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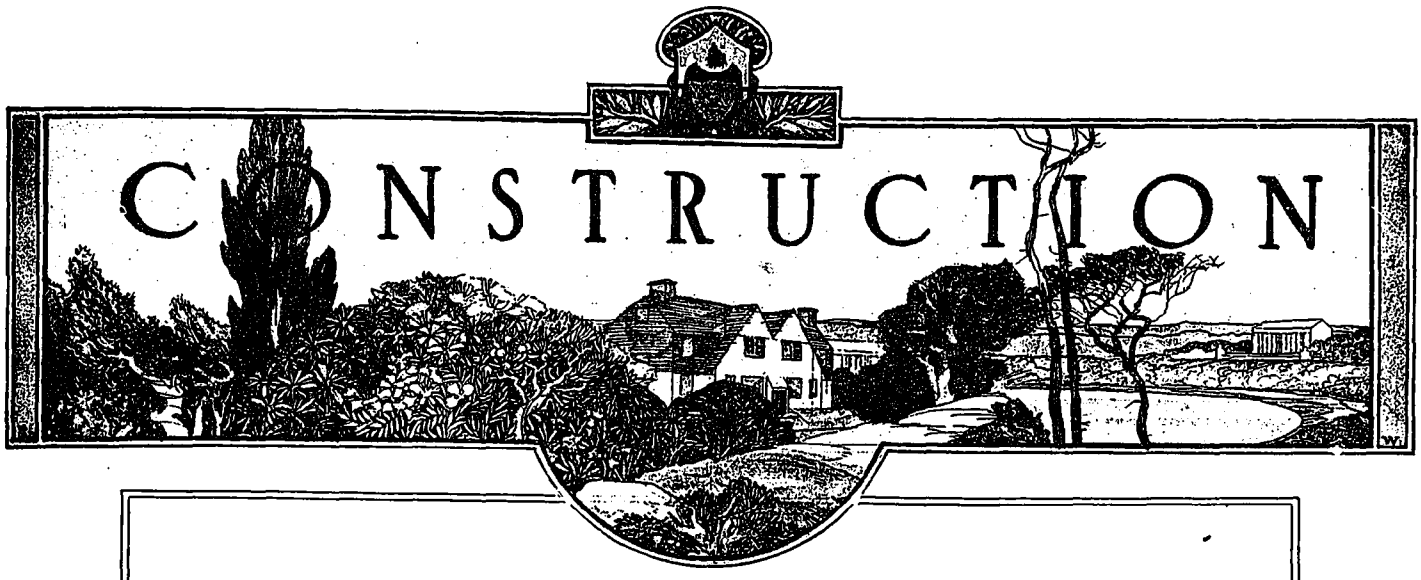

July, 1916 Vol. 9, No. 7

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H. GAGNIER, Limited, Publishers
GRAPHIC ARTS BLDG., TORONTO, CANADA
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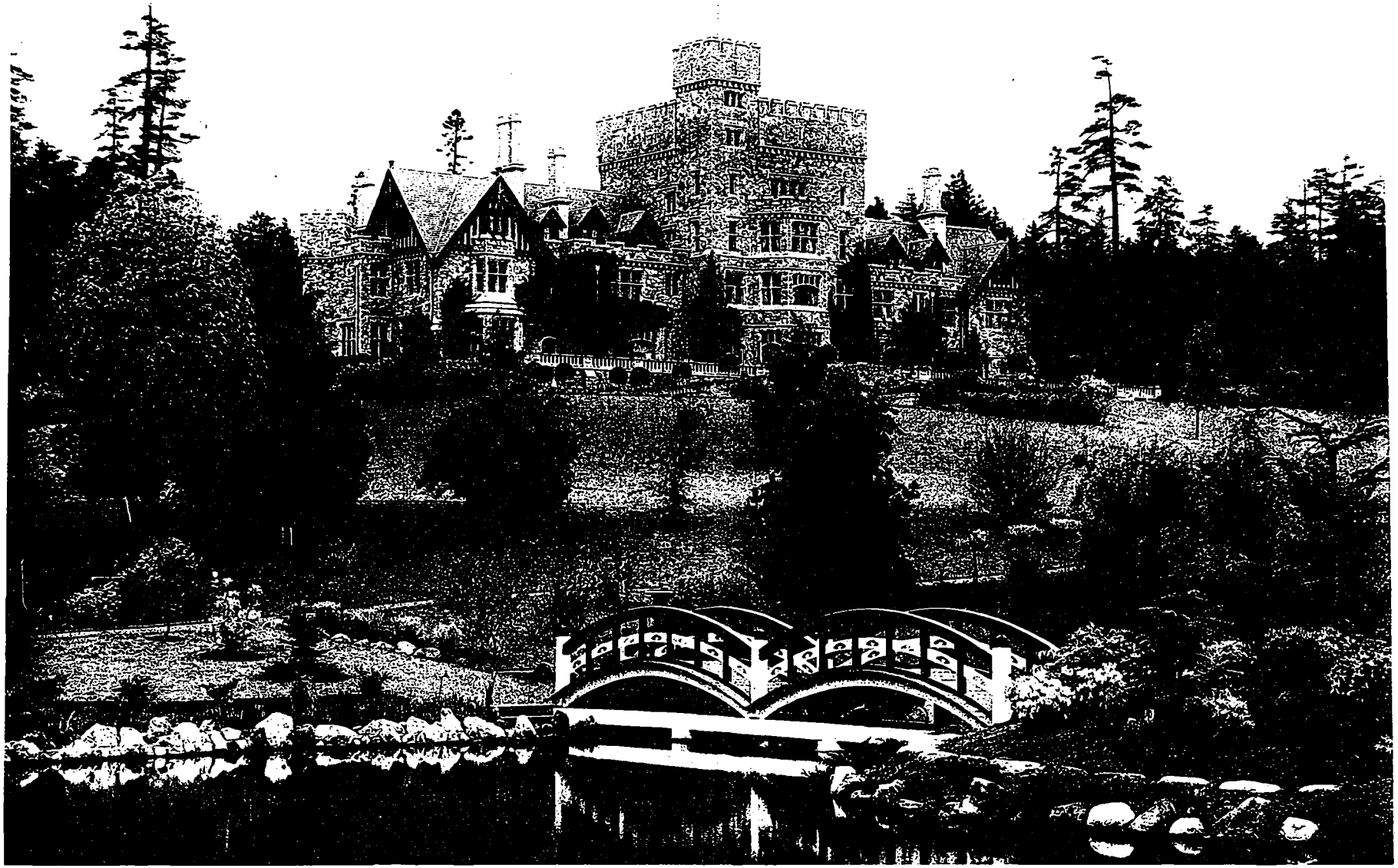


VIEW FROM THE LAKE, HATLEY PARK, RESIDENCE OF JAMES DUNSMUIR, VICTORIA, CANADA.

SAMUEL MACLURE, ARCHITECT.

St. Denis Theatre, Montreal

TO find a new building, planned as the result of an infinite amount of study and patient supervision, designed with due regard to its artistic effect, and in the spirit of independence of the influence of architectural precedents; executed with the best materials, and handled by skilled workmen, and built for the edification of the public, is seldom the fortune of an architectural critic. Such is the new St. Denis Theatre.

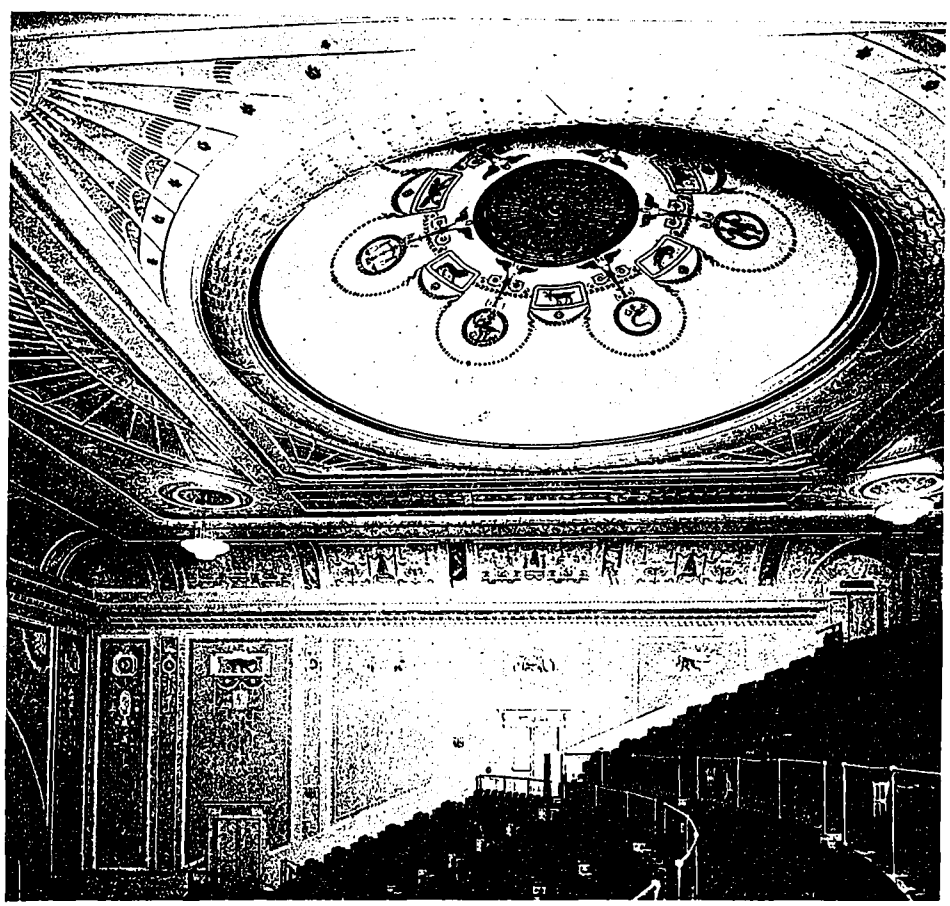
It is located in that portion of Montreal favored by the French-Canadian as a residential section, and mainly for their use, yet so readily accessible from other parts of the city, and though now used mainly as a "moving-picture" theatre, is so arranged and equipped that it can be readily converted for theatrical performances or for operatic productions.

