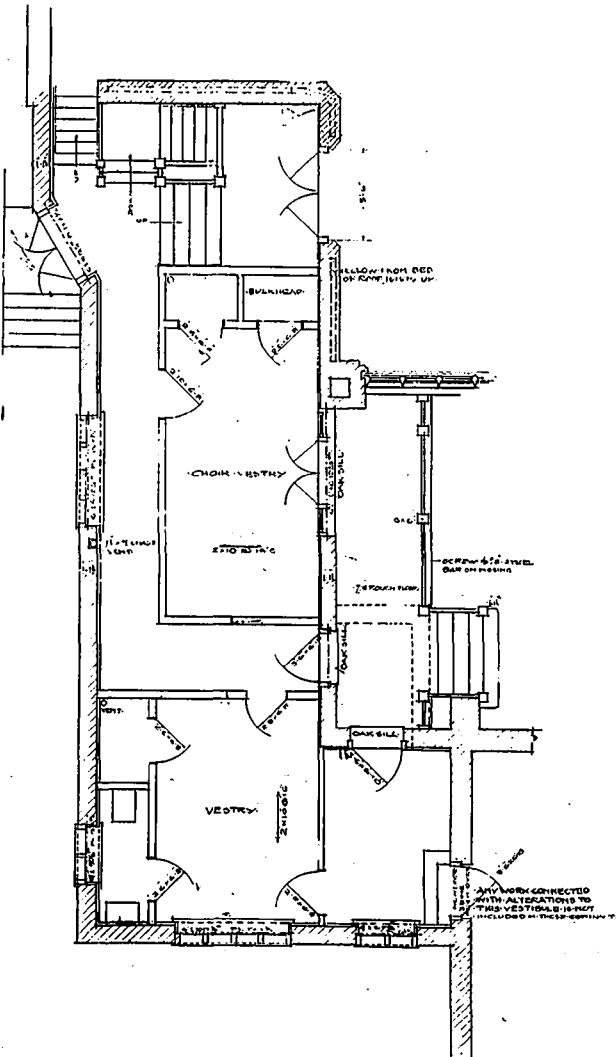
KEW BEACH PRESBYTERIAN CHURCH. LINDSAY, BRYDON & GREIG, ARCHITECTS.

CANADA is generally recognized as one of the foremost power-producing countries of the world. Her numerous rivers have immense potentialities, and within the area of population reasonably to be anticipated in the near future, is estimated to have water-power possibilities aggregating 17,764,000 horse-power, while some 1,712,193 horse-power of this amount has already been developed.

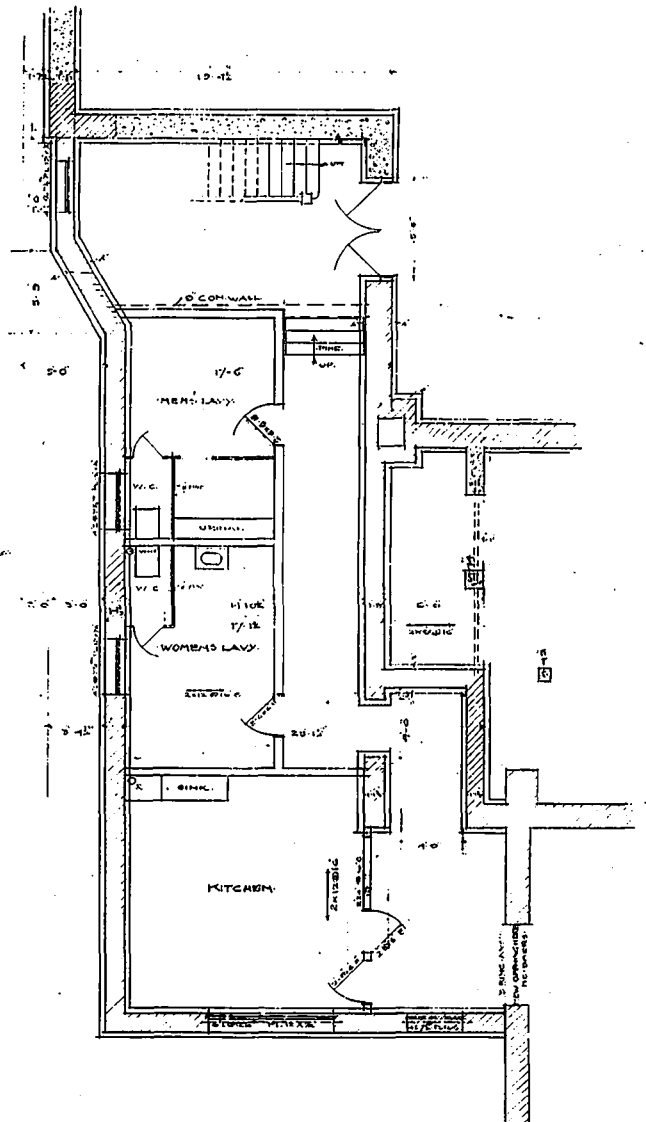


ENTRANCE, KEW BEACH PRESBYTERIAN CHURCH.

EXTERIOR, S.E. CORNER, KEW BEACH PRESBYTERIAN CHURCH.



PLAN OF VESTRY, KEW BEACH PRESBYTERIAN CHURCH.



PLAN OF PART OF BASEMENT, KEW BEACH PRESBYTERIAN CHURCH.

# Progress in Paint Manufacture

NOEL HEATON

I AM afraid that the majority of architects still look upon the subject of painting more or less in the light of a side issue, regarding the function of paint as of too little importance from a structural point of view for the question of its proper composition and use to demand serious attention.

Fundamentally, paint is composed of a finely divided solid portion, or pigment, and a liquid portion, or vehicle, which has the property of changing into a tough adhesive solid on exposure to the air, thus binding the particles of pigment to the surface. This change is commonly known as "drying," but is in reality a complicated chemical reaction, the control of which forms one of the most vital problems in the production of efficient paint.

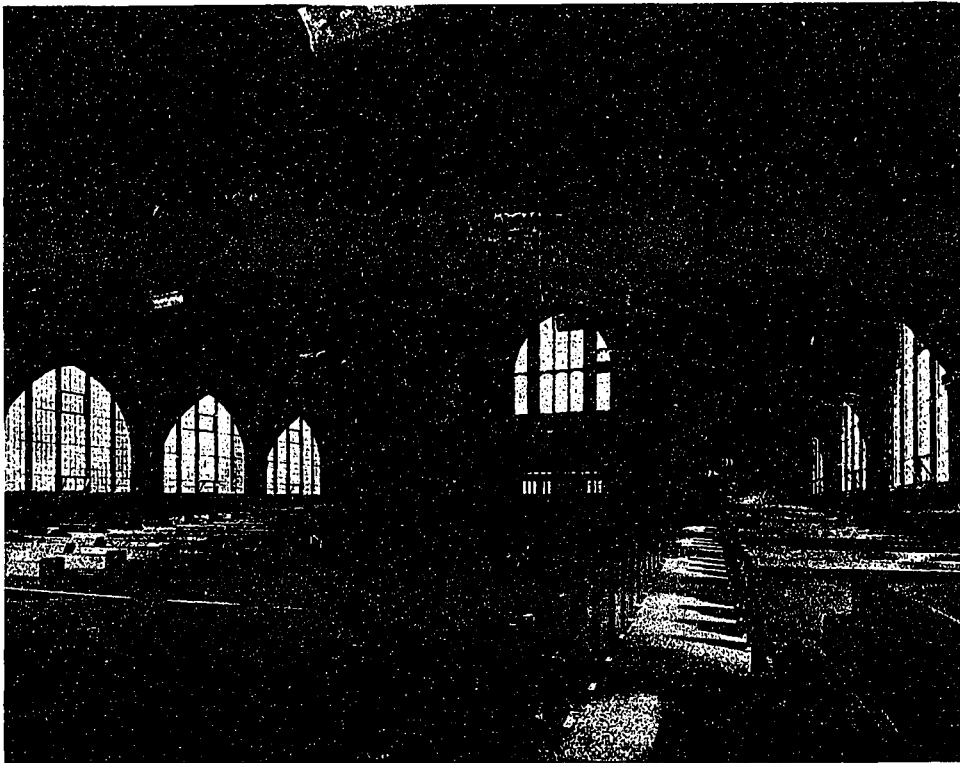
The conditions which paint is called upon to fulfil in the protection and decoration of buildings are many, and a perfect paint would excel in numerous properties, which may be summarized thus:—(1) Perfect freedom of working. (2) Great "body"; that is, power of hiding the surface. (3) Power of "drying" quickly and uniformly to form a film having the characteristics—(4) Elasticity, to enable it to follow the expansion and contraction of the surface. (5) Hardness, to protect the surface from mechanical injury. (6) Impermeability to moisture and gases, to enable it to protect the painted surface

from the effect of frost, corrosive agents, and so on. (7) Chemical stability and inertness, to enable it not only to resist attack by the same agencies itself, but to remain indefinitely without suffering any internal or external chemical change.

We must, of course, take it as an axiom that no paint is ideal in the sense of possessing all these properties fully developed. The problem of paint production is to strike an effective balance between these conflicting requirements. One of the most remarkable features of modern scientific research has been the bringing into prominence of the enormous influence that can be exerted by agencies so slight as to appear at first sight insignificant. One need only call to mind as an illustration the far-reaching influence of radium, which exists in such minute quantities that the world's present supply could be held in one hand. This applies as much to the paint industry as to other branches of applied chemistry. Research has shown, for example, that the "drying" of the oil and the durability of the resultant film of paint are influenced to a remarkable degree by the presence of certain metallic salts in extremely minute quantity.

Such subtle reactions may be applied to improving the qualities and eliminating the known weaknesses of those materials which have been

proved by long experience to be the most efficient, and true progress has lain rather in this direction than in the more obvious one of endeavoring to replace them by new materials possessing theoretical advantages which in general prove in practice to introduce at the same time new and unforeseen defects. Both methods have, however, been practised, and there has thus arisen in the industry two schools of thought—those who follow the principle of applying scientific research to solving the problem of increasing the efficiency of paint by improving the manufacture of existing materials, and those who attempt to cut the Gordian knot by abandoning well-



SOUTH AISLE, KEW BEACH PRESBYTERIAN CHURCH.

known materials in favor of others possessing theoretical advantages. I must frankly confess myself a believer in the former method, for the reason that one has a sound basis of accumulated experience to direct the most profitable line of enquiry, for the problem is complicated by so many factors in actual use—the influence of varying conditions of exposure, environment, etc.—that it is only by years of practical experience that the qualities and defects of any material become fully understood.

The danger of introducing new materials and rejecting old ones lies, therefore, in the fact that, whilst the new material may show some specific advantage under favorable circumstances, this may be far outweighed by defects which manifest themselves under different circumstances. An instance that immediately occurs to one in this connection is the question of abandoning the use of white lead in favor of other pigments, on account of certain technical and economic disadvantages. This pigment is one of the most valuable ingredients the paint manufacturer has at his command. It has been in use for so long, and the experience of its use is so great, that its merits and defects are well known from every point of view.

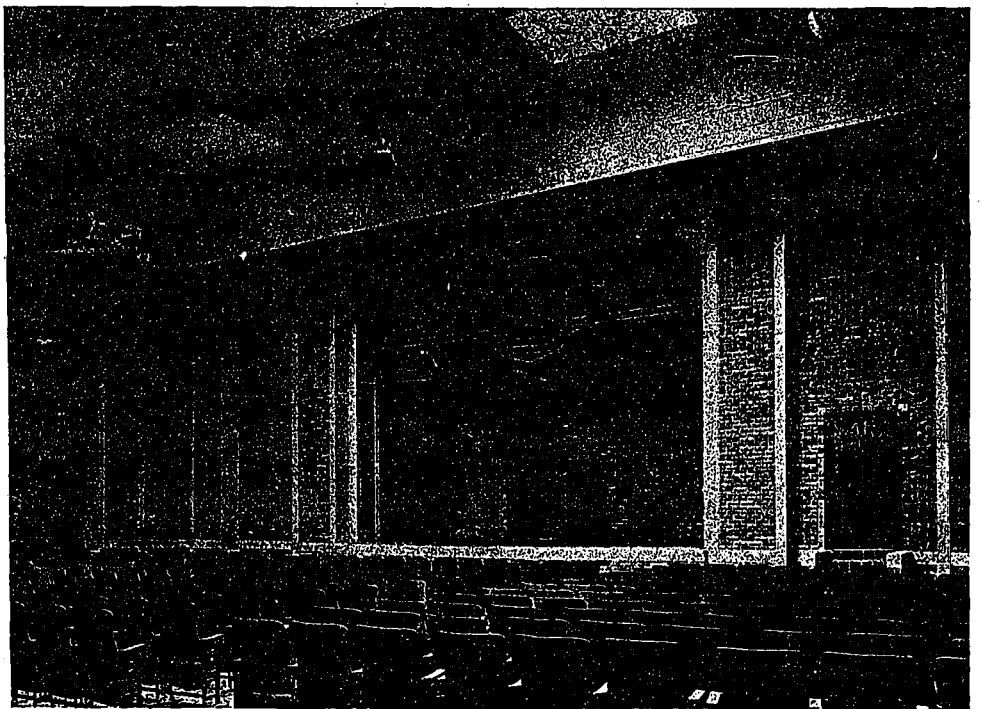
One technical problem presented by its use illustrates very well the difficulty of making progress by the method of substitution—namely, the discoloring effect of air containing sulphuretted hydrogen, owing to the gradual formation of lead sulphide. Theoretically, the substitution of white lead by oxide of zinc would obviate this, not because sulphuretted hydrogen has no action on it, as is too often incorrectly stated, but because the sulphide of zinc formed is white, and therefore the action does not become apparent by discoloration. In practice, however, it is found that, whereas the action of such impure air is merely to discolor the surface of the lead paint without impairing its durability, when zinc is substituted this difficulty is only obviated at the sacrifice of the most valuable property of the paint—its protective value; for the paint under such conditions rapidly disintegrates in a manner that appears unaccountable until we investigate more closely the chemical reactions involved, when we discover that the action does not stop with the formation of the sulphide.