The growth in popularity of moving-picture entertainments during the past twenty years has been one of the most remarkable phenomena of modern life, and to satisfy the demand a great number of buildings have been constructed, or, in many cases, altered, so that now the daily attendance is equivalent to one in twenty of the total population of the country.

The great demand in the earlier history of the business resulted in the erection of a cheap and inferior design of building, and it is not easy to find examples now that rise above mediocrity. The causes of this are obvious enough, the principal ones being the vulgar taste of the great majority of owners and their disinclination to pay the commission demanded by a competent architect. The artistic quality of these buildings has been further degraded by certain firms of decorators who specialize in this type of work and are generally cheap and trashy and usually overornate.

Furthermore, from a mechanical point of view, moving picture theatres are highly defective, due to lack of attention to the technical features necessary to their construction, especially with regard to fireproof qualities and ventilation.

The St. Denis Theatre, however, is one of the most modern types of building adapted to this particular amusement, and planned in such a manner that the public is safeguarded in every respect. The building is constructed with a steel frame, nearly five hundred tons of material being required, fireproofed with concrete, and the walls of solid brick masonry; ample exit and commodious entrances are furnished, and the comfort of the patrons foreseen by spacious retiring rooms, an ice water plant and perfect ventilation. The latter system is most complete; fresh air is "inhaled" from the roof level to the basement, passing through heating coils, and then through an air-washer—cleansing the air from all impurities—and forced by fans through a sanitary plenum chamber under the auditorium and gallery, and eventually through mushroom ventilating bends under the seats, the circulation being further accelerated by large ventilating suction fans on roof, maintaining a constant current of pure tempered air throughout the building.



CEILING DETAIL, ST. DENIS THEATRE, MONTREAL.

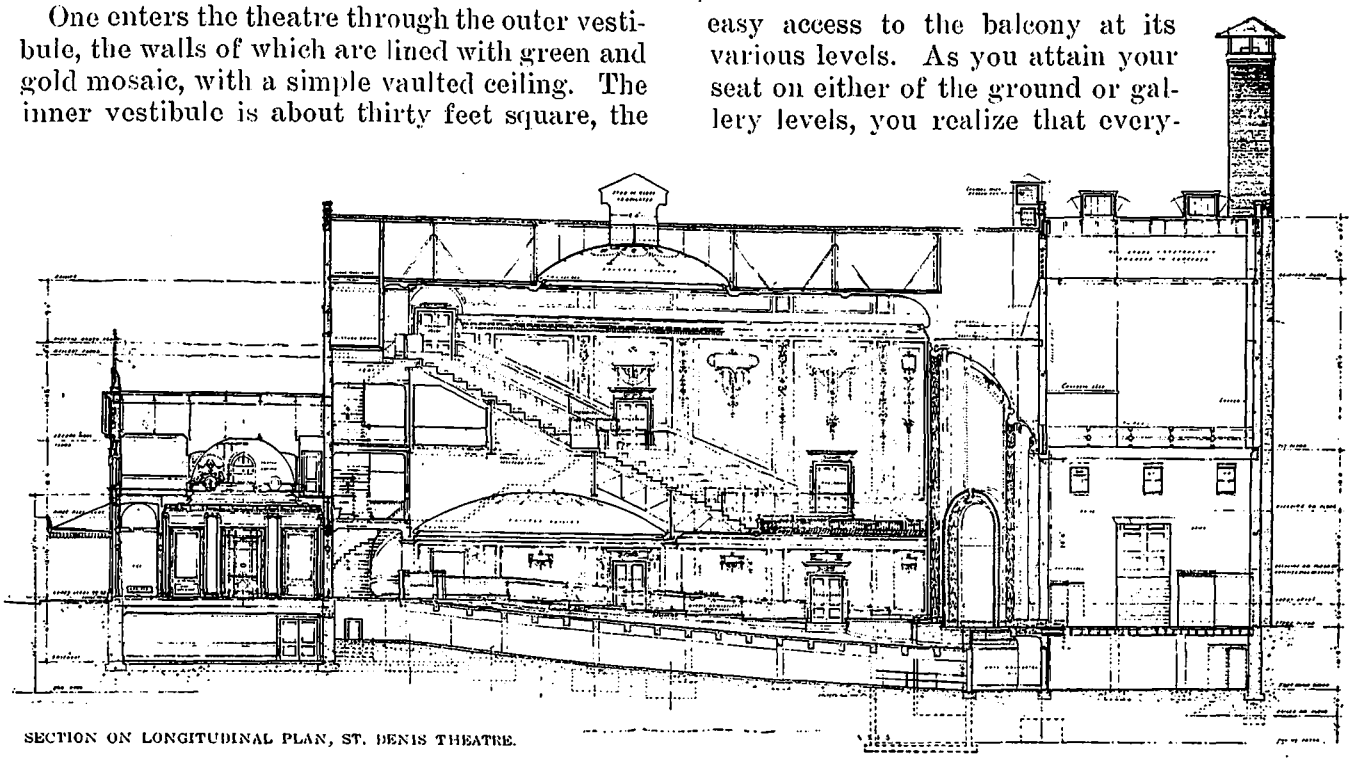
GENERAL INTERIOR VIEW, ST. DENIS THEATRE, MONTREAL. BAROTT, BLACKADER & WEBSTER, ARCHITECTS.

The stage section is equipped with a sprinkler system, and can be instantly separated from the theatre by an automatic fireproof curtain, as well as a water curtain.

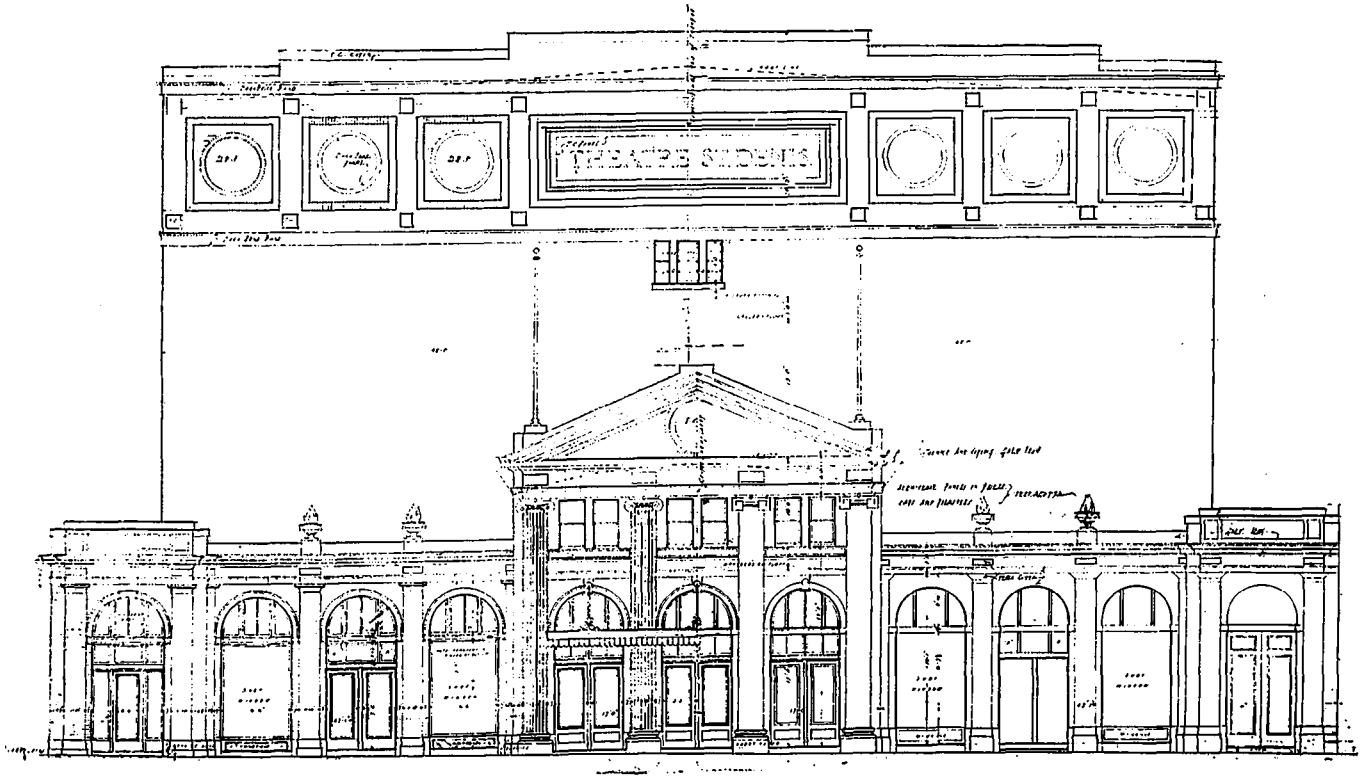
In regard to the exterior design of the building, the main shaft of the exterior of the auditorium has been treated with a warm yellow tone face brick, laid in rusticated courses, and the upper section in panels enriched with polychrome terra cotta ornament. The main portico, ornamented with dull green Ionic pilaster surmounted with a pediment and flanked on either side with an arcade containing small shops, all of the prevailing yellow tone.

One enters the theatre through the outer vestibule, the walls of which are lined with green and gold mosaic, with a simple vaulted ceiling. The inner vestibule is about thirty feet square, the walls lined with faience tile in panels, separated by Ionic pilasters supporting a simple cornice, and over all a central dome decorated in stencil ornament and monotone color, the dome being pierced with lunettes and windows, enabling the management to oversee the operation of the "front of the house" from the offices over the vestibule.

One is impressed upon entering the theatre with the general feeling of spaciousness and huge span of the gallery. On either side of the foyer a wide marble staircase invites you by easy access to the balcony at its various levels. As you attain your seat on either of the ground or gallery levels, you realize that everything possible has been done for the comfort of the theatre-goer. The air is fresh, there is no disturbing noise, the lighting subdued, and eventually you observe that there is no sense of oppression from over-ornamentation; the walls and ceilings are "decorated" in low applied relief of the Adams School, and the color has been applied in such a manner as to blend with the ornament in a harmonious warm golden tone, monotony being avoided by spots of color in the panels consisting of interesting sketches to enliven the attention.

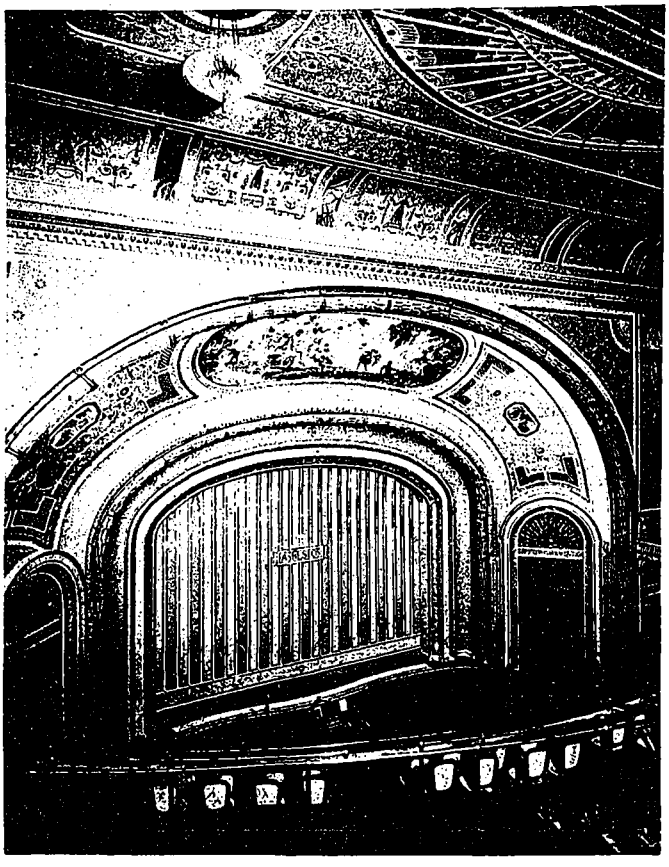


SECTION ON LONGITUDINAL PLAN, ST. DENIS THEATRE.



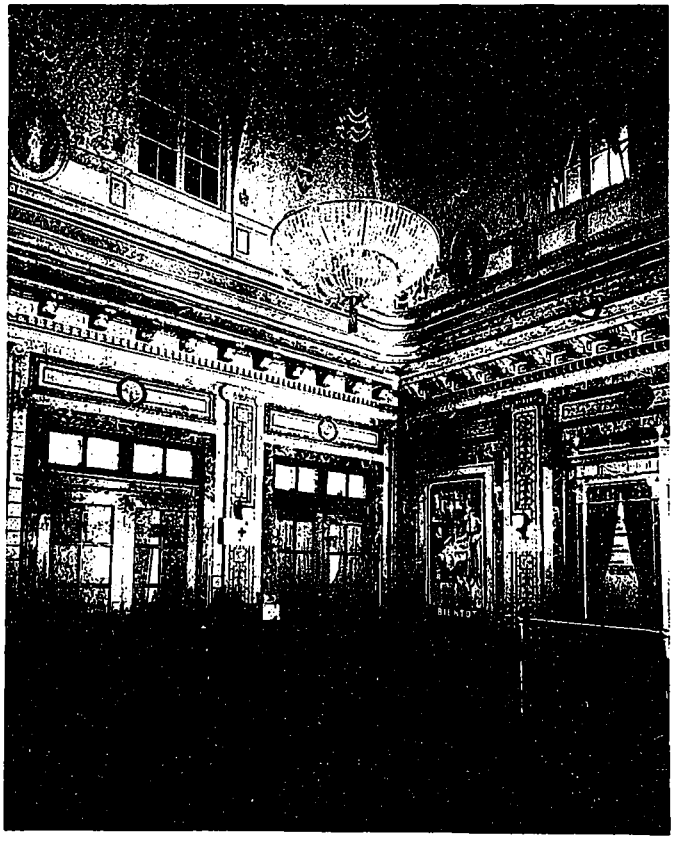
FRONT ELEVATION, ST. DENIS THEATRE, MONTREAL.

BAROTT, BLACKADER & WEBSTER, ARCHITECTS.



VIEW FROM BALCONY, ST. DENIS THEATRE, MONTREAL.

The central portion of the main ceiling is pierced by a dome forty feet in diameter, painted a deep soft blue, enriched with zodiacal signs and glittering stars in gold, and the balance of the geometrically designed ceiling is in white, here



VESTIBULE, ST. DENIS THEATRE, MONTREAL.

BRONZE TICKET BOOTH, ST. DENIS THEATRE, MONTREAL.

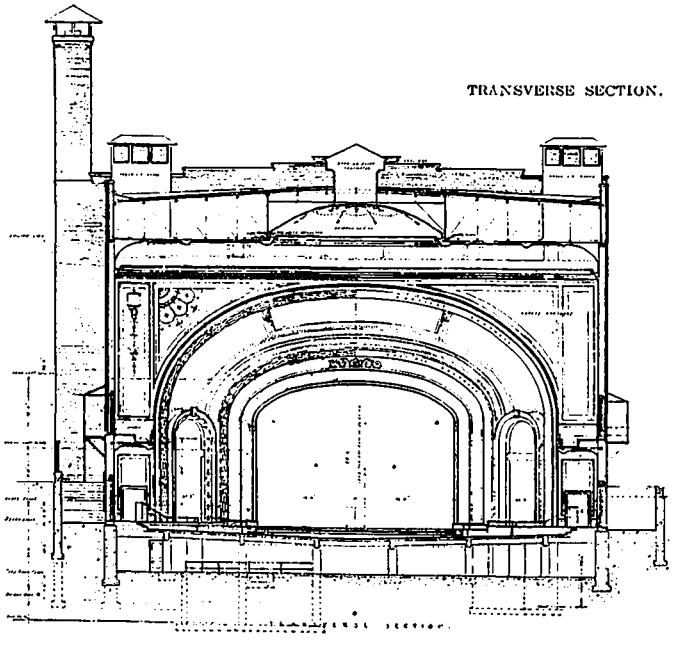
and there enriched with color recalling the tone of the main walls.

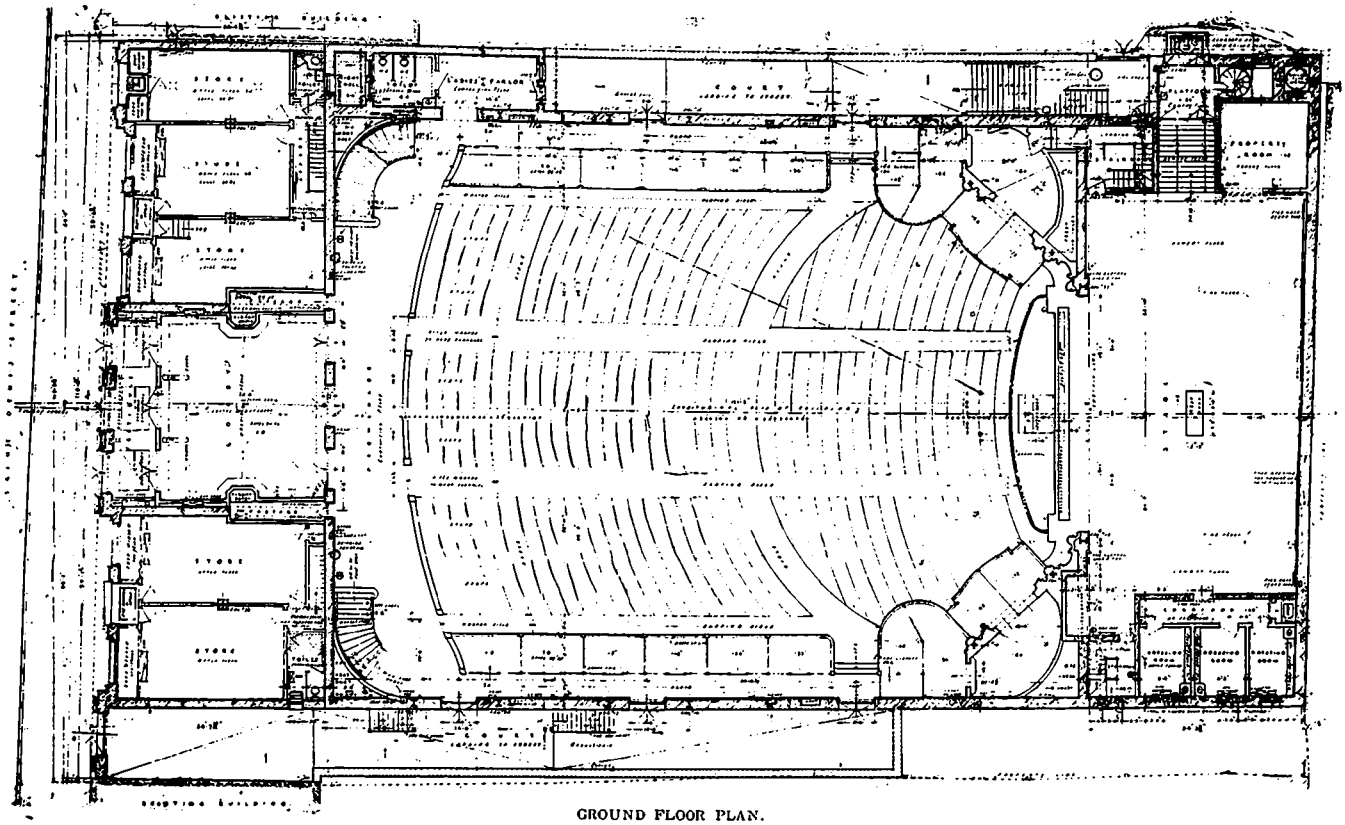
The hangings and upholstery are of turquoise blue, with golden fringe; the seats of a dark mahogany tone; the lighting fixtures are not discernable until you make a point of looking for them, and you then note they are of crystal beads, thereby eliminating the heavy masses which heretofore have been the objectionable feature of theatre lighting.

Concealed from view in the orchestra pit and over the proscenium boxes a large organ has been installed and operated from a central keyboard in the orchestra pit.