Oxidation ensues, with the production of sulphate of zinc, which is freely soluble in water; the paint, in consequence, becomes useless as a protection against moisture, which causes it to disintegrate rapidly by dissolving away the now soluble pigment. In the case of white lead a similar cycle of reaction takes place, with the essential difference, however, that the lead sulphate so formed is quite insoluble and only inferior to the original white in durability, so that the ultimate effect is, for all practical purposes, to restore the original condition of affairs.

It is quite conceivable, moreover, that research on the lines of improvement rather than substitution may obviate this disadvantage of discoloration in the case of white lead. It is suggestive to note in this connection that white lead was freely used in mediæval times for tempera painting, for which purpose it was mixed with a medium consisting largely of yolk of egg.

MR. F. S. BAKER, F.R.I.B.A., Toronto, has moved from his temporary quarters on Selby street to offices at 721 Traders Bank Building.

UNLESS a municipality does some municipal thinking it will never attain full development as a municipality. The leading citizens must be able to see beyond their own interests. Every one who is able and willing to work must have an opportunity. It is idleness that kills. A municipality will not enjoy a healthy growth unless all parts of it are developed symmetrically. The leaders in a municipality should make a study of municipal conscience and consciousness—and there should be no selfishness mixed with it.



INTERIOR OF AUDITORIUM LOOKING TOWARDS STAGE, CONGRESS HALL.

# Congress Hall, Montreal

**T**HE handsome new Congress Hall adjoining St. Patrick's Church, corner Dorchester and St. Alexander streets, Montreal, is one of the new buildings of note erected during the past year. This edifice, reflecting credit on both architect and builder, was erected by the voluntary offerings of the congregation of the parish of St. Patrick.

The corner-stone of Congress Hall was blessed, according to the Catholic custom, on Sunday, October 18th, 1914, by the Most Reverend Archbishop Bruchesi. A magnificent ceremony marked the event, and His Grace happily designated Congress Hall as the palace of prayer, charity and fine arts.

Though intended as a sacristy in connection with the big Irish Catholic place of worship, Congress Hall, named as a memorial of the great Eucharistic Congress, held in this city in 1910, is destined for a number of parochial purposes, and to serve as well for the headquarters of the administration of the various activities, religious and social, that are carried on in the foremost English-speaking parish of Montreal.

Architecturally, and from the viewpoint of destined service, Congress Hall is a unique departure from the general style of semi-religious buildings attached to many of the larger city churches. It is comprehensive, to say the least, as a glance at the list of parochial departments provided for will show. Of unusual interest and

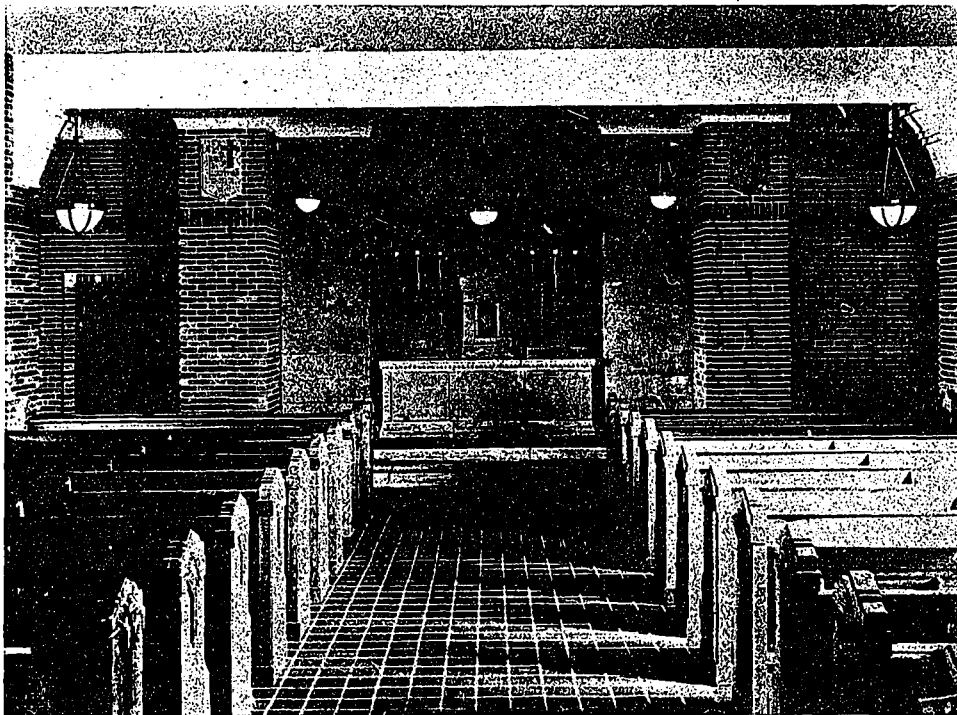
significance in a structure of this kind, and with so central a location, is the auditorium. As a private theatre for school tableaux, illustrated talks, etc., to the children, a hall where the big folk may gather to hear prominent speakers in choice lectures and conferences, as a concert room, and as the charming locale for future well-set social functions, this feature alone of the new building is going to contribute in no small degree to the entertainment and cultural development of English-speaking Catholics.



BAPTISTRY, LOOKING EAST, CONGRESS HALL.

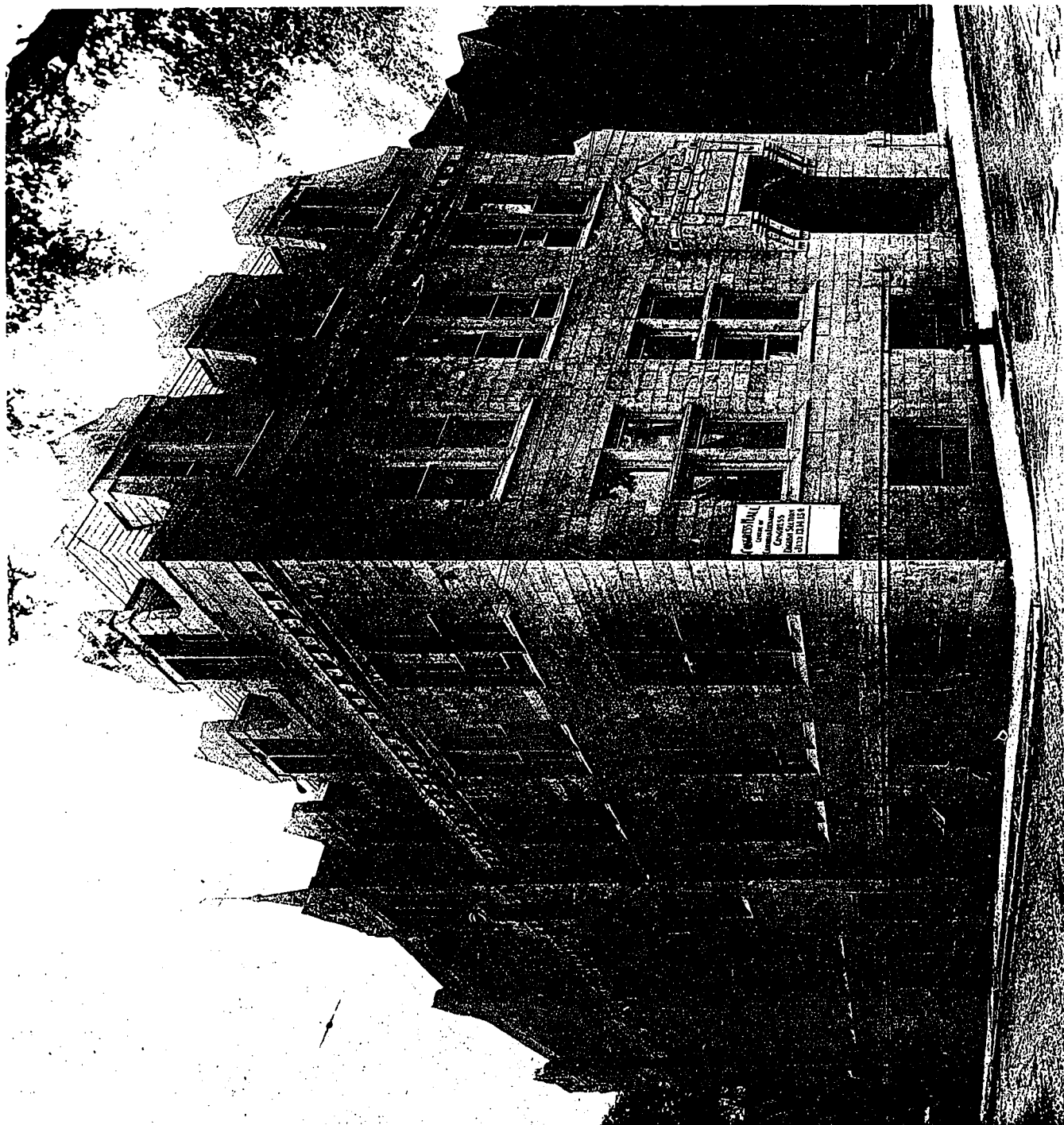
A beautiful lady chapel, and a splendidly modern auditorium, lighted from above, with balcony, stage and four dressing-rooms, and with smaller rooms for board meetings of wardens and trustees, local societies, private gatherings, etc., a choir practice hall, a banquet room with kitchen annex and cloak rooms occupy the upper storeys.

The entire ground floor is reserved for a sacristy, with baptistry, confessional for the deaf, vault, a spacious vestry for the altar boys with lockers, lavatories, etc., a large sodality room and quarters for the Sisters in charge. This part of the hall was completed first, the rapidity of the construction being a matter of special congratulation to the builders.

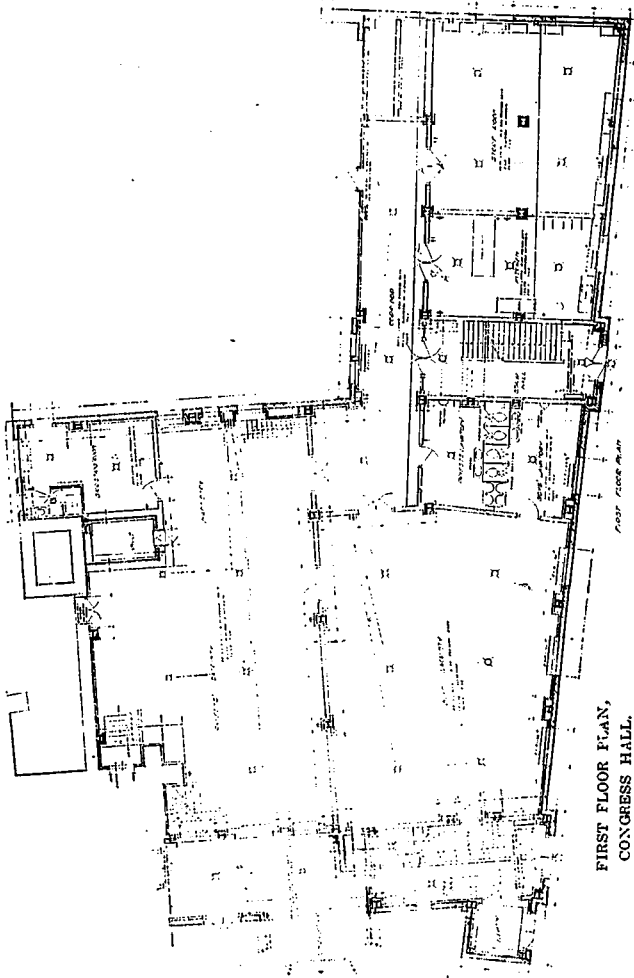


CHAPEL, SHOWING ALTAR AND SEATS, CONGRESS HALL.

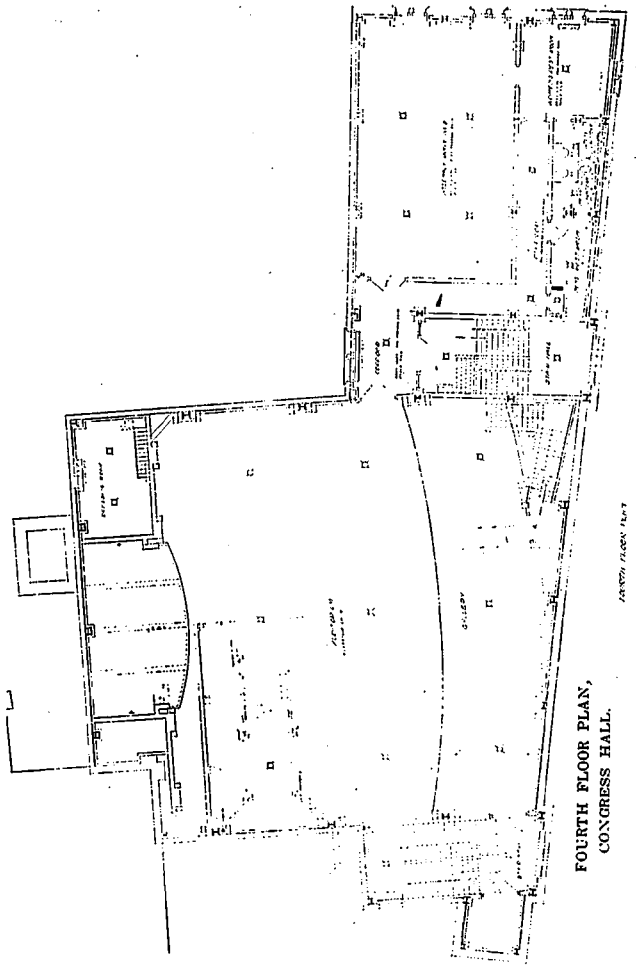
CONGRESS HALL,  
NORTH-EAST VIEW.  
HYNES, FELDMAN  
& WATSON,  
ARCHITECTS.