Over the proscenium arch in the covered panel

TRANSVERSE SECTION.





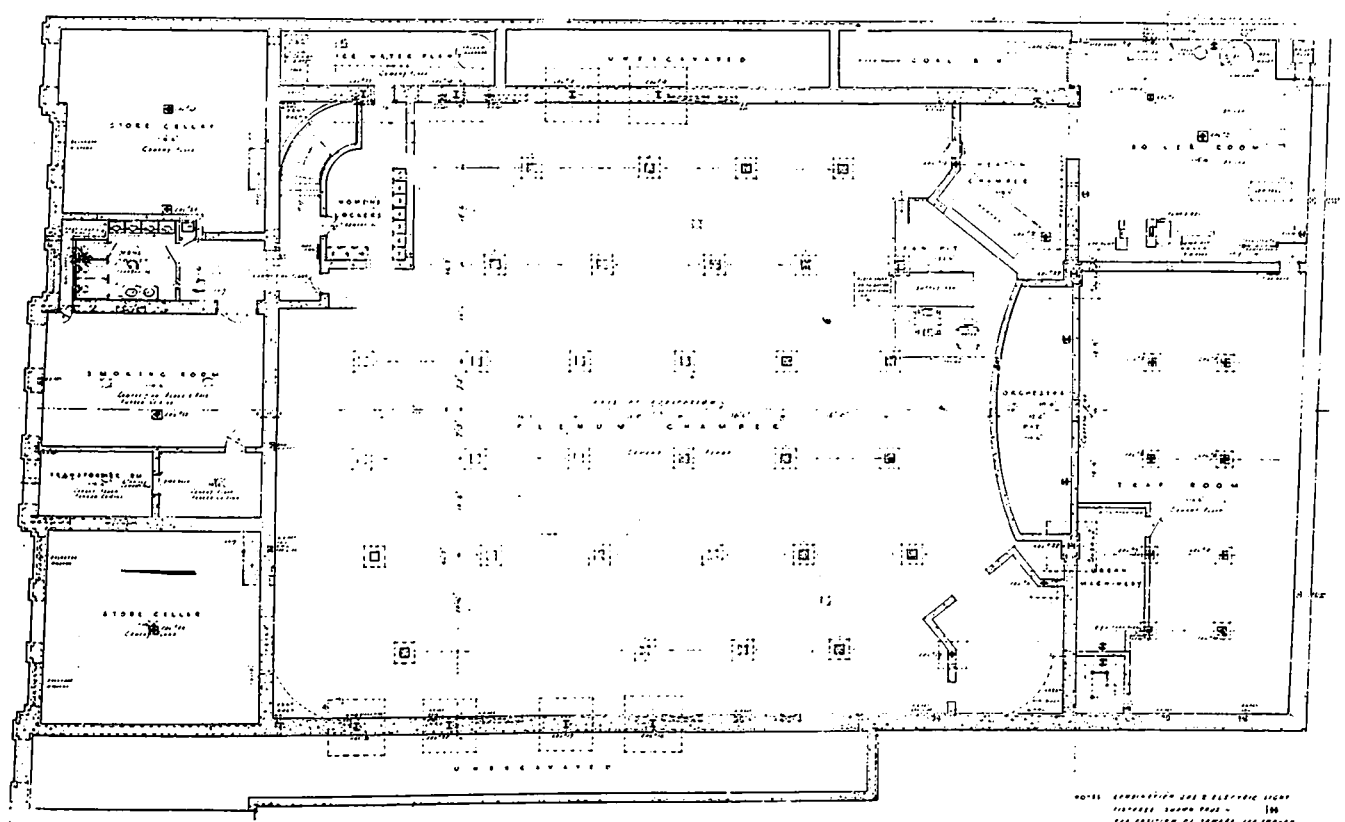
GROUND FLOOR PLAN.

is a large allegorical painting typifying the various features of the stage, and reminiscent of Montreal in the background, all cleverly illuminated by concealed lighting.

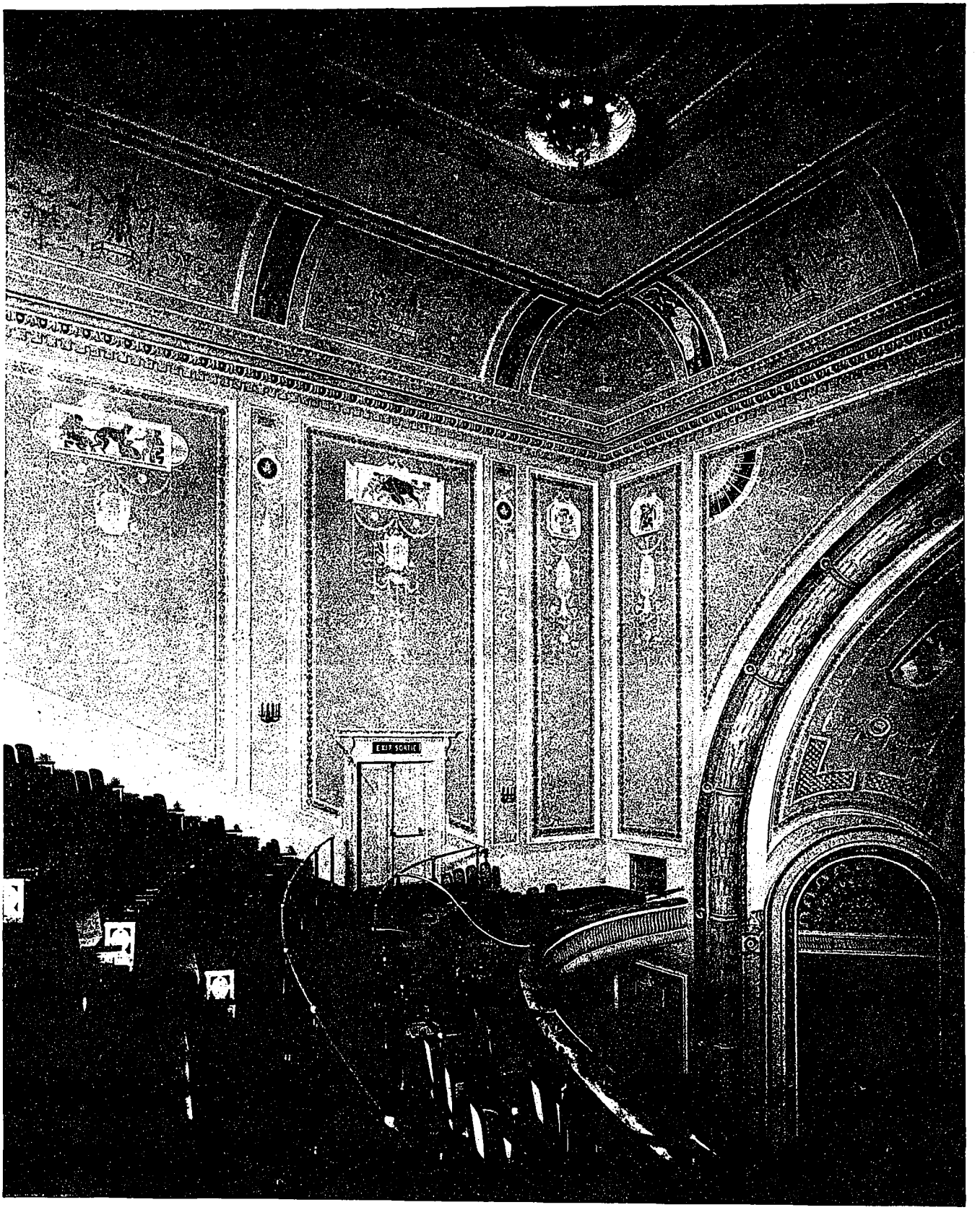
Our only criticism is that of the inevitable electric sign, which is as usual a hideous excrescence on the exterior of the building, but presumably the architects could not control this commercial necessity.

BUILDING MATERIAL SHORTAGE IN NETHERLANDS

At a meeting in Amsterdam of an association of employers and workmen in the building industry, gloomy reports were made regarding the supply of timber for building purposes. Holland has more woodlands than most foreigners suppose, but they are far from sufficient



BASEMENT PLAN, ST. DENIS THEATRE, MONTREAL.

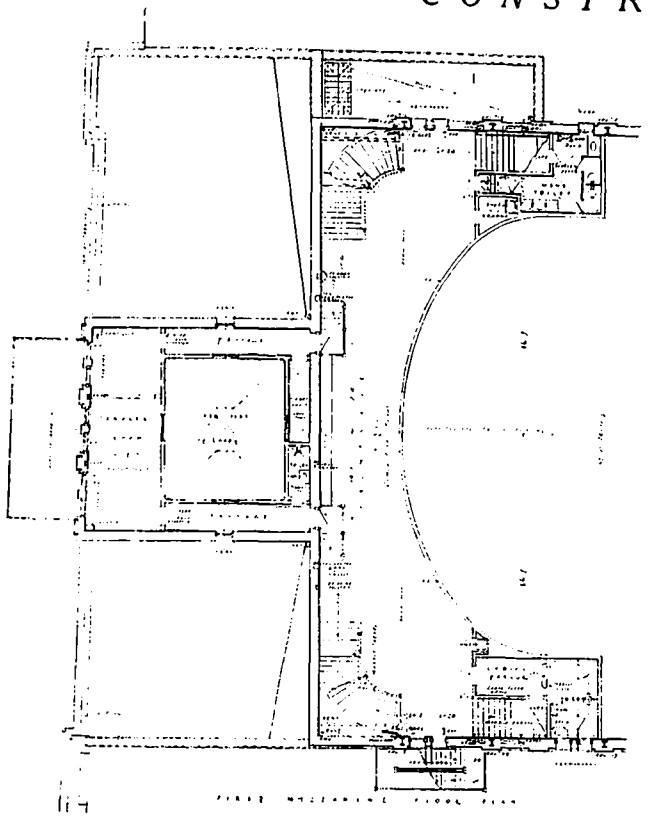


BALCONY, SHOWING MURAL DECORATIONS, ST. DENIS THEATRE, MONTREAL. BAROTT, BLACKADER & WEBSTER, ARCHITECTS.

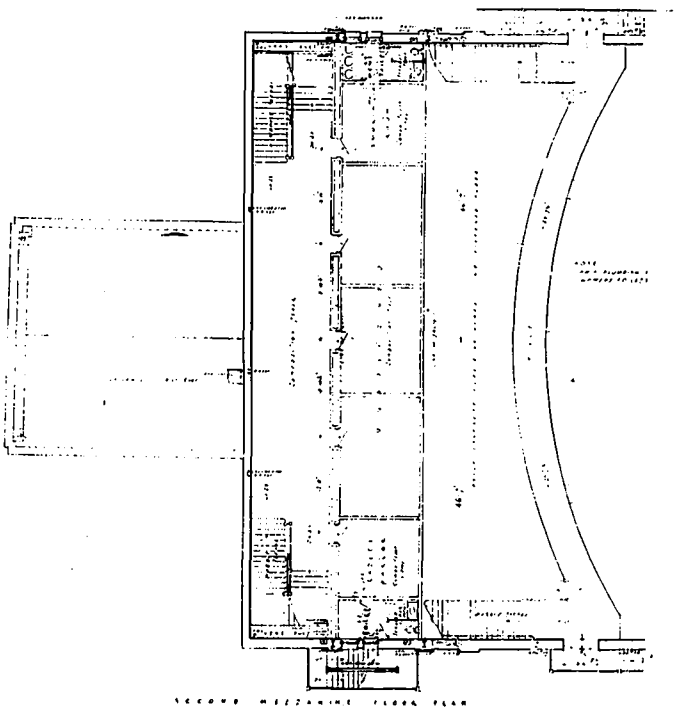
to supply the needs of the country for building timber, and without imports from other countries few houses could be built in the Netherlands.

In the opinion of the association of builders the situation is serious. Timber is now imported from Germany, Sweden, and Norway. The quantity obtainable is small, and most of it is of inferior quality. Continued supplies from Germany cannot be relied upon, the association believes, as the German Government has need of the surplus timber and will pay a higher price than this country has paid.

The building association gives warning that unless relief measures are taken the supply of wood most needed for construction work will



FIRST MEZZANINE FLOOR PLAN, ST. DENIS THEATRE, MONTREAL.



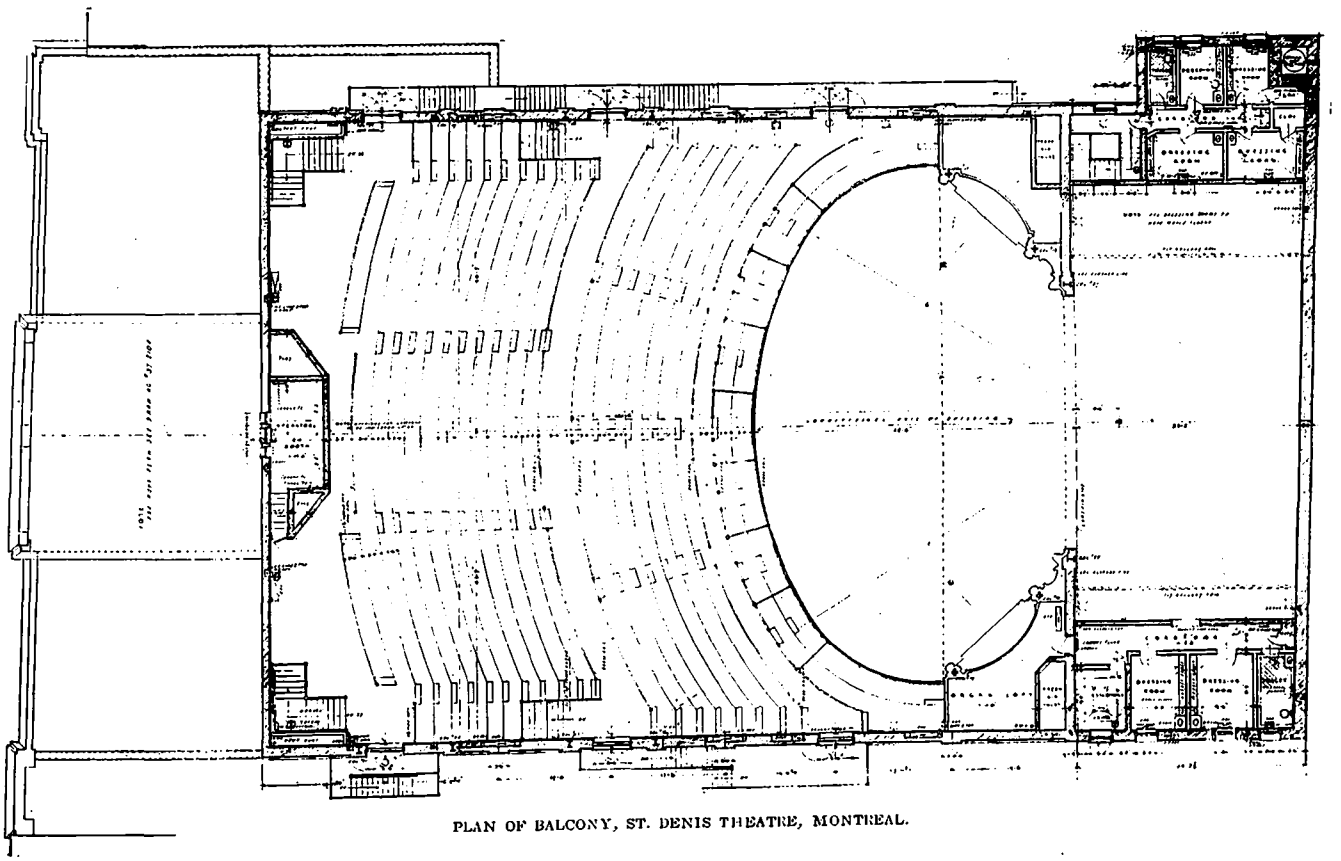
SECOND MEZZANINE FLOOR PLAN, ST. DENIS THEATRE, MONTREAL.

be exhausted within a few months and great stagnation and unemployment in the building trades may be expected. Already several woodworking factories have ceased operations.

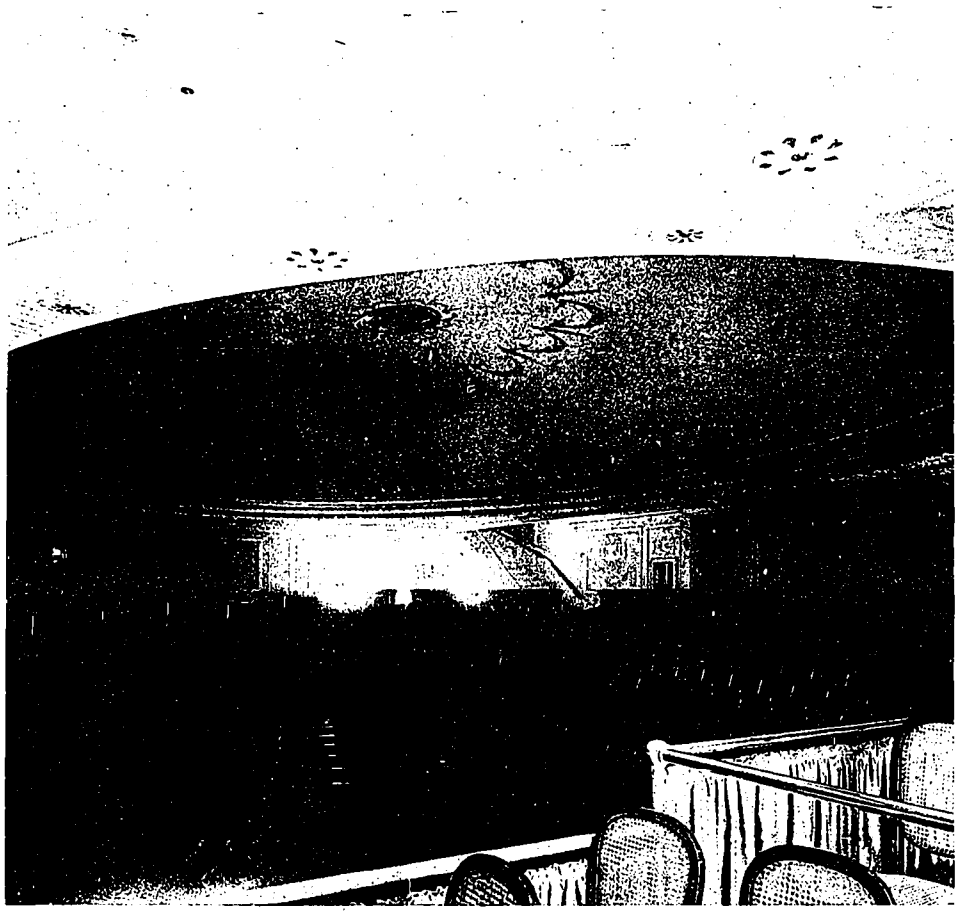
This situation suggests that American manufacturers and exporters of building materials might profitably give renewed and special attention to the Dutch market, with a view to both the present and the future.

MEASURES AIMED AT WHITE-PINE BLISTER RUST

The white-pine blister rust has reached a stage where, according to specialists of the United States Department of Agriculture, energetic action is imperative if the disease is to be controlled. Not only is all of the eastern white pine threatened already, but there is little



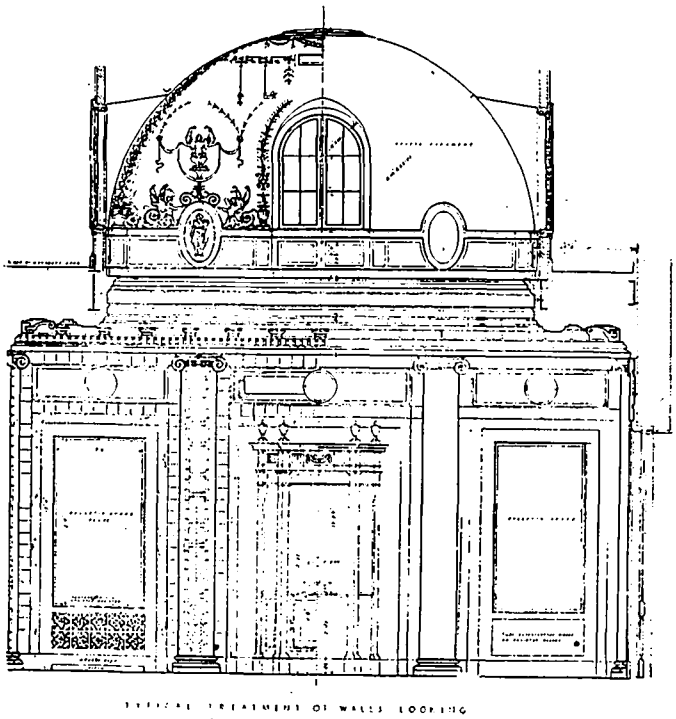
PLAN OF BALCONY, ST. DENIS THEATRE, MONTREAL.