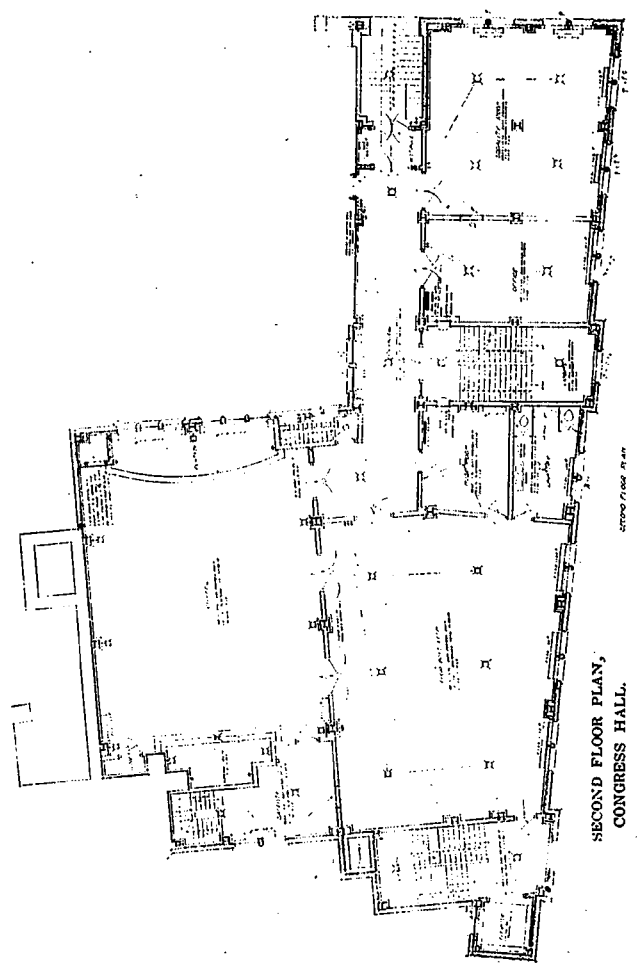
FIRST FLOOR PLAN,  
CONGRESS HALL.



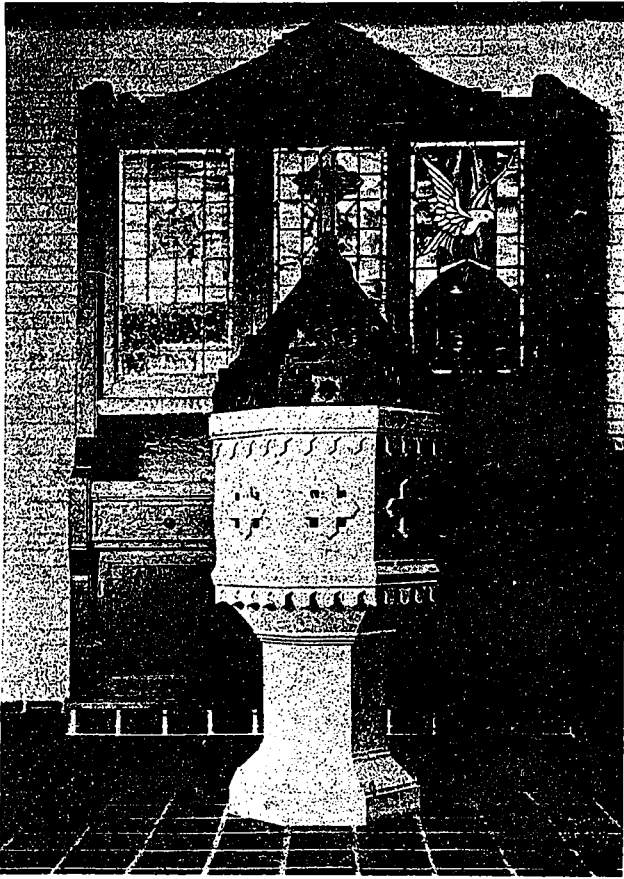
FOURTH FLOOR PLAN,  
CONGRESS HALL.



BASEMENT PLAN,  
CONGRESS HALL.



SECOND FLOOR PLAN,  
CONGRESS HALL.



FRONT IN BAPTISTRY, CONGRESS HALL.

The style is that of cubist architecture, a novel departure, built upon the principle that human endeavor models, upon the straight line, the square and the cube. The old world monastery idea of stone and brick were woven into the plans of the architects. Messrs. Hynes, Feldman and Watson have also the designing of the furniture, which is surety for its artistic original individuality.

The building, which is fireproof, contains thirty-five rooms, and is constructed of reinforced concrete and Montreal limestone, the latter to match the material used in St. Patrick's Church and presbytery. The building is four storeys high, and every floor is of tile.

Throughout the interior the walls are buff pressed brick, with floors of square red Welsh tiles. Special mention should be made of the elevators, the ventilation plant, and also of the conservatory, in which will be tended the flowers and plants used to decorate St. Patrick's for imposing religious functions and national demonstrations, such as it has been so often the scene in the past.

There are many features that deserve attention in this building. The company that installed the steel sash and concrete construction made a straight gallery beam in the auditorium in one span sixty-eight feet long, the longest in Canada. This reinforced concrete work was done by a Montreal firm. In the auditorium there are no visible columns, clear sight of the

stage being afforded from every part of the auditorium. All the wiring and piping is also invisible, a somewhat rare feature, even in up-to-date buildings. All doors also open outwards, although the building is fireproof.

In the basement are the paint and carpenter shop, furnaces and storage premises.

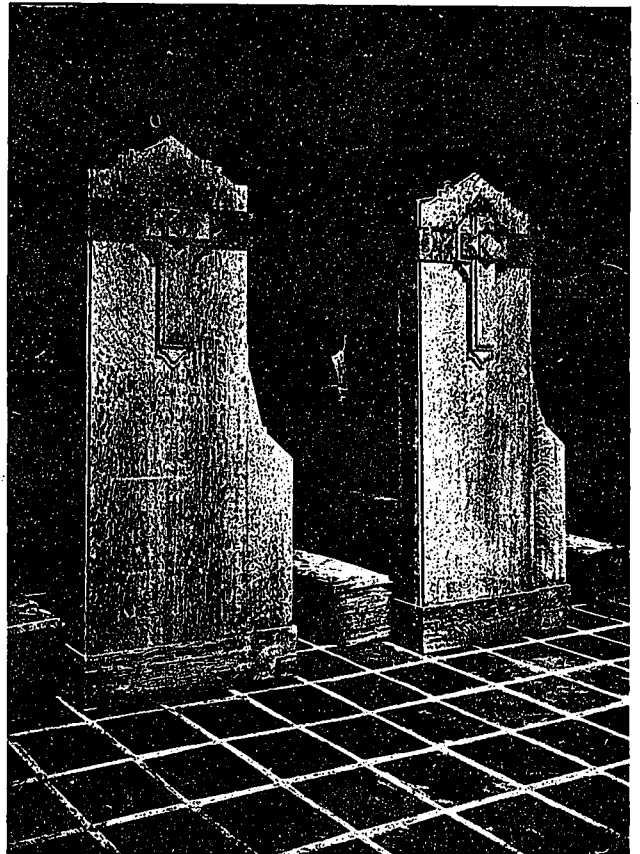
That the builders have not lost much time is shown by the fact that work on the excavations was begun on August 3rd, 1914. On April 5th the first concert was given in the chapel.

With the extras and additions, which include the furniture, the cost will not fall far short of one hundred and seventy thousand dollars.

### LAWS OF STATES ON SCHOOLHOUSE VENTILATION

Forty States of the Union have taken some legal action toward safeguarding the sanitation of public school buildings, according to a bulletin on "Schoolhouse Sanitation," just issued by the Bureau of Education of the United States Department of the Interior. "Probably nine-tenths of the existing regulation of this sort has come within the past decade," declares the bulletin. "Each State profits by the experience of 47 others. A law passed in one extreme of the country to-day is copied next month or next year by a State 2,000 or 3,000 miles distant."

Thirty-eight States have some legal provision regarding the school site, according to the bul-



PEWS IN CHAPEL, CONGRESS HALL.

letin. Nearly all of these provisions are State-wide in their application, and are mandatory in character. These provisions include the proximity of "nuisances," availability of the site, and size of the site. Nineteen States have laws prohibiting the location of school buildings



BOARD ROOM, CONGRESS HALL.

within a specified distance from places where liquor is sold, from gambling houses, houses of prostitution, and noisy or smoky factories.

Thirty of the States have sought to regulate the water supply of the public school. "The revolt against the common drinking cup," says the bulletin, "has come within the past five years. Kansas was the pioneer, but other States followed rapidly, so that now half of the entire number have either a law or a regulation regarding drinking cups."

Some form of protection against fire and panic is found in 36 States. Blanket regulations, or the power to make such regulations, exist in 12 States. General or special construction with a view to fire prevention is dealt with in 10 States. Less than half the States, according to the bulletin, have any legal word on ventilation. In the matter of cleaning and disinfecting, slightly more than one-fourth of the States have regulations which control conditions to any degree outside the districts themselves. Some of the laws and regulations are almost model; others are wholly inadequate. A few State boards of health have done notable work in this particular. Special cleaning and disinfecting follow in seven States immediately upon discovery in any school of any of a certain class of diseases.

### GUTTER FOR SLATE ROOFS

WHEN IT IS required to insert a new gutter to a slated roof, says a contemporary, it is often necessary to remove the lower two or three rows of slates to allow for the lead or other gutter material to be inserted. As the slating nails are covered up by the slates, it is not

possible to extract the nails unless the slates above are removed. For the purpose of removing the nails the slater uses a "ripper," which has a thin blade and is inserted between the slates, and a slotted end allows for the clipping hold of the nails. A sharp tap on the ripper shears the nails and allows for the removal of the slates.

The replacing of the slates after the gutter has been placed in position presents a little difficulty. If one row of slates, which includes the double eaves course, has been removed it will be found that the eaves course can be nailed at the sides of each slate, and when the next course of slates is in position the nails will be covered. The course over the eaves course cannot be nailed, and is fixed by means of narrow strips of lead or zinc, which are nailed to the boarding through the small space left between each slate. The ends of these strips are turned over, and when the slate is inserted under the slates, the turned-up end clips the slate and prevents it sliding down the roof. If two rows of slates are necessary to be removed it will be found that the bottom row, comprising the eaves course and the slates immediately over, can be nailed, and the next row will have to be fixed as before mentioned. As regards the fixing of a parapet, or any other gutter, it depends upon the form of gutter used, and the construction of the roof at eaves, whether it is necessary to remove the slates or not.



MAIN ENTRANCE, DORCHESTER STREET, CONGRESS HALL.

# For King and Country

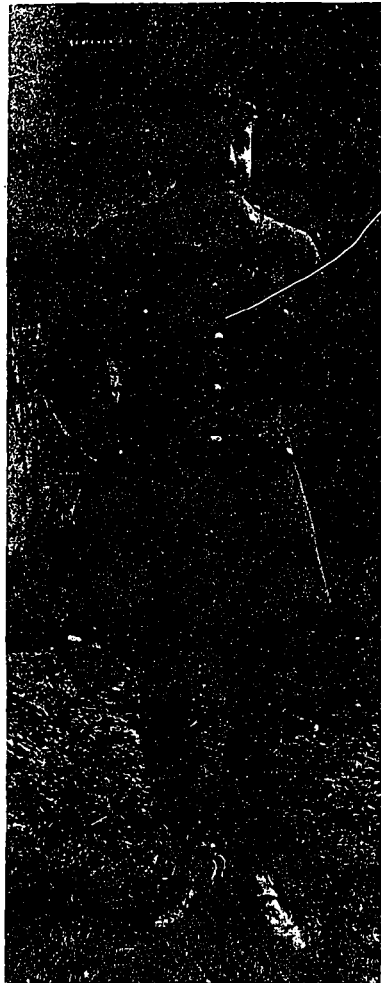
NO profession has offered itself more freely than the architectural in Canada. Previous to the war, many members had taken an active part in military affairs, and not a small number had already seen active service. It is estimated that up to the present time, eighty-five per cent. of those engaged in the profession have enlisted; this is not at all surprising, as there are instances of whole office staffs having joined the colors. Both members of the firm of Chadwick & Beckett have appointments on the Canadian Expeditionary Force.

Lieut.-Col. Vaux Chadwick organized and commanded the 4th Canadian Mounted Rifles, now overseas, and from that regiment was selected for an appointment on the Headquarters Staff, later resigning to take over the command of the Hundred and Twenty-fourth Battalion, which he is organizing from the Governor-General's Body Guard and Ninth Mississauga Horse.

Col. Beckett was appointed commander of the Ninth Mississauga Horse, from which he was transferred to command the Seventy-fifth Battalion for overseas service.

From the offices of Ross & McDonald twenty-three out of thirty members of the staff have gone overseas with the first contingent. P. Debray returned to his regiment in the French Reservists; Sergeants E. F. Morgan and F. Higginson, with Pte. A. L. Johnston, joined the Grenadier Guards (Montreal); Capt. H. O. Ives and Pte. P. Slessor with the Thirteenth Battalion (Fifth Royal Highlanders). The latter was wounded and made a German prisoner.

Lieut. J. Jensen enlisted with the Automobile Machine Gun Corps of Ottawa. Lieut. A. Lockheed rejoined his regiment, the Royal Scotch Fusiliers of Glasgow, and L.-Corp.



COLONEL VAUX CHADWICK.  
Commanding 124th Battalion, Exhibition Camp, Toronto.



COLONEL BECKETT.  
Commanding 75th Battalion, Exhibition Camp, Toronto.

W. Graveley, Third Battalion (Queen's Own Rifles, Toronto). In the second contingent five men enlisted with the Victoria Rifles, Montreal: Sergt. C. Dolphin, Corp. H. Patterson, Sergt. H. A. Dawson, Ptes. H. E. Routledge and C. Clarke. Five men were with the third contingent: Capt. G. Shearer, 27th Field Battery; Lieut. H. B. Rugh, Forty-fourth Battalion of Winnipeg; Ptes. J. R. Jeffrey and A. Hamlet, Fifth Mounted Rifles, Sherbrooke, and P. B. Richardson was drafted into the C.P.R. Engineering Corps. A number of men enlisted after having left the employment of the firm, among them being R. E. L. Hollinshead, who was killed in action; Pte. W. Symmonds, Thirty-fifth Battalion, Toronto, and Ptes. P. J. D'Alton and John Drew, of the Twenty-fourth Battalion, Montreal.

Eight men have gone overseas from the office of Darling & Pearson, four having already gone to the firing line: Corp. T. C. Pomphrey and Sergt. Wm. Ferguson, Fourteenth Battalion, Third Brigade, France; Lieut. S. W. Rowatt, Seventy-fifth Battalion, first contingent; Pte. L. Patterson, Twelfth Reserve Battalion; Pte. G. Kereland, Thirty-fifth Battalion; Pte. D. C. Carmichael, Royal Fusiliers; Pte. J. C. Bartholomew, Third Battalion, and Corp. F. T. Trapp of the Troop Supply Column.