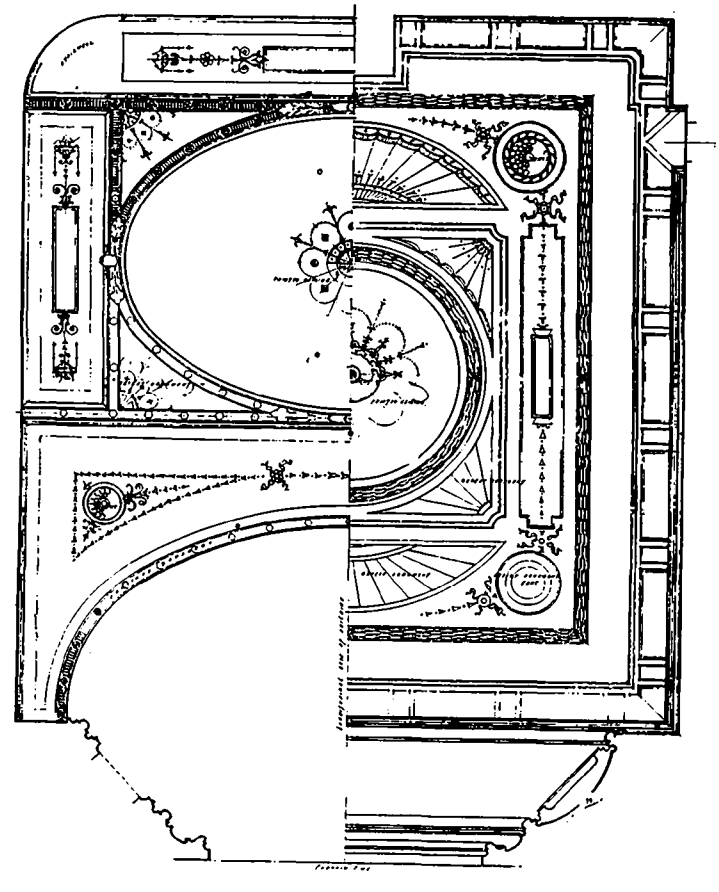
UPPER BALCONY, ST. DENIS THEATRE, MONTREAL.

doubt that if rigid State quarantines do not stop it the infection ultimately will ravage the great forests of the West.

The mature white pine in the Eastern States is valued at approximately $186,000,000. In the West the mature stands of sugar and western white pine are valued at $240,000,000. In Farmers' Bulletin 742, a new publication of the Department of Agriculture, it is declared that each State west of the Missouri River should prohibit immediately all shipments from the East of 5-needle pines or of currants and gooseberries, which play an important part in the transmission of the disease.



TYPICAL TREATMENT OF WALLS LOOKING TOWARDS STAGE



HALF PLAN OF AUDITORIUM PLAN, ST. DENIS THEATRE, MONTREAL.

The Canadian business of Estey Bros., manufacturers of ornamental iron and bronze work of 4 St. Cecile St., Montreal, has been taken over by Lymburner, Ltd., of Montreal, and will be operated by them as their architectural ironwork department. The offices will be consolidated as soon as the new building under construction on St. Paul St. has been completed. Mr. Park Bishop, formerly manager of Estey Bros., will continue as manager of this department.

Heating and Ventilating by Warm Air Furnaces

By David Millar, Heating Engineer.

THERE are a number of things which should have consideration from the owner of any building to be occupied by human beings which is to be heated, and in order of importance they are as follows: 1st, Healthfulness; 2nd, Ventilation; 3rd, Humidity; 4th, Economy of Operation; 5th, Proper Installation.

Healthfulness is certainly the prime consideration in the installation of any system of heating and the consensus of opinion at the present time, of physicians and by laymen who are best qualified to judge is that heating by warm air is the most healthful of all systems.

Your heater is the only practical mechanism for rectifying the indoor conditions during the cold half-year. To excel in personal development, a family needs the best of air, day and night; any man or woman fully realizes that fresh air is absolutely essential to good health. Then why are so many homes poorly ventilated, or worse still, not ventilated at all, except in warm weather? Certainly the medical profession has done all in its power to awaken home owners to the dangers of bad air, but year after year, as cold weather approaches, people close up their doors and windows tight until spring; then follows a wave of colds, headaches, catarrh, tonsilitis, bronchitis, pneumonia, and tuberculosis, which cause incalculable suffering and expense. Air isn't fit for breathing purposes unless it is fresh, and few people realize how quickly fresh air becomes bad. Many a man, woman and child possesses health but lacks vitality, lacks energy, lacks vim. What builds power and vitality? Plenty of food, water, exercise, rest and fresh air.

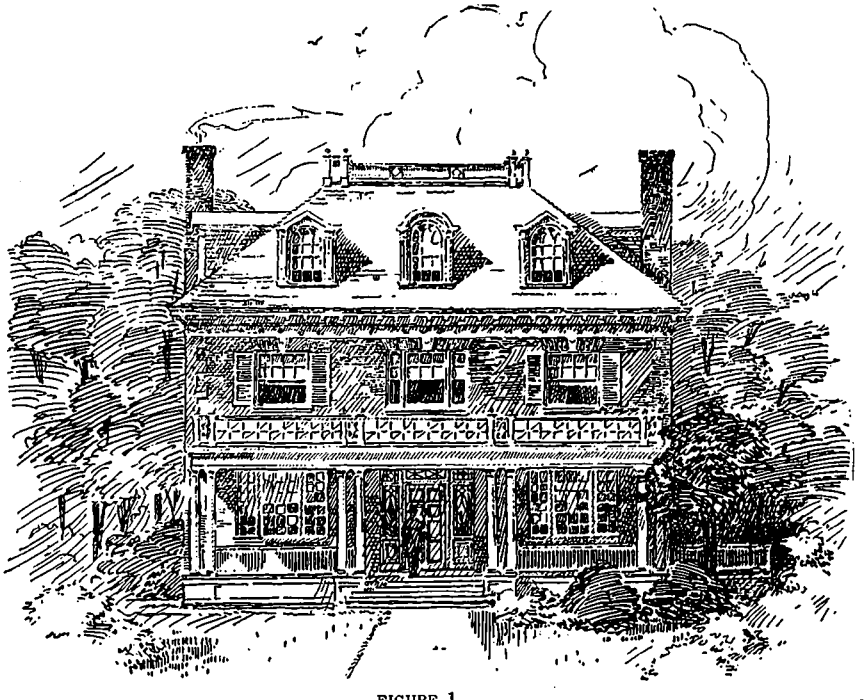


FIGURE 1.

The system of heating with warm air involves the introduction into the building of fresh, pure air from the outside into a fresh air room with filter screens, which passes through ducts, then over the heated surfaces of the furnace, and is discharged into the rooms to be heated through air conducting pipes and registers. Such method of heating appeals to common sense as being absolutely the best that has been devised up to the present time, as it is the only method by which pure air is introduced into the building with the single exception of indirect steam or hot water heating, which are rarely installed owing to the very great first cost and often expense in fuel, which make them practically prohibitive to persons of moderate means. It is clearly apparent that there are three functions in addition to heating incumbent in an efficient heatng system, viz., It must supply the home with an abundance of pure fresh air, a proper relative humidity, it must force out the old air before it becomes "dead" and it must do it so rapidly that the air of the home will not become dry through super-heating. Any heating system which fails to fulfill these functions is not only totally inefficient, but decidedly unhealthful. A proper warm air system with ventilation fulfils these functions by giving a constant and continuous stream of fresh air throughout the home, changing the air from three to five times every hour. It is possible for a man to live three weeks without food, three days without water, and three minutes without air. This simple statement of a well-known fact, should make it quite clear that air, fresh, pure air, is the most important element in the world for sustaining life. We have pure food laws, and their enforcement is upheld by a strong public sentiment, but it would be vastly more beneficial to the people to enact and enforce pure air laws. For one person who is injured by eating adulterated food, a thousand suffer from breathing

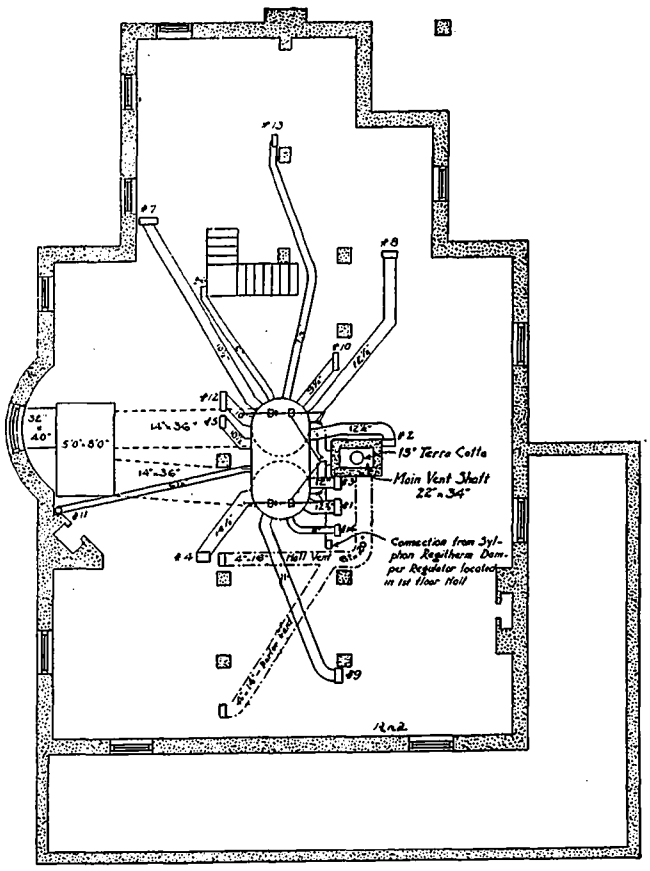


FIGURE 2.

impure air. Scientific tests show that the average person consumes the oxygen in 24 cubic feet of air every minute.

Ventilation—is the process of changing and renewing the air in a building so that it may be preserved in a state of sufficient purity to be healthful for breathing purposes; in fact, it is even more essential to health than heating. We could possibly manage to exist even in comparatively cold climates, without artificial heat; but, whether our houses are heated or not, if our rooms were perfectly tight, so that ventilation would be entirely absent, all occupants would quickly perish.

While it is one of the great merits of the warm air system, that it is impossible to heat a building under this system without at the same time changing or revolving the air in it, yet the heating is more surely and successfully accomplished and ventilation is much more adequate, certain and sanitary, when a formal system of ventilation is installed as a part of the heating plant. It is not necessary, however, to take the entire supply of air from without, but no part of the air supply should come from the basement. It is essential that sufficient fresh air from without the building be furnished to replace the vitiated air thrown out by the occupants.

Almost all cities and towns enforce strict rules regarding plumbing, with the purpose of preventing those who erect building from installing defective or unsanitary plumbing work. It is of much greater importance to the public that municipalities should enact and enforce correct rules for heating and ventilation, so well established is the fact, that school boards in building school houses, almost everywhere now require the inflow of 30 cubic feet of fresh air per minute per pupil; and a corresponding out-flow of the same amount of "dead air." So is there any reason why a child or the mother should be forced to live in a home that lacks the same health-giving equipment as the school-room?

Humidity.—On the subject of humidity, which is a vital one from the standpoint of health, while the atmosphere of our houses in winter, when artificial heating is necessary, if not devoid of humidity, approaches it so close as to be very injurious to health.

During the heating season the air in houses is entirely too dry, no matter what system of heating is operated. The dryness of the indoor air varies with the difference between the outdoor and indoor temperature.

The average outdoor relative humidity during the healthy season is about 65 per cent. The average indoor humidity is about 22 per cent., and in zero it falls as low as 12 per cent. All medical and scientific experts are agreed that the indoor relative humidity should never be permitted to fall below 40 per cent., and they are further agreed that atmosphere with a relative humidity of 55 per cent. to 65 per cent. is best for human inspiration.

It is a well-known fact that a room is more comfortable at a temperature of 60 to 65 degrees

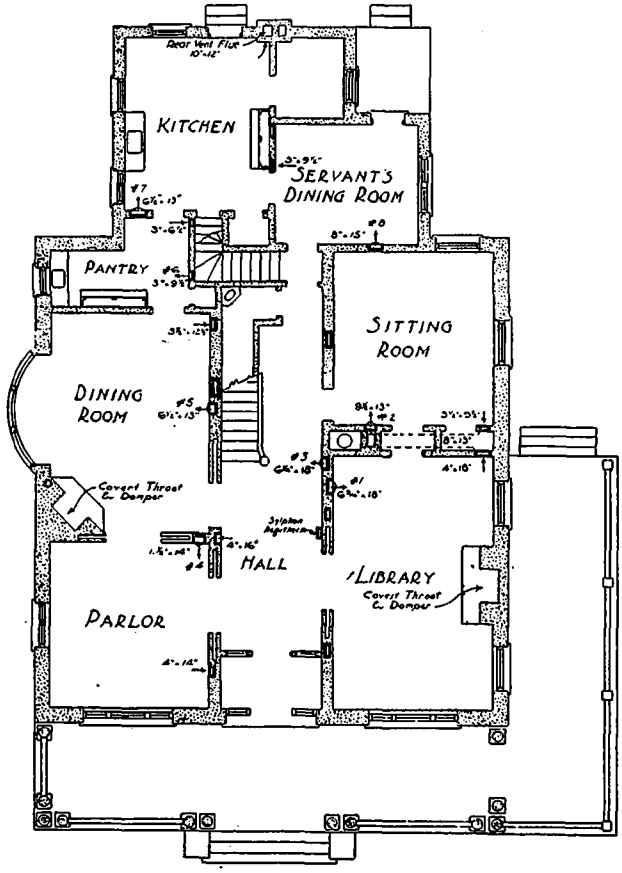


FIGURE 3.

and a relative humidity of 50 to 60 per cent,, than it is at a temperature of 70 degrees and a relative humidity of only 30 per cent.

The point is this: When the air in our homes is lacking in moisture it tends to produce pneumonia, catarrh, bronchitis, and other diseases of the respiratory tract. The dry atmosphere absorbs the moisture from the lungs and membranous linings of the air passages, thus causing irritation and disease. How frequently have you seen the occupants of such homes place an unsightly pan of water on a radiator in each room in a vain effort to relieve this condition? There is no system of heating that provides for adequate humidity except that of a properly constructed warm air furnace, in which the moisture from the water pan of the furnace is supplied automatically.

Economy of Operation.—Comparatively few people can afford to overlook the cost of fuel in heating their homes.

It is a pretty well recognized and indisputable fact that all types of modern heating plants, properly installed, will deliver ample heat, but which system will deliver that heat at the minimum cost for fuel is the vital question of economical heating. The instant heat is generated in a warm air heater, the temperature of the home begins to rise. There are many weeks in the year when one needs heat, but only a little heat, a shovel of coal or a broken up box or a bunch of waste paper will furnish ample heat. Yet when cold weather comes, two or three firings a day will usually keep the building comfortably warm and ventilated.

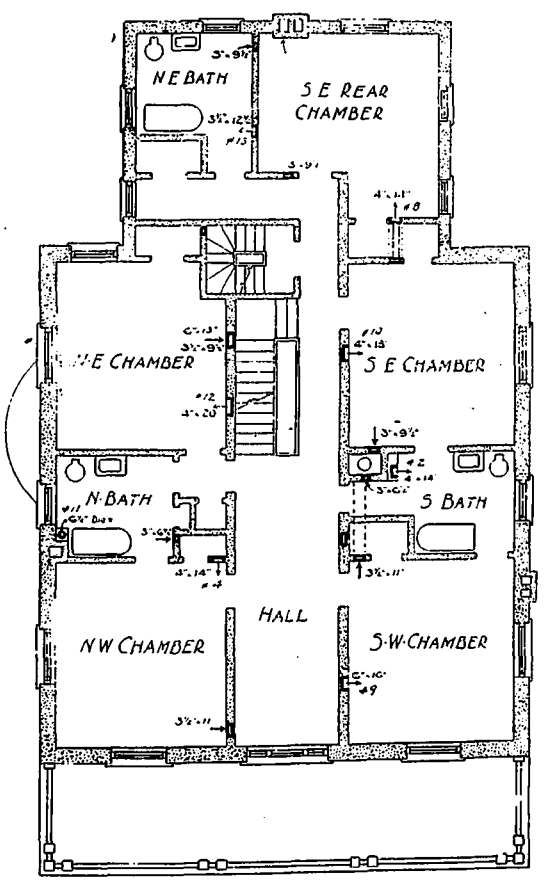


FIGURE 4.

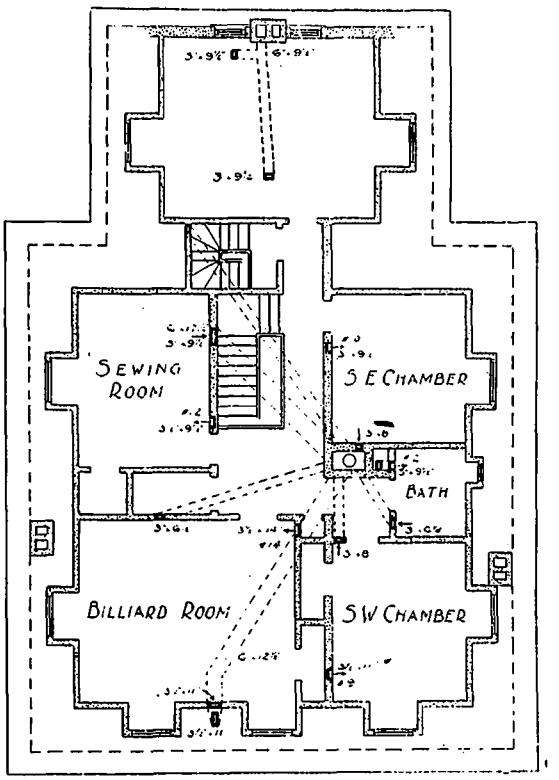


FIGURE 5.

Proper Installation.—The cost of installing a high-grade warm air system is not great, and it is decidedly less than for any other type of heating system.

Under no circumstances install a "cheap" furnace, that would prove one of the costliest investments you ever made. Get a high-grade furnace—one that is built on scientific lines and of worthy materials. You will save fuel and repairs. It is a good practice to put in a slightly larger size heater than is mathematically required; an over-size furnace consumes no more fuel in ordinary weather than the next size below; in bitter cold weather the over-size heater burns less fuel, because you do not have to force it. Too frequently the heating and ventilating is delayed until the contracts for erecting the building have been let, when it is often too late to introduce any system in the best manner, without alterations in plans and consequent annoyance; the heating and ventilating should be arranged for as soon as the general plan of the building has been decided upon, so as to provide for the necessary chimneys, flues, etc. Too often the heating is reserved for consideration until after everything else has been provided for; and as to ventilation, it is not even considered in one case out of a hundred. After the plans are completed it is the frequent practice to call for tenders for the heating, with the understanding that the lowest bidder shall receive the contract; each one is generally permitted to furnish what he pleases, the only question the owner is interested in is, "Who will do the job

the cheapest?" Thus stove dealers, tinsmiths, and plumbers are often permitted to compete for the contract, and their bids are considered, though they may not understand the simplest principles of heating and ventilating, or be in any way fitted to do work requiring education, skill and good judgment.