Both members of the firm of Page & Warrington—Lieuts. Page and Warrington—have joined the third contingent.

Major McDougall, who had seen active service in South Africa, enlisted with the first contingent, taking with him four men from the Board of Education, Ptes. A. Abercrombe, H. A. Rhodes, U. C. Rhodes and H. Barber of the Artillery.

Sergt.-Major Wm. Price and Lieut. Arthur Everett, from the office of Burke, Horwood & White, returned to England to instruct in caval-

ry. E. V. Reid and H. Pell have gone overseas with the Royal Naval flying squadron. Pte. G. Hedley, who joined the Artillery in the first contingent, was seriously wounded in one of the first engagements.

Capt. McGiffin, of the firm of Chapman & McGiffin; Lieuts. Molesworth and West of the same firm, are all members of the third contingent. Two men, Ptes. C. F. Wellington and F. W. Burnett, from the office of C. R. Reid, Toronto, are with the Engineers.

Major Eden Smith, of the firm of Eden Smith & Sons, and Major Sanford Smith, of Bond & Smith, represent two of the leading architectural firms of Toronto, the latter having gone to the front with the first contingent. The former was attached to the Thirty-fifth Battalion, from which he was drafted to take charge of the draft reinforcements of the Third Battalion, France.

### COMPLETE BUILDING SHOW

In Cleveland, Ohio, U.S.A., during the month of February, 1916, will be held the first Complete Building Show ever held in the United States.

This exhibition will be patterned after the justly famous Building Trades Exposition, which has been a bi-annual event in London for many years. Like it, the Cleveland show will be open to every kind of material which takes it out of the field of "trade" shows.

Many cement shows, clay shows, real estate shows and lumber shows have been held in the United States—but it remains for Cleveland to have the first general exposition ever held in the States within which every sort of material is to be impartially displayed.

Backed as it is by sixty manufacturers and dealers in building materials, it is purely an educational demonstration for "the man about to build." It is not to be conducted for profit. It has not even a professional manager. Its affairs are in the hands of an advisory committee made up of those who have unselfishly put their money into the venture. The sub-committees having each specific work in their hands, are composed of members of the general committee.

Success for the Complete Building Show is that it will move. There will be no dead exhibits—no endless array of booths. Several houses, complete except in size, will be erected, and the grounds surrounding them planted, fenced and so laid out as to present a finished picture to the eye.

This is made possible by the grouping of displays into community exhibits. In this manner it is possible to have more pretentious displays at a less cost than as though each manufacturer

or dealer were to maintain an individual exhibit.

A distinct feature of the Complete Building Show will be the architectural exhibit, in which will be shown the drawings submitted in a contest that is to be conducted by the Cleveland Chapter of the American Institute of Architects, under the auspices of the Complete Building Show Company. This will give opportunity for showing the building in every stage, from the architect's plans through the various types and mediums of construction to the finished building, equipped with the latest work-saving and safety appliances.

The prizes being offered in this contest are sufficiently large to assure its being more than a local affair. The competition is for small low-priced houses—in short, workingmen's homes. This type of building is attracting great attention in the States and this competition promises a wide interest.

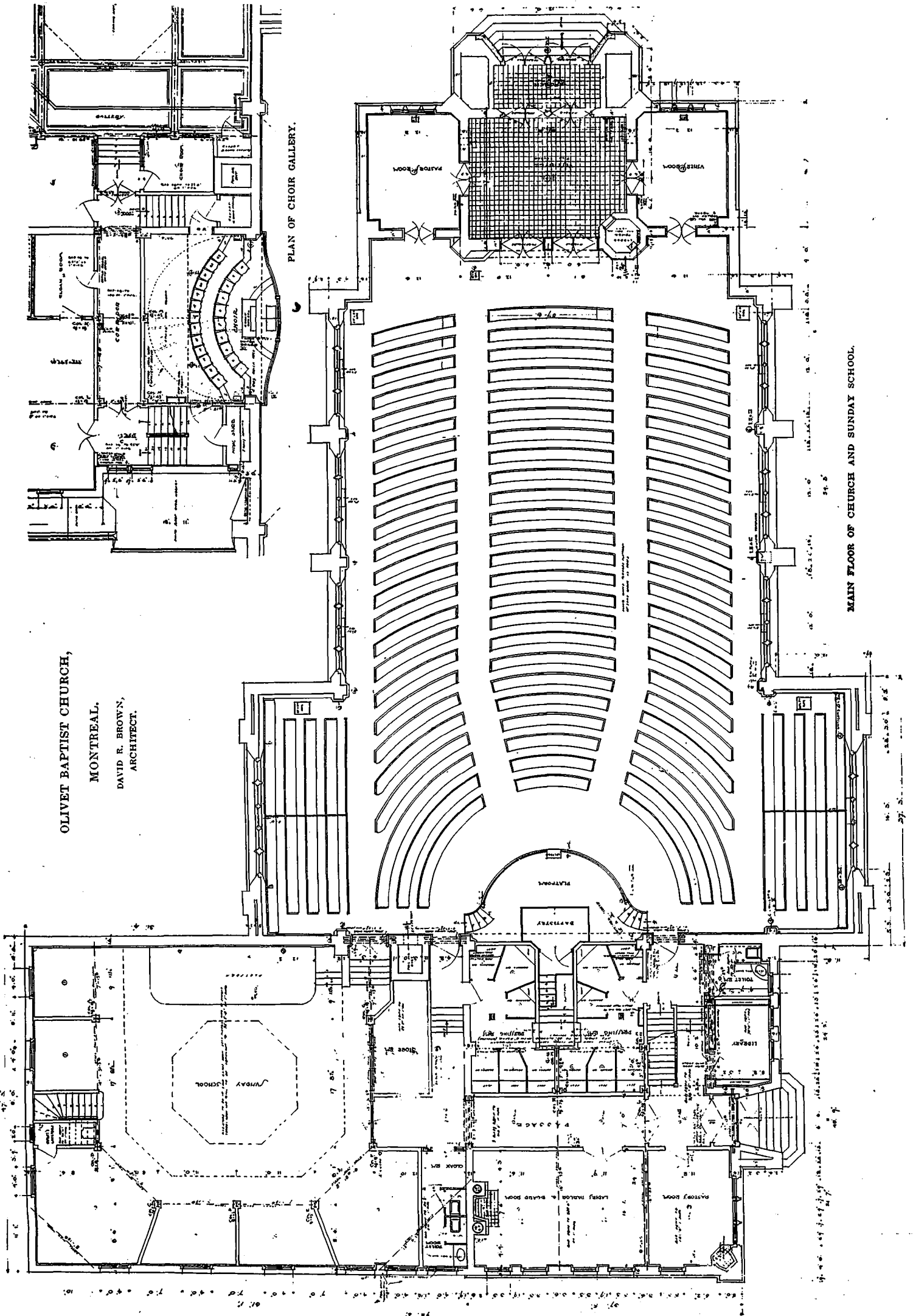
It is aimed to make this the most widely advertised exposition, of its kind, ever held in the United States. A feature of this publicity campaign will be the giving away of a complete house free. The competition, under which this house will be awarded, will be such as to link it directly to the exhibits in the show and will eliminate the "guessing" features of the average contest. Roughly, it will be a popularity contest among the various materials and fittings, which would enter into the "ideal" home. A careful study of the show will be necessary to successfully compete for the free house.

The exhibits are to be grouped into four general classifications: Building Materials and Construction; Equipment and Devices, Interior Finish, Decoration and Furniture; Real Estate and Gardens, Art, etc.

### CHANGES IN BY-LAWS

At the present time the members of the Canadian Society of Civil Engineers are being asked to vote on certain amendments to the by-laws of the association. One of the most important of these is the suggestion which, if followed out, will tend to make the society a hide-bound close corporation and would keep many men from membership who would be not only highly desirable, but who would be a decided acquisition. A change, such as suggested, would be dangerous to the society and a menace to its best interests. If the members are wise they will not be guilty of retrogression in this respect. It should be borne in mind that any attempt on the part of the organization to make membership difficult will have a boomerang effect upon every effort the society may make to secure legislation, having in view protecting civil engineers or defining their status in the Dominion.

OLIVET BAPTIST CHURCH,  
MONTREAL,  
DAVID R. BROWN,  
ARCHITECT.



MAIN FLOOR OF CHURCH AND SUNDAY SCHOOL.

PLAN OF CHOIR GALLERY.

# CONSTRUCTION

A JOURNAL FOR THE ARCHITECTURAL  
ENGINEERING AND CONTRACTING  
INTERESTS OF CANADA



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

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FRASER S. KEITH . . . . . EDITOR AND MANAGER

**Vol. VIII Toronto, Dec., 1915 No. 12**

## CANADIAN PROSPERITY

A year ago it looked to most Canadians should the war last another year that not only would industry be paralyzed but that the country generally and its citizens would be on the verge of ruin. The unexpected, however, has happened and the situation is a paradox. Nationally Canada has never made such advances towards prosperity in her history, as she has during the past twelve months.

Munition orders amounting to over \$600,000,000 have kept our factories working overtime, provided work for tens of thousands of mechanics and others who would otherwise have been idle, and supplied ready money, in many

cases, in abundance. A record wheat crop of 336,258,000 bushels of wheat surpassed the most roseate forecasts of the well informed during the growing stages of the season. This crop was seventy-five per cent. greater than the average of the past five years. For the first time in the history of the Dominion, Canada shows a favorable trade balance. According to the Minister of Finance, the total revenue for the Dominion for the month of November was \$17,072,456, an increase of \$7,576,920 over that of November last year and the largest of any money in the history of the Dominion. The latest monthly statement of Canada's trade shows that we exported during October nearly \$80,000,000 worth of goods. This is about double the value of goods exported during October, 1914. The huge increase is not due to any particular movement of manufactured goods such as war munitions, but to a notable increase to practically all kinds of trade. For Canada's war loan of \$50,000,000 there was subscribed a sum of \$110,000,000, the surplus of which is to be used for the credit of Great Britain in this country. Canadian banks have on hand \$120,000,000 more than they had a year ago. The combined gross earnings of the Canadian Pacific Ry., the Grand Trunk Ry. and the Canadian Northern Ry. for the last nine days of November were the second largest total on record, being exceeded only by the final period of October and as compared with the corresponding period a year ago an increase of 58.4 per cent., a new high record in history. A further and very satisfactory index to conditions is the record of building permits in seventeen Canadian cities during the month of November which show an increase of 55.7 per cent. over the same month last year.

The present war is making Canada a nation among nations and arousing within her, to resultant action, the latent strength of her resources to such an extent that the world at large must realize how great are her possibilities.

## STANDARD BUILDING LAWS

The standardizing of the building by-laws of Canada has been undertaken by the Commission of Conservation at Ottawa. At present the Commission is investigating the various fire losses throughout the Dominion and the adequacy or otherwise of the fire protection in the different centres. The object, in keeping with the utilitarian purposes of the commission, is to evolve a set of by-laws applicable to villages, towns and cities and the various districts in cities which when standardized to meet the requirements of the group for which they are intended will apply in the same way to every like district.

The importance of this step undertaken by the Conservation Commission cannot be over-

estimated, involving as it does the present fire loss and concerning the growth along definite lines of the different centres. It is a movement that should have the hearty co-operation of architects, manufacturers of building materials and fire underwriters.

City Architect Pearce of Toronto, when requested by the commission for his advice, made the following valuable suggestions:

"In my opinion you are carrying out a much-felt want. This department at the present time is working on the revision of the city building by-law and we have found great difficulty in getting accurate data with reference to Canadian products which might be used in buildings in order to protect them from fire.

If I might suggest it (if there is not one already established of which I am unaware) I think it would be an excellent thing if some central bureau could be maintained whereby the different municipalities could get full information with reference to the fire resisting qualities, and also the strength of the different materials used in the buildings. I might say that in a great many cases this department is forced to get its information either from the Fire Underwriters or from the different cities located in the United States. This, it appears to me, to be a very poor policy to have to pursue. At the present time we are making use of the testing laboratory of the University of Toronto, but, unfortunately, this is closed to us during the time the school is in session.

It would also be an excellent thing if there could be some advisory code gotten up to guide the different Canadian municipalities with reference to the minimum requirements which the municipalities should enforce with reference to fire protection, leaving it to the municipalities themselves to enforce a more rigid code if they so desire to do. I do not think it would be possible to have a uniform building code for all sections of the Dominion on account of the great differences in climatic and physical conditions, water supplies, etc. This opinion, I might add, was concurred in at a recent meeting of the Building Superintendents, Fire Commissioners, etc., which was held this year in New York City and which was attended by the writer."

### NEED FOR REFORM

Allusion was made in these columns to the unbusinesslike and bigoted action of the Toronto Board of Education in refusing to entertain the lowest tender on a plumbing contract because the business man submitting it was a Roman Catholic. There was no question of the strong financial standing of the firm in question or of its ability to carry out the contract. Merely because they thought they would gain votes among the least intelligent members of the com-

munity, the trustees decided to take cash out of the pockets of public school supporters to vindicate sectarian prejudice. It is gratifying to note that the Separate School Board and the Roman Catholic ecclesiastical corporation of Toronto diocese have never done anything to justify such a step—if the waste of public money could under any excuse be justified. During the past year Roman Catholic institutions have been doing a great deal of building and renovating, and in every case the contracts have been awarded to the lowest tender. Enquiry shows that even in cases where the differences between the lowest and the next lowest tender were very slight the businesslike practice of giving the work to the former has been steadily pursued to the advantage of Protestants tendering, and the question of creed absolutely ignored. This is not a mere general statement, but is proven by the names of the following Protestant firms who have carried out contracts for Roman Catholic institutions during the past year or are engaged on work still in progress. The mason work on St. Cecilia's school went to Samuel Young; concrete work on several separate schools to William Purvis (who, by the way, is a prominent Orangeman), and to the Ramsey Contracting Company. Contracts for electrical work in the schools have gone to George Beatty and to Cornish Brothers, for heating to the Toronto Furnace Company; for plastering to Henry Beaver; for sheet metal work to W. E. Dillon, and for roofing to Douglas Brothers, all Protestant concerns.

So much for the separate schools; the same policy of placing business considerations above creed prejudice has been pursued by the clergy. At Oak Ridges, near Toronto, the Christian Brothers are erecting a magnificent training school, at a cost of a quarter of a million dollars. In connection therewith Thomson Bros., a Protestant firm, have a contract which it is said amounts to \$100,000. For the new Parish hall of St. Paul's (R.C.) Church, James A. Wickett, Ltd., have a contract. For St. Clair's Church, on St. Clair avenue, and St. Anthony's Mission Church, Fred Holmes is the contractor. Cecil Waters was the successful tenderer for the Church of the Holy Name and the Priest's house attached thereto. The mason work on the Church of St. Vincent de Paul went to Dancy Bros. The Presbytery being erected for Rev. Dr. Treacy, on Pacific avenue, is in the hands of Gordon Bros., and the new Roman Catholic office building on Bond street is being built by Fred Holmes. When it is borne in mind that these contracts represent only the past year's activities, the picayune meanness of the Toronto Board of Education, to say nothing of its reckless misuse of public money, becomes the more apparent.—*Saturday Night*.



# The Imperial Oil Building

**A**MONG the larger buildings planned and to be rushed to completion immediately, is the Imperial Oil building, which will be located on Church and Court streets, Toronto. The building was planned by Clinton & Russell, Dominion Bank Building, architects for the Imperial Oil Co.

A number of unique ideas, new to office building construction in Toronto, have been introduced. The building will be of steel with fire-

trance to the building will be from Court to the elevator hall leading to three large elevators, and the tower staircase. Both the elevator shafts and staircase will be enclosed in six-inch terra cotta, with the stairs of cast iron construction and slate treads; the doors and trim are to be of steel, with polished plate wired glass.

In the rear portion of the building, adjacent to the driveway, display rooms for the Imperial Oil products will be located, also gasoline storage tanks, waiting rooms, and conveniences for the use of motorists.

All of the upper floors will be occupied by the Imperial Oil Company and its subsidiary companies, and will be finished in marble with floors of marble mosaic; all doors and trim will be finished in steel. Special attention has been paid to the board room design, which will be finished in panelled mahogany with ornamental plaster ceiling.

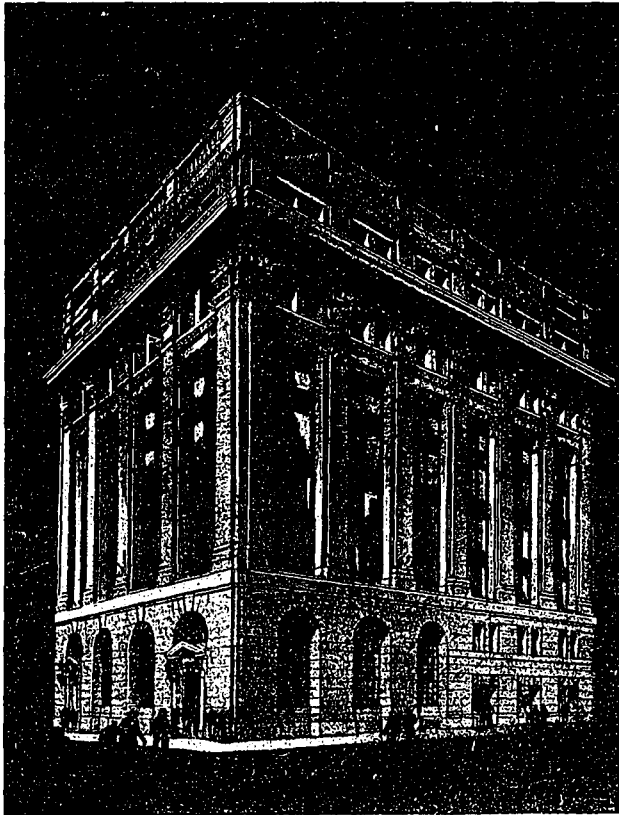
The general contract for the building has been let to Thompson, Starrett Company of 51 Wall street, New York City, who in turn will sublet all trades to Canadian contractors, having already let the structural steel to the Dominion Bridge Company; the masonry and fireproofing to Witchall & Sons; steel casements and trim to the A. B. Ormsby Company.

A number of the elaborate details of the banking room were reproduced by the Canada Blue Printing Company, 89 Jarvis street, on their new rectiograph. The tracings were not available, so that it would have been a week's work for a draughtsman to trace the blue prints; instead, the rectiograph photographed and produced twelve prints in three hours. This machine also eliminates the pantograph in the reduction and increasing of scale drawings by an ingenious device. The low cost of production combined with the efficiency of this invention should be investigated by every architect, engineer and draughtsman, being the only one used for commercial purposes.

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## GOOD ROADS CONGRESS

The third Canadian and International Good Roads Congress is to be held in Montreal in the early part of March. Delegates will be present from every Province in the Dominion, from the United States and from Great Britain. In addition there will be representatives of engineering societies, boards of trade, good roads organizations, manufacturers' associations, automobile clubs and members of agricultural associations.



IMPERIAL OIL BUILDING,  
Church and Court Streets, Toronto.

proofing throughout, rising seven stories, with basement; it will occupy seventy-six feet on Church street and one hundred and fifteen feet on Court street, with a twenty-three foot driveway at the westerly end of the building. The style will be an adaptation of the Italian Renaissance in Bedford limestone, similar to that used in the new Toronto Registry Office, supplied by the Indiana Quarries Co.

A portion of the basement will be devoted to squash court, gymnasium, shower, and locker rooms, for the use of the tenants of the building, in addition to the usual boiler, fan, pump and switch-board rooms.

The first floor will be used as a banking room and stores. The banking room will be occupied by a Canadian chartered bank. The main en-

# Prosperity Paragraphs

## FORGING AHEAD.

"Canada in the next thirty years will grow more than any other part of the North American continent has grown in any thirty years."—Clarence W. Barron, editor of the "Wall Street Journal."

## EXPECT BIG EMIGRATION.

A well-known American writer thinks that the signing of peace will lead to an emigration movement that will amaze the world. After the Franco-Prussian war in 1870, 200,000 Germans settled in three American States—Nebraska, Minnesota, and Iowa.

## TORONTO BUILDING INCREASE.

The City Architect issued permits to the value of \$300,000 during November, which shows a decided increase over any month since last June. When it is taken into consideration that November and February are calculated to be the two quiet months of the building year, this is an omen which cannot pass without reflection.

## CANADA WILL GET MORE.

The output of munitions in Britain and France has now reached a stage which makes the Allies independent of other supplies, and it is unlikely that any further contracts will be placed in the United States. The financial importance of this development need not be emphasized to Canadians who will continue to share in any new orders given.

## BANKING BUSINESS GROWS.

The steady increase of bank clearings from week to week over the corresponding periods of last year is a pleasing indication of the fact that the period of depression in Canada is a thing of the past. Recently the Canadian clearings aggregated \$198,892,000 as against \$157,200,000 the same week last year. The percentages of increase in the various cities were: Montreal 24.1; Toronto, 10.1; Winnipeg 64.4; Ottawa, 4.0; Calgary, 59.8; Quebec, 4.7; Halifax, 3.4 and Regina 50.2.

## INDEX OF THE TIMES.

Net profits of the Canadian Pacific Railway for the month of October were \$6,579,434 which was about treble the showing made in recent previous months, and an increase over last year of \$3,258,106. Gross earnings were \$13,443,214; working expenses, \$6,863,780; net profits, \$6,579,434. For the four months ended Oct. 31, the figures are: Gross earnings, \$40,413,207; working expenses \$22,845,754; net profits, \$17,567,453. In October, 1914, net profits were \$3,321,328 and for the four months ended Oct. 31st, 1914, \$14,820,960.

## LOOKING TO CANADA FOR INVESTMENT.

Investors in the leading financial centres in the United States are now looking to Canada as a new field for profitable investment, states Mr. Allen D. Alberts of Minneapolis, president of the International Rotary Clubs, journalist, political economist, sociologist and keen student of current affairs. Mr. Alberts, who is regarded as an authority on economics, and is a professor of applied economics at the Minnesota University, is on a tour of the principal cities of the United States and Canada, making a study of the "forces that build cities" and securing data for authoritative works on that and applied subjects.

## INCREASED TRADE.

Trade statistics published by the Dept. of Trade and Commerce show that for the twelve months, ending with October, exports of Canadian produce increased by \$96,296,139, while imports of merchandise increased by \$92,908,747. Total exports for the nine months amounted to \$509,092,245, while total imports amounted to \$421,677,217 leaving a balance of trade in favor of Canada of \$87,415,028. Exports of animal produce for the twelve months totalled \$89,471,675, an increase of \$25,757,405. Exports of agricultural produce totalled \$158,453,160, a decrease of \$6,318,923. Exports of manufactured products totalled \$130,848,327, an increase of \$65,393,597, or of 100 per cent.

## FACTORIES BUSY.

Speaking of conditions in Eastern Canada, Mr. C. J. McCuaig, President of the Sherbrooke Railway & Power Company, Director of the Ottawa Light, Heat and Power Company, and Director of a large number of big enterprises, stated that the industrial situation is particularly good. The textile mills around Montreal and elsewhere in the Province of Quebec are once more working full time, compared with about seventy per cent. capacity a year ago. Firms manufacturing all kinds of steel products used in shells are working night and day. Chemical companies cannot turn out enough goods; and factories turning out a great diversity of products are working right up to their limit.

## RAILWAY EARNINGS MADE RECORD.

The combined gross earnings of the Canadian Pacific Railway, the Grand Trunk Railway and the Canadian Northern Railway for the last nine days of November were \$6,539,507, the second largest total on record, being exceeded only by the final period of October (10 days). Compared with a year ago, the increase is \$2,413,325, or 58.4 per cent., a new high record in history, comparing with 51.3 per cent. in the third week, 48.3 per cent. in the second, 43.9 per cent. in the first, 50.9 per cent. in the fourth week, October, 39.7 per cent. in the third, 23.9 per cent. in the second, 19.5 per cent. in the first, and 2.7 in the fourth week, September. Every prior week since war began showed a decline.

## GREATEST REVENUE.

The war budget is giving results exceeding the most sanguine expectations of the Minister of Finance. The total revenue for the month of November is \$17,072,456, an increase of \$7,576,920 over that of November of last year, and the largest of any month in the history of the Dominion.

Between increased revenue and decreased expenditures the financial position this year as compared with the previous year shows a favorable balance of twenty-seven million dollars. The Dominion is thus daily being made stronger to meet the increasing heavy expenditures of the war. The expenditure of Dominion revenue on ordinary and capital account for eight months ending Nov. 30th, is \$13,000,000 less than for the same period of the preceding year.

## FAVORABLE TRADE BALANCE.

For the six months ending with September of this year Canada's total trade in merchandise was \$486,966,000, or \$18,440,000 more than it was for the corresponding six months of last year, for the most part under ante-bellum conditions. While imports of merchandise during the past six months show a relative decrease of thirty-eight millions, exports of Canadian produce show an increase of sixty-five millions. For September exports totalled \$46,129,000, and increase of \$14,333,000 over September of last year. Of this increase four millions is credited to manufactures, three millions to animal produce, and five millions to agricultural produce. As for the balance of trade, it is interesting to note that the total exports for the past six months have been \$246,000,000 as compared with total imports of \$213,000,000.

## ENORMOUS GAIN.

This year Canada will have a wheat crop of two hundred and fifty million bushels, of which two hundred millions will go for export direct to Great Britain. If you add that to the direct war orders, Canada will have a bigger total of exports in 1915 than she has ever had in her history. Hitherto Canada has always bought more than she sold, imported more than she exported; and as Hetty Green says, because everybody was buying they called it prosperity.

This year Canada will sell from two hundred million to three hundred million dollars' worth more than she buys, and the difference must be settled with her in gold; and when the tide sets that way Canada will be swept clean out of her glooms and dumps, to such a level of prosperity as she has never known.—A. C. Laut—"Saturday Evening Post."

## CANADA'S LOAN.

On Nov. 22 a new era in the financial life of Canada was inaugurated. The domestic loan of \$50,000,000 is the largest ever issued in the Dominion. From the favorable reception accorded it in the press together with the assurances of large under writings by financial concerns indicate that it will be a complete success. Apropos of this the words of the Hon. Mr. White of Toronto the other day are significant.

"The balance of trade is now in Canada's favor, and the excess of exports over imports can be applied to the liquidation of our interests and our indebtedness to foreign countries. We are now in a position to raise a considerable portion of our war expenditure in the Dominion, and the people will be asked to show that we have money to uphold the cause we know to be just and the ideals for which we stand."

## CONFIDENT OF CANADA'S STABILITY.

Sir Edmund Walker, President of the Canadian Bank of Commerce, expresses the opinion that Canada is well able to finance its part in the war for another three years, without imposing unduly heavy increases in taxation.

"We are confident of our financial stability," said Sir Edmund. "We have been borrowing from United States and Great Britain in the past, but this will not be necessary in the future, because of the splendid grain crops present and prospective. Winnipeg advises state that never in the history of Canada's flour trade have times been so good as the present. There is an enormous demand for export at various western points. Both New York and Boston orders have recently poured in for shipments to Italy and France. The Canadian ports are supplying the British trades direct. Country demand is vigorous both for flour and for mill feed, both sides of the line."

## OCTOBER'S TRADE ADVANCE.

The latest monthly statement of Canada's trade shows that Canada exported during October nearly eighty million dollars' worth of goods. This is about double the value of goods exported during October, 1914. The huge increase not due to any particular movement of manufactured goods, such as war munitions, but to a notable increase in practically all lines of trade. Exports of agricultural products increased in value from \$17,900,000 for Oct. 1914, to \$39,833,000 for the past October. The export of animals and their products increased by \$4,000,000; manufactured goods by \$5,700,000, minerals by \$1,500,000, and so on all along the line. The statement shows that Canadian trade for the past seven months in 1914, total exports were larger than imports by \$33,000,000. Canada is experiencing a notable business revival, the trade expansion resting on the record crop of this year, while the business stimulus expected from the trade in war munitions has yet to reach its maximum.

## THE NATION'S GRANARY.

Canada's wheat harvest of 336,253,000 bushels from 12,986,000 acres, an average yield of 25.89 bushels, surpasses the most rosy forecasts of the well-informed during the growing stages of the season. This yield is 104,541,000 bushels, or 45 per cent. more than the best previous record, which was made in 1913. Compared with last year's rather disappointing harvest of 161,230,000 bushels, the increase is 174,978,000 or 108 per cent. The substantial nature of this growth in production is shown by the fact that the harvest returns are 72 per cent. greater than the average for the past five years. The same satisfactory and highly important success has been attained in other grain crops. The aggregate yield of oats is 481,035,000 bushels from the 11,365,000 acres under crop. The barley harvest is 50,868,000 bushels from 1,509,350 acres, an average yield of 33.7 bushels per acre. The average yield of rye is 22.07 bushels, the aggregate being 12,604,700 bushels from 1,009,600 acres. Flax seed has become an important crop and the harvest record is 12,504,700 bushels from 1,009,600 acres, or 12.48 bushels per acre.

# Construction News

## ASYLUMS AND HOSPITALS.

BERLIN.—A by-law will be submitted to ratepayers to grant \$5,000 for an addition to hospital.

BERLIN AND GALT.—The two towns have purchased a site for the erection of a House of Refuge.

HAMILTON.—The city will erect a hospital for soldiers to cost \$15,000.

STRATFORD.—The city will erect an addition to the hospital; cost \$7,000.

## BRIDGES, WHARVES AND SUBWAYS.

BELLEVILLE.—Hastings County has passed a by-law to erect bridges to cost \$20,000.

## BUSINESS BUILDINGS AND BANKS.

TORONTO.—Thompson Starrett, 51 Wall street, New York City, have awarded the following contracts on the new Imperial Oil building, Church street: Masonry and fireproofing, Mitchell & Son, 156 St. Helens avenue; steel sash and trim, A. B. Ormsby Co., King street west; structural steel, Dominion Bridge Co.

TORONTO.—The Royal Bank have plans for a bank addition, Danforth avenue and Dawes road. Purdy & Henderson, new Birks building, Montreal, P.Q.; cost \$14,000.

TORONTO.—W. H. Mallory, architect, 65 Adelaide St. W., has awarded the following contracts on Ellis Bros.' store, Yonge St.: Mason, Thomson Bros., 151 Russholme Rd.; Carpenter, Geo. Sparrow, 110 Church St.; Sheet Metal, Feather & Roadhouse, 528 Front St. W.; Steel, Hepburn & Disher, 18 Van Home St.; Plumbing, Heating and Ventilation, Bennett & Wright, 72 Queen E.; Plastering, Taylor & Nesbitt, 13 Have-lock St.

WINDSOR.—J. C. Pennington, architect, has awarded the Humphries Construction Co. the contract for alterations to Dougall Block.

WINNIPEG, MAN.—The Bank of Hamilton, J. P. Bell, general manager, will erect a large office building.

## CLUBS AND SOCIETIES.

BRIDGEBURGH.—Whitehall Club building was destroyed by fire. Dr. H. B. Cobb, Buffalo, N.Y., Pres.

TORONTO.—The East Toronto I.O.O.F. have plans prepared for a new lodge hall to cost \$5,000, located on Barrington Ave.

VICTORIA, B.C.—Labor Temple, Limited, contemplate erecting a new hall on Pandora avenue.

## ELECTRICAL CONSTRUCTION.

BURGESSVILLE.—A bylaw to erect a hydro electric plant will be voted upon Dec. 16.

SPRINGFIELD, ONT.—The ratepayers will vote December 9 for a hydro electric plant.

STRATHROY.—The town will extend its electric system and water supply.

WEST LORNE.—A by-law will be voted upon to instal a hydro electric plant.

WINDSOR.—The city will spend \$50,000 on the extension of its hydro electric system.

## GAS PLANTS, ELEVATORS AND WAREHOUSES.

BARNET, B.C.—W. J. Prout has been awarded the general contract for a warehouse. Cost \$150,000.

MONTREAL.—Tenders are open for the erection of a warehouse for the Dominion Government.

MONTREAL.—W. B. Shaw, care of Montreal Electric Co., has plans for a warehouse on St. Antoine street; cost \$5,000.

PETROLEA.—Stonehouse Bros. have awarded D. McPherson a contract to erect a 100 x 50 addition to their garage.

TORONTO.—Architect McConnell, 176 Yonge street, has plans for a warehouse to cost \$20,000 for W. H. Harris, Richmond street west.

TORONTO.—R. H. Abraham, architect, has plans for an addition to the Mounce Storage Co. warehouse, Parliament street.

TORONTO.—Oxley and Hunter, engineers for the new Automobile and Supply warehouse on University Ave., Toronto, have awarded Teagle and Son the mason contract, McGregor and McIntyre the steel work, the Crescent Concrete Co. the reinforced concrete.

TORONTO.—Toronto Hydro Electric Commission propose erecting offices and warehouse to cost \$450,000.

TORONTO.—W. H. Harris, Standard Bank building, has plans for an \$18,000 warehouse on Richmond street. Mr. McConnell, architect, 176 Yonge street

VANCOUVER, B.C.—Walker Bros., 307 Pender street, Vancouver, B.C., suffered a \$12,000 fire loss to their garage.

VICTORIA, B.C.—The Davie Shipbuilding Co., Levis, P.Q., have been awarded the contract for a ferry boat to cost \$400,000, from the C.N.R.

## MILLS AND FACTORIES.

CHATHAM.—The Dominion Sugar Co. of Wallaceburg, D. M. Gordon, President, have awarded the general contract, for the new million dollar plant at Chatham, to the F. W. Marks Construction Co., Cleveland, Ohio., who will sublet all trades.

GEORGETOWN.—The ratepapers have granted Henry Corks \$6,000 to aid in the erection of a woollen mill.

HAILEYBURY.—The Riordan Paper Co. have purchased a site for the erection of a paper mill.

HAMILTON.—Proctor and Gamble are erecting a 50 x 30 two-story addition to their factory.

HAMILTON.—Steel Company of Canada will enlarge their plant.

HAMILTON.—The Dominion Steel Foundry Co. will erect four new buildings.

KINCARDINE.—The Ontario People's Salt Co. contemplate erecting a 15,000 addition.

KINCARDINE.—Wm. Mitchell will erect a knitting mill.

LONDON.—A. E. Nutter, architect, Dominion Bank Building, London, has awarded the general contract to John Putterborough for the erection of a factory for the London Peerless Hosiery Co. Cost \$10,000.

PETERBORO.—M. Kylie has plans for a new ice house on Rogers street.

PORT MOODY, B.C.—The Port Moody Steelworks Co. have plans prepared for a new mill.

QUEBEC, P.Q.—The Imperial Oil Co. contemplate erecting a factory for the manufacture of asphalt.

SANDWICH.—The Willys-Overland Motor Co. propose erecting a large plant.

ST. CATHARINES.—Chemical Refinery, Limited, will erect a potash factory.

ST. CATHARINES.—The fire loss of \$50,000 to the Maple Leaf Milling Co. will be rebuilt.

ST. MALO, P.Q.—Eastern Canada Steel Co. suffered a \$10,000 fire loss.

SYDENHAM.—Robert Cochrane will erect a cheese factory.

TORONTO.—The Canadian Tygard Engine Co., Royal Bank building, are preparing plans for a new factory on Kingston road, cost \$30,000.

WINDSOR.—The Curtis Co. have purchased a site for an addition to their factory.

WHITBY.—Whitby Silk Mills Co. will erect a new factory. The ratepayers will vote on a by-law to grant certain concessions.

## PUBLIC BUILDINGS.

KINGSTON.—Lusman & Cohen awarded the heating and plumbing to Lemmon & Sons, carpenter work to W. J. Gates, on the building which they are preparing as a soldiers' barracks.

LONDON.—A. M. Piper, city architect, is calling tenders for new Fair building.

LONDON.—The city contemplate erecting a building for live stock purposes.

PETERBORO.—By-law to be voted upon to erect exhibition buildings; cost \$30,000.

PORT COLBORNE.—The congregation of St. James Church, Rev. D. Russell Smith, pastor, have endorsed an expenditure of \$15,000 on a new church.

THE PAS, MAN.—The Provincial Government will erect new Court House.

TORONTO.—The city will erect two firehalls, one at Earls-court to cost \$25,000, the other at Wychwood to cost \$37,000.

TORONTO.—The city will erect sixteen new buildings to cost \$3,000 each, located at the Exhibition grounds.

TORONTO.—The city will erect a waiting room at Sunnyside to cost \$5,000.

WELLAND, ONT.—The city will erect two buildings, 100 x 20, for military purposes.

## RAILWAY CONSTRUCTION.

EDMONTON, ALTA.—The city will extend their street railway lines. Mr. Harrison is commissioner.

## RESIDENCES AND FLATS.

LONDON.—Watt and Blackwell, architects, Bank of Toronto Chambers, have prepared plans for an apartment building on Wellington St., cost \$20,000.

MONTREAL.—W. H. Mallory, 65 Adelaide St. E., Toronto, is preparing plans for a modern residence in Westmount.

MONTREAL.—W. H. Taylor, 2310 Gouin boulevard, has plans for residences; cost \$4,000.

OSHAWA.—S. M. McLaughlin is having plans prepared for a large modern residence.

WESTPORT.—J. P. McNally, secretary of St. Edward's Church, Westport, is calling tenders for a new presbytery.

WINDSOR.—P. Osterhont will erect three residences to cost \$7,000.

VICTORIA, B.C.—H. L. Griffith, architect, has plans for a \$9,000 residence for H. F. Bullen.

TORONTO.—The following are erecting brick residences: A. Beck, Nairn street and Morrison avenue, cost \$3,000; E. M. Brette, 39 Rainsford road, cost \$2,000; H. B. Crowne, 48 Rhodes avenue, one pair residences, on Rhodes avenue, cost \$3,200; Devins Bros., 51 Bird avenue, residence, Lauder avenue, cost \$8,000; S. Donnelly, 773 Shaw street, residence, Shaw street, cost \$2,000; J. Durham, 93 McKay avenue, three residences, McKay avenue, cost \$6,000; McMillen & Costain, 166 Main street, residence, Enderby road, cost \$2,000; E. H. Pearson, 434 Montrose avenue, residence, Montrose avenue, cost \$2,000; S. J. Green, 650 Annette street, residence, Hutchinson avenue, cost \$3,500; S. B. Hinder, Heath street and Oriole road, store at Bloor and Sherbourne streets, cost \$5,500; I. R. Hunter, 50 Chicora avenue, one pair residences, Glencairn and Heather streets, cost \$6,500; H. B. Jackson, Bracken avenue, residence, Bracken avenue, cost \$7,000; H. Lucas, 118 Felstead avenue, one pair residences, Felstead avenue, cost \$7,000; Jas. Mackenzie, 1425 Queen street east, two residences, Indian road, cost \$7,000; Wm. Morley, 114 Greenwood avenue, builder J. Claxton, 259 Shaw street, one pair residences, cost \$7,000; D. McKinley, 1139 Dovercourt road, residence, Dovercourt road, cost \$3,000; McMillan & Costain, 166 Main street, one pair residences, Enderby road, residence, Neville Park road, cost \$2,500; Muir & Lamb, 30 Hazelwood avenue, residence, Fifth avenue, cost \$5,000; Mrs. Martin, 120 Kenilworth avenue, residence, Kenilworth avenue, cost \$2,500; Muirhead & Medland, 130 King street east, stores and apartments, St. Clair avenue, cost \$15,000; Purton & Chenells, 634 Christie street, residence, Frederica street, cost \$6,000; J. Peacock, 1066 Queen-street west, two pair residences, cost \$7,500; J. Peppiatt, 12 Well's Hill avenue, residence, Keewatin avenue, cost \$4,000; Wm. Rive, 89 Galt avenue, residence, Galt avenue, cost \$2,500; C. B. Routcliffe, 417 Erie terrace, residence, Drayton avenue, cost \$2,000; Mrs. F. Spragge, 17 Willecock street, residence, George street, cost \$3,000; P. L. Spiers, 20 Biggar avenue, residence, Lauder avenue, cost \$2,500; Miss Strachan, care of 199 Yonge street, builders Ham Bros., 83 Salem avenue, residence, Indian road, cost \$5,000; C. F. Skipper, 17 Strathmore boulevard, residence, Neville Park boulevard, cost \$2,500; W. Williams, 33 Cloverdale avenue, residence, Dufferin street, cost \$3,500; S. F. Wilson, 5 Dale avenue, residence addition, Dale avenue, cost \$2,500; H. C. Long, 605 Traders Bank building, two residences, Keewatin avenue, cost \$10,000; T. W. Robinson, 11 Evelyn crescent, residence, Glendowyn avenue, cost \$2,500; N. Hicks, 612 Delaware avenue, two pair residences, Oakwood avenue, cost \$11,000; H. A. Johnston, 63 Normandy boulevard, residence, cost \$3,000; Cox & Cummings, 36 Canada Life building, residence, Pine crescent, cost \$5,000; H. Lucas, 118 Felstead avenue, two pair residences, Bathgate avenue, cost \$8,000; W. Nye, 1471 King street west, residence, Bartlett avenue, cost \$2,200; R. T. Robinson, 1310 Lansdowne avenue, stores and residence, St. Clair avenue, cost \$4,500; W. J. McWaters, 28 Kipswood road, residence, Neville Park boulevard, cost \$3,500; W. Humphrey, 83 Wellesley street, one pair residences, Kent road, cost \$4,000; A. Larkin, 6 Ravensden avenue, one pair residences, Mackay avenue, cost \$5,000; W. Williams, 33 Cloverdale avenue, brick residence, Dufferin street, cost \$5,000.

#### SCHOOLS AND COLLEGES.

BEAMSVILLE.—A by-law to erect a high school has been passed. W. D. Fairbrother, clerk. Cost, \$20,000.

BELMONT.—A new addition to the school will be erected to cost \$6,000.

FARNHAM, P.Q.—Chairman G. L. Elmos, of the Protestant School Board is calling tenders for a new school.

GALT.—The city contemplate erecting a new school; cost \$50,000.

HAMILTON.—The city contemplate erecting a school at the Beach.

INGERSOLL.—The by-law to erect a \$70,000 school has been passed.

LAMBTON HILLS.—S. B. Coon and Sons, Ryrie Bldg., awarded the general contract on the Lambton School to S. Barrett, cost \$20,000.

LONG BRANCH.—J. Doughty, Lake Shore Road, has received the heating contract, D. W. Hall, 244 High Park Ave., roofing, and R. C. Johnston, 17 Galley Ave., glazing on the new school, from Smith & Wright, architects.

MOTHERVILLE.—W. W. Rogers, Secretary of the School Board, is calling for tenders for a new school.

MOUNT DENNIS.—Work has started on a new school to cost \$22,000.

OTTAWA.—\$180,000 will be spent for additions and improvements to the high school.

POINT DU BOIS, MAN.—The town will erect a new school to accommodate fifty pupils.

TORONTO.—Sproat & Rolph are preparing plans for the new St. Andrew's College in North Toronto.

TORONTO.—The following have contracts on the new training school for the Salvation Army on Davisville Ave.: Mason, Ham Bros., 83 Salem Ave.; Heating, Sheppard & Abbott, 78 Harbord St.; Concrete, the Crescent Concrete Co., Temple Bldg.; Steel, McGregor and McIntyre, 1139 Shaw St.

WINDSOR.—A by-law has been passed for the addition to the Sandwich East School; clerk, Wm. St. Doris.

WINDSOR.—The Separate School ratepayers have passed a bylaw to erect a new \$60,000 school.

#### THEATRES AND RINKS.

TORONTO.—Darling and Pearson, architects, are preparing plans for the new Trinity College Building, Hoskin Ave., and ladies' residence on St. George St.

TORONTO.—H. C. Crane, architect, Detroit, is preparing plans for the re-erection of the Princess Theatre, King St., work to start in spring.

#### WATERWORKS, SEWERS AND CANALS.

BROCKVILLE.—Roberts Co., Darby place, have been awarded the contract for a new filtration plant; cost \$85,000.

CHATHAM.—By-laws have been passed to construct sewers and reinforced concrete pavements.

EDMONTON, ALTA.—The city contemplates a \$75,000 sewage disposal plant.

GUELPH.—The city will construct sewers to cost \$6,000.

LONDON.—Blight & Fielder have been awarded sewer contracts.

MARKHAM.—The town contemplate constructing sewers; cost \$5,000.

MONTREAL.—Plans are being prepared for sewer work to cost \$1,000,000.

OTTAWA.—The city will pave Rideau street with wood block and asphalt.

SARNIA.—A by-law will be voted upon Jan. 1 to spend \$12,000 on water mains.

SARNIA.—Tenders are open for pipe sewer work. John A. Beard, Engineer.

SMITH'S FALLS.—The town will extend its sewers and water mains.

TORONTO.—The city of Toronto have let the following sewer work: McCormick street, Toms Contracting Co., \$743; Perth street, Toms Contracting Co., \$744; Shipman avenue, Connolly-Agnew, \$327; Gunn's road, Mayes Contracting Co., \$948; Heintzman avenue, Mayes Contracting Co., \$388; W. Taylor received Dodds avenue, \$2,887; Boler street, \$347; Symes road, \$1,887; Keele street, Grant Contracting Co., \$635; Mulock avenue, Grant Contracting Co., \$640; Gunn's road south, Long & Gentile, \$1,340. The West Toronto outlet, division No. 2, via St. Clair avenue, went to Jennings & Ross for \$22,000; the city's tender was \$38,750.

#### PERSONALS.

Eden Smith & Son, 199 Yonge St., Toronto, will move to 23 Scott St. immediately.

Mr. Madill, of Craig and Madill, is lecturing on architecture at the University of Toronto.

B. R. Coon, B. Sc., of S. B. Coon & Son, Toronto, is improving after his recent serious illness.

Since the death of Mr. Storey, of Storey & Van Egmond, Calgary, Mr. Van Egmond has decided to retain the old name of the firm.

Clinton & Russell, of New York City, architects for the new Imperial Oil building, Church St., Toronto, have appointed Mr. Havill, associate architect, with offices in the Dominion Bank Building, Toronto.

Mr. George Goodwin, formerly one of the largest contractors in Canada, died at his home in Ottawa, Sunday, Nov. 28. Mr. Goodwin constructed many railways, canals and public buildings in Canada, his last achievement being the construction of the Victoria Memorial Museum, Ottawa.

Kivas Keeldar Tully, a pioneer architect of Saint Louis, and for the last thirty-five years employed by the U.S. Government, died in that city on October 17 at the age of sixty-two years. Mr. Tully was born in Toronto, a nephew of the late Kivas Tully, Ontario Provincial Architect, where he received the rudiments of an engineering training in the Government Model School. His work in St. Louis is represented by several churches, and the pedes and spire of the Cathedral. Mr. Tully was a member of the Mississippi River Commission, a Fellow of the American Institute of Architects (1890) and a corresponding member of the Society Central of Architecture of Belgium.

#### UNIQUE BRONZE WORK.

The bronze cover of the baptismal font, illustrated in the description of Congress Hall, is a unique and notable piece of workmanship. On account of all surfaces being of smooth finish and all lines being straight, greater mechanical efficiency was necessary than for more ornate work. This cover works on a ball-bearing pivot, and the least effort of the priest will uncover the font, making it very convenient. It was manufactured by John Watson & Son, Limited, Montreal.

#### MAJOR E. G. M. CAPE, HONORED.

The Montreal Builders' Exchange joined with a representative gathering of soldiers in tendering a complimentary dinner

to Major E. G. M. Cape, the commanding officer of the 3rd Overseas Battery, Siege Artillery. Major Cape has been an outstanding figure in contracting circles in Montreal during the past ten years. Advantage was taken of the occasion to present Major Cape with a regulation service pistol.

A notable feature in connection with the dinner was the fact that of the one hundred and fifty members of the Builders' Exchange present, the majority had sons or relatives on active service. Mr. John Quinlan, president of the Builders' Exchange, took the chair, and with him at the head table were Major Cape, Lt.-Col. John Costigan, Thos. Gilday, Lieut. Linton, Alex. Bremner, Wm. Rutherford and Capt. A. Charlebois.

#### IMPERIAL MUNITIONS BOARD.

The direct result of the visit of Mr. D. A. Thomas to this country has been the creation of an Imperial Munition Board superseding the Dominion Shell Committee. The reconstructed board has at its head J. W. Flavelle, of Toronto, who will act as chairman, with executive and administrative powers. General Alex. Bertram, former head of the committee, will in future hold the position of deputy chairman, with the following others comprising the board: Hon. Col. David Carnegie, (member of former committee), G. H. Dawson, C. B. Gordon, J. A. Vaillancourt and E. R. Wood, the latter four being new members.

In addition to the forming of the above new board, a Commission has been established to make inquiry into the supply and sufficiency of raw materials in Canada required for the production of munitions of war, and as to the best methods of conserving the same. The following are the members of this new Commission: Col. Thomas Cantley, head of the Nova Scotia Steel Co. of New Glasgow; E. Carnegie, of Welland; Geo. H. Watts, of Toronto; Robert Hobson, of Hamilton; Senator William C. Edwards of Ottawa and Geo. G. Mackenzie, B.Sc., Superintendent of Mines, Ottawa.

#### VANCOUVER BRANCH CIVIL ENGINEERS.

The first general meeting of the Provincial Division of the Canadian Society of Civil Engineers is being held in Vancouver on December 10th and 11th. The schedule of papers to be read and discussed during the coming season is as follows:

Dec. 16—The Vancouver Grain Elevator, C. D. Howe, Engr. Dom. Govt. Grain Commissioners; 1916, Jan. 6—The Bridges of the C.N.R. Ry., J. L. Harrington, M. Can Soc. C.E.; Jan. 20—Some Remarks on Railway Location Problems in British Columbia, C. E. Cartwright, M. Can. Soc. C.E.; Feb. 3—The North Arm Jetties of the Fraser River, C. C. Worsfold, M. Can. Soc. C.E.; Feb. 17—The City of Kamloops Power Plant and Pumping Systems, H. K. Dutcher, M. Can. Soc. C.E.; Mar. 2—The Prince Rupert Docks of the G. T. P., J. H. Pillsbury; Mar. 16—Electric Dredging and Hydraulic Sluicing, F. D. Nims, M. Am. I.E.E.; Mar. 30—Pneumatic Foundations, E. G. Mathieson, M. Can. Soc. C.E.; Apr. 13—Water Powers of British Columbia, G. R. G. Conway, M. Can. Soc. C.E.; May 4—Election of Officers.

A paper is also promised by Professor R. W. Brock on "Geology as applied to Engineering," and it is hoped that arrangements can be made for a paper on the Rogers Pass Tunnel.

#### ANNUAL MEETING, SASKATCHEWAN ASSOCIATION OF ARCHITECTS.

The annual meeting of the Saskatchewan Association of Architects was held on Wednesday, October 27th, in the offices of the President, Regina, Sask. Members were present from the different parts of the Province, including Saskatoon, Moose Jaw and Prince Albert, besides the local members.

Mr. A. G. Creighton and Mr. R. M. Thompson were re-elected to the council for three years and the election of officers resulted as follows:

President, Mr. W. G. Van Egmond, Regina; Vice-Presidents, Mr. A. G. Creighton, Prince Albert, Mr. R. M. Thompson, Saskatoon; Secretary-Treasurer, Mr. F. W. Knight, Regina; Prof. A. R. Greig, Saskatoon; R. G. Bunyard, Moose Jaw; H. Cooper, Saskatoon.

The Examining Board were elected as follows: Chairman, Prof. A. R. Greig, Saskatoon; Secretary, R. M. Thompson, Saskatoon; W. G. Van Egmond, Regina; H. Cooper, Saskatoon; A. G. Creighton, Prince Albert.

In the President's address particular attention was drawn to the amendment passed at the last session of the legislature amending the charter of incorporation whereby it is now illegal in the Province of Saskatchewan to provide plans for buildings except by a registered architect unless as owner or as contractor for another person. The president pointed out that this is the most advanced legislation relating to the practice of architecture in Canada and should prove of great benefit to the profession and to the public generally.

In the secretary's report reference was made to the following: An architectural library has been established in connection with the Association, about \$600 worth of books having been bought and are now in the library of the University at Saskatoon and are for the use of all members. The books will be sent by mail to any member forwarding the postage. This will form the nucleus of a large library and will be at the disposal of the students at the university taking up an architectural course. It is proposed to establish a chair of architecture at the University when the time is opportune.

Eighteen members of the association have joined His Majesty's forces, including the secretary, Mr. F. C. Clemesha and Mr. D. Webster, also a member of the council. One member, Mr. Alan Richardson, was killed in action at the battle of Festubert. It was decided to keep all members who have enlisted in good standing for the duration of the war.

In accordance with a motion made at the last annual meeting the council took legal advice as to the right of an architect to put a lien upon a building. No hesitation was given in advising that a duly qualified architect has the right in this Province to file a lien against a building for the full amount of his fees.

The following were appointed delegates to the R.A.I.C. for the year 1915-16: Mr. W. G. Van Egmond, Mr. R. G. Bunyard, Mr. F. C. Clemesha, and Mr. D. Webster.

The sum of fifty dollars was voted to the Patriotic Fund. The next annual meeting will be held in Regina.

#### BOOKLETS, CATALOGUES, ETC.

**THE INTERIOR BEAUTIFUL.**—A folder has just been issued by the Sarnia Metal Products Company, Limited, Sarnia, Canada, illustrating in an artistic manner a number of two-color interior views suggesting the solution of the problem of interior decorations in the home. Views are shown of a typical bed-room, dining-room and reception hall, showing how well adapted the metal products are to interior finishing.

**GLOBE METAL SHINGLES.**—This is the title of a twelve page booklet just issued by the Globe Iron Roofing & Corrugating Company of Cincinnati, Ohio, illustrating the various types of shingles manufactured by this firm. It also contains instructions for applying them.

**CONDULET SUGGESTIONS.**—A well-printed catalogue containing thirty-two suggestions, each one illustrating an actual installation, has been received from the Crouse-Hinds Company of Canada, Limited, Toronto. It contains timely information to all having to do with electrical installations of any kind.

**BRICK CATALOGUE.**—The Hydraulic Press Brick Company, St. Louis, Mo., with offices in principal cities of this country, has just published a new catalogue, descriptive of Hy-tex brick. In this catalogue are shown, by means of colored plates, not only individual bricks of the various lines of manufacture, but also colored reproductions of sections of walls laid up with the more popular varieties of Hy-tex brick. The text portion of the catalogue describes the various products in detail, discusses the architectural merits of brick, gives reasons for the adoption of Hy-tex products, and much data that is of interest and value to the architect in determining the materials that best meet his requirements.

**INCINERATORS.**—The Borge Incinerator Corporation, Flat Iron Building, New York, has recently published a loose-leaf catalogue, describing standard and special incinerators for municipalities, institutions, banks, hotels, restaurants, factories, department stores, clubs and private residences.

**FIREPROOF HOUSES.**—A booklet presenting the principles and methods of fire-proof construction for dwellings, together with a detailed description of a fire-proof house and a fire-proof bungalow, has recently been published by the General Fireproofing Company, Youngstown, Ohio.

**STEAM TRAPS.**—The Automatic Steam Trap & Specialty Company, Detroit, Mich., has issued Catalogue No. 8, describing the Barton Expansion Automatic Steam Trap. The principal of the Barton trap is an expression of one of the simplest and most dependable laws of mechanics. In accordance with it the condensed water in the trap causes a lowered temperature which instantly contracts the inner sleeve and automatically and positively opens the trap for water to escape. The temperature again raised by the steam automatically closes valve by expanding sleeve and prevents any escape of steam.

#### TECHNICAL SOCIETIES.

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

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

**MANITOBA ASSOCIATION OF ARCHITECTS.**—President, H. E. Matthews, Winnipeg; Secretary, R. G. Hanford.

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

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A Barrett Specification Roof

is the cheapest permanent roofing made and it costs nothing to maintain.

It will last without any attention for twenty years or more. The unit cost accordingly is less than  $\frac{1}{4}$  of a cent per foot per year of service.

These roofs take the base rate of insurance and are approved by the Underwriters Laboratories.

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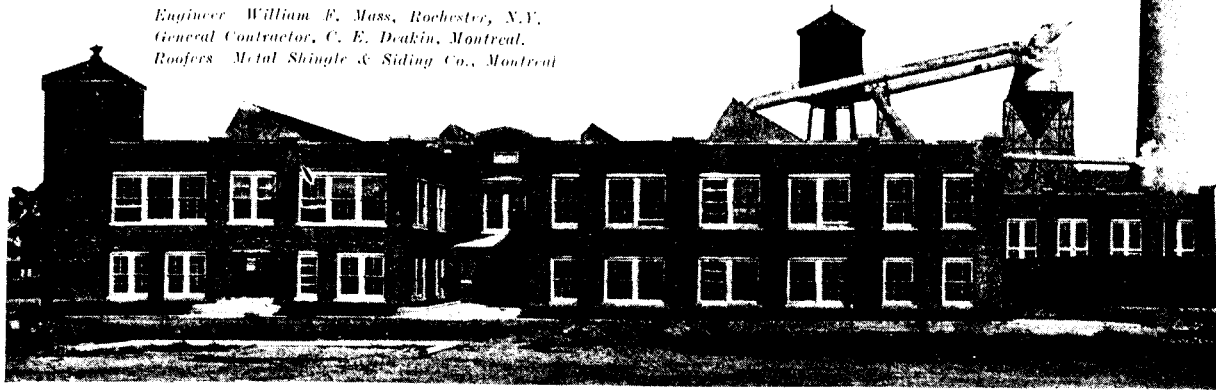
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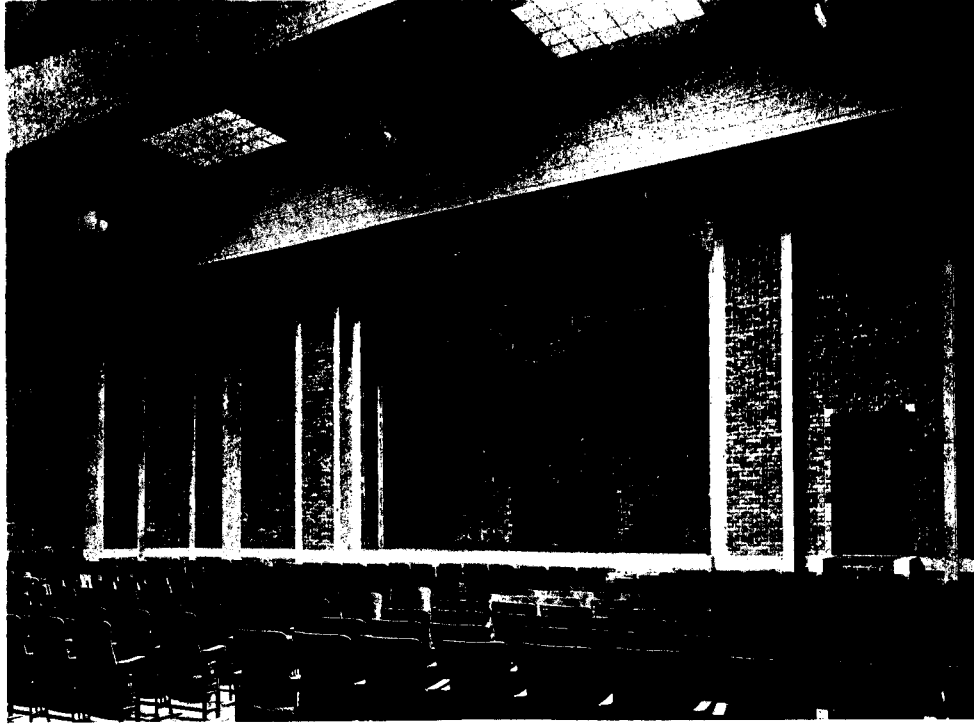
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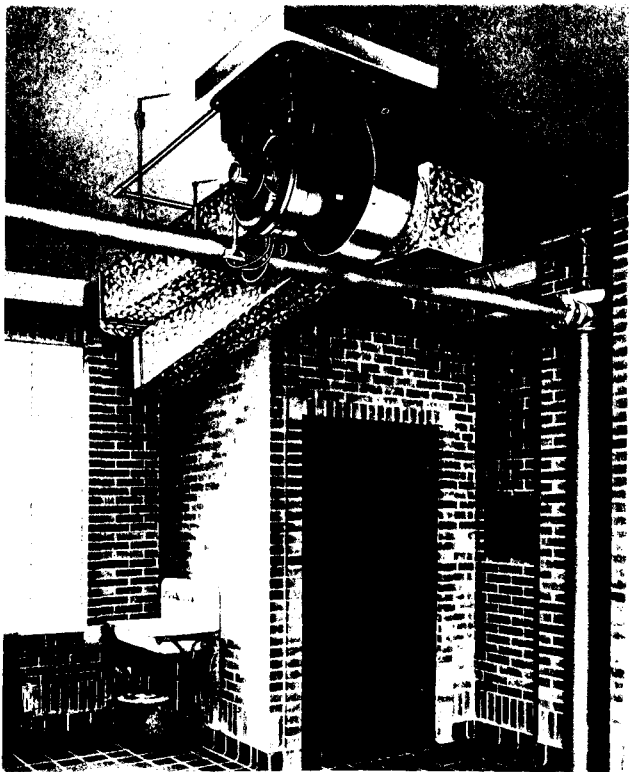
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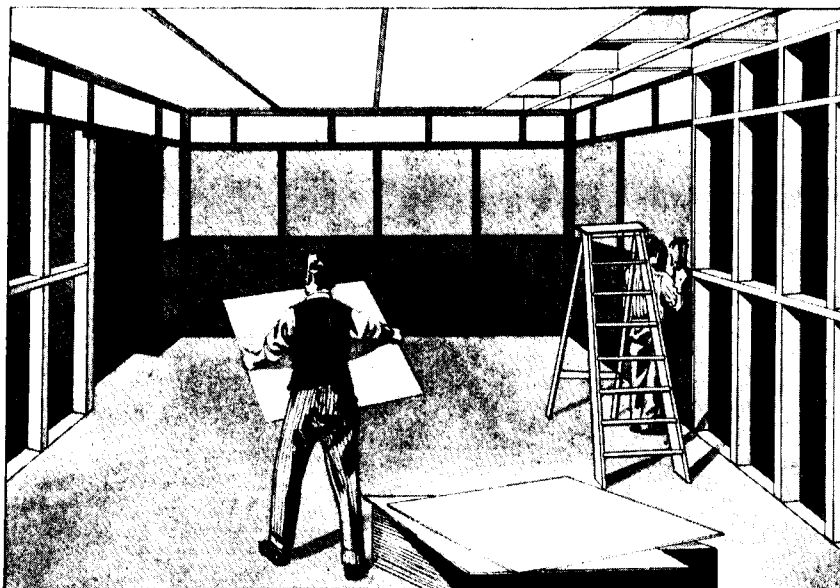
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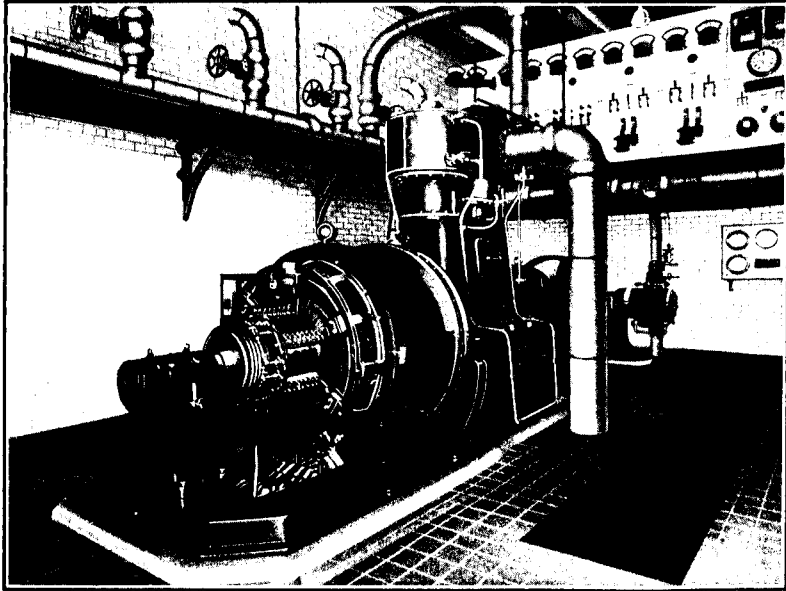
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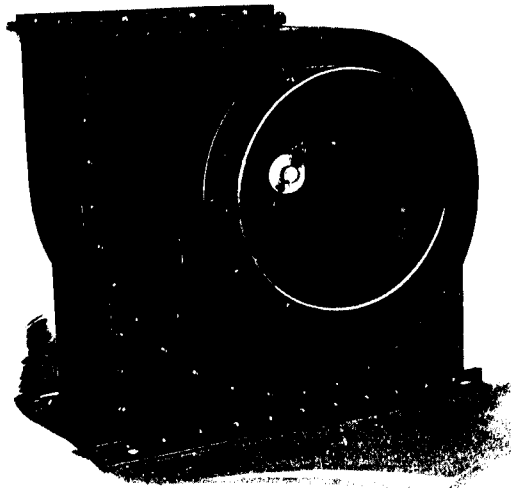
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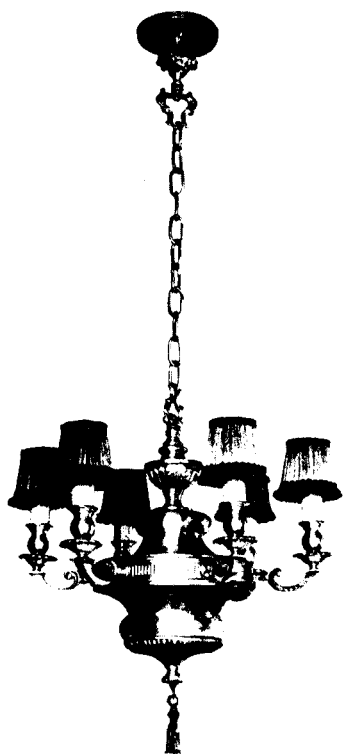
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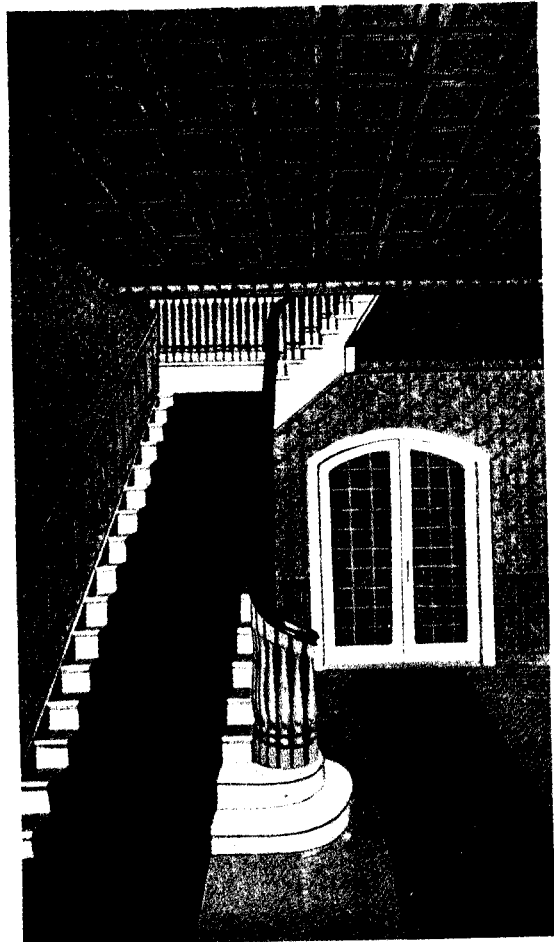
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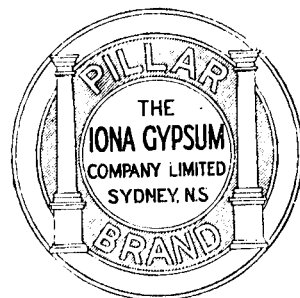
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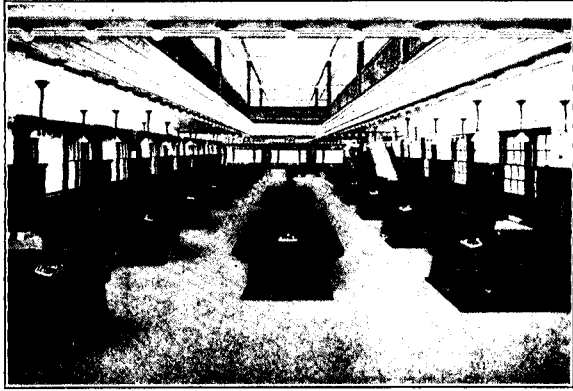
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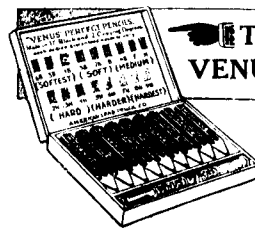
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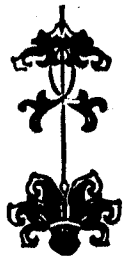
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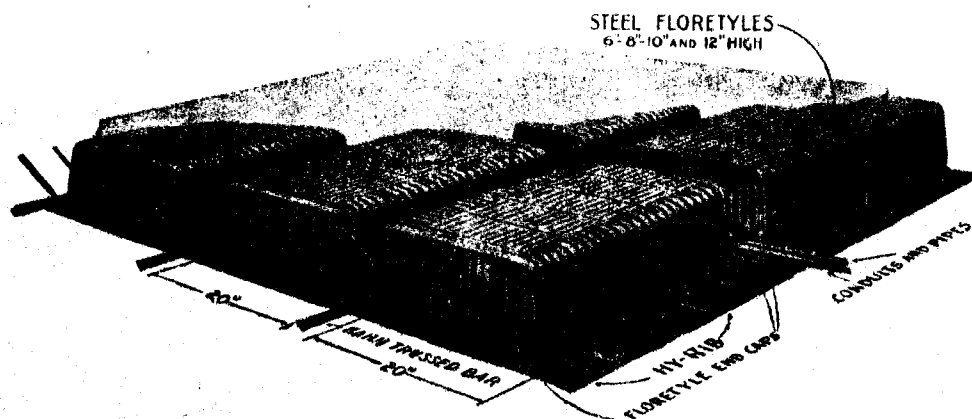
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