The acceptance of the lowest bid under such circumstances means that the man with the least knowledge or experience is entrusted with the duty of providing for the health and comfort of those persons who will occupy the building; he then starts in to "skin" the job in an attempt to make a profit at a contract figure which has no possibility of a legitimate profit in it. If, however, at the very commencement the desirability of proper heating and ventilation is pointed out by the architect, as he should do in his capacity as expert professional adviser, he will in almost every case find that his client will accept his advice, just as he will that for a proper arrangement of the drains and plumbing work. By taking this course the architect will find his clients much better satisfied with their houses and with himself than if he defers to their ignorance in these matters.

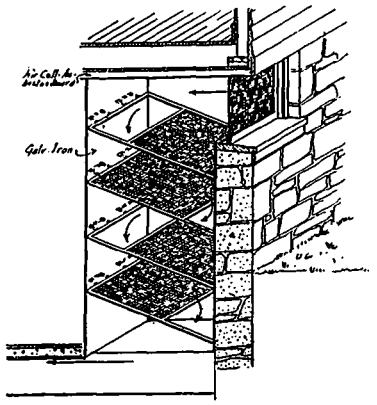


FIGURE 6.—FRESH AIR ROOM WITH FILTERING SCREENS, WHICH CAN BE REMOVED FOR CLEANING.

From the mechanical standpoint also, one of the essentials of satisfactory furnace heating is ample ventilation, and lack of it has been the means of condemning many an otherwise excellent furnace installation.

In its low cost and the means that it affords for proper ventilation lies the superiority of furnace heating, every house, no matter how small, should have ventilating flues in connection with the chimneys with arrangements for connecting them with the different rooms. This is rarely done, but all the rules of health demand it, and it will greatly simplify the heating problem. The furnace is nothing more than an air pump worked by force of gravity and warming the air as it passes through. If outlets are not provided the flow is checked and heat units are wasted, while the cold and impure air remains in the room and holds the heat in the cellar.

WARM AIR FURNACE SYSTEM.

There is but one correct and sanitary method of heating and ventilating a house, and that is to pour pure warm air into the rooms in sufficient volume and to remove the colder and impure air from the rooms at the bottom thereof, to a ventilating shaft.

It is accomplished perfectly by a warm air furnace system of heating provided the furnace has adequate capacity, is of high-grade construction and is correctly installed, then every room will be constantly filled with pure, fresh air.

This article will show how it can be done in a large suburban residence, as illustrated, which is perfeely heated and ventilated by this system, which contains twenty-two rooms and large halls on three floors. This heating plant is installed on the basis of maintaining a temperature of 70 degrees above zero in every room, containing a warm air register, when the outdoor temperature is at zero.

There are two furnaces (set as twin furnace). The advantage of this, is that in mild weather only one of the furnaces can be fired up, instead of firing up one large furnace, which means a great economy of fuel. The furnace is set over a fresh air pit, the fresh air supply is conducted from the fresh air room after passing through filtering screens, which is conducted through one or more underground ducts to furnace. The warm air pipes in basement are thoroughly insulated by covering them with corrugated air-cell asbestos board. The warm air pipes in partitions are double tin pipes. The main ventilating shaft is 20 x 45 inches in the clear, and the chimney flue (a 13-inch terra-cotta pipe) is run up inside thereof.

The automatically controlled humidifier (water-pan) is placed inside of casing over dome or combustion chamber of furnace. The size of warm air and vent ducts are shown on plan.

All the warm air and vent registers are placed in the walls, and not taking up valuable space. They can be furnished in designs and finishes that harmonize with any scheme of decoration or color. Every room is thoroughly and healthfully heated and ventilated at a lower cost than any other system.

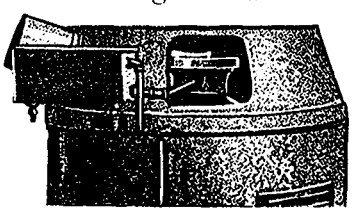
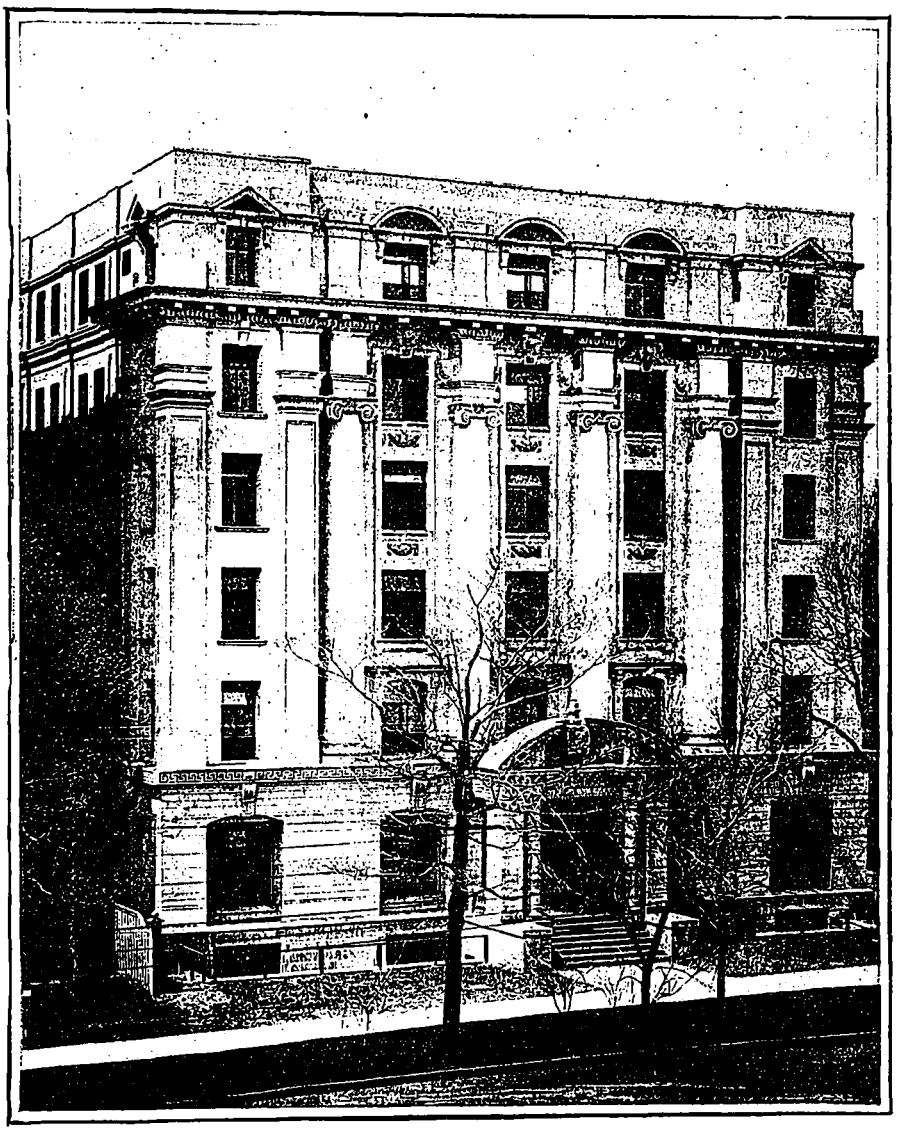


FIGURE 7.—SHOWING HOW THE HUMIDIFIER IS LOCATED WITH TANK AND CONNECTIONS.

There seems to be but one reasonable conclusion, namely, that the warm air furnace system, properly installed, is at present the only available system for the proper heating and ventilating of the home. In fact, I feel safe in saying that if the furnace system of heating with an efficient apparatus for maintaining a proper indoor relative humidity and with the proper amount of air supply taken from without, even universally adopted, in a few years the bad air diseases would be added to the list of rare diseases, except among the very poor.

Administration Building, Hydro-Electric Commission

IN view of the rapid development of the business interests with the necessary staff increases of the Hydro-Electric Power Commission, and in view of the difficulty in securing adequate accommodation, the Commission decided that the best solution of their problem in this respect was to erect an administration building suitable for present requirements, and capable of allowing for the inevitable future growth of the Commission's business. The result of this decision, made in 1914, is the handsome building on University avenue, just south of College street, recently occupied by the Hydro-Electric staff.



FRONT VIEW, HYDRO-ELECTRIC ADMINISTRATION BUILDING, TORONTO.
E. T. BRANDON, ARCHITECT AND ENGINEER. GEO. W. GOUINLOCK, CONSULTING ENGINEER.

The structure is of steel construction, with exterior walls of cast stone and buff pressed face brick.

Architecturally the front facade of the building is of simple classic Greek design, the main feature of which is four large Ionic columns flanked with end pavilions and capped with massive column caps, all of Ionic design. The entire front is composed of light buff colored cast stone of pleasing appearance. An interesting feature is an artistic portico at the entrance of the building, having an arched roof supported by four simple Ionic columns. The arched roof of Grecian design carries a shield bearing the Commissioners' arms in a niche cut in the front.

The coat-of-arms of the Commission recently adopted was designed by Alexander Fraser, the Provincial Archivist, its purpose being to indicate the aims and activities of the Hydro-Electric Commission. In this coat-of-arms, which is shown in the illustration of the portico, the two wheels signify "Power," and, being at the top of the shield, or "in chief," convey that power and its generation, distribution, etc., are the main function of the Commission. The wavy chevron, or angular band in the centre of the shield, with its two blue borders, is the heraldic representation of "running water," and the three stars with which it is charged signify "Light"; or, the combination, "Light from running water." The stars, with their emanating rays, are intended also, to convey the idea of light, figuratively. The spray of maple leaves and the supporters are taken from the shield of the Province of Ontario, and denote the Provincial scope of the Commission's work. The crest, an electric locomotive, symbolizes the railway activity of the Commission. The motto below the shield, "Dona naturæ pro populo sunt," or, translated, "Nature's gifts are for the people," may be regarded as peculiarly fitting, since

the Commission's work has enabled many thousands, who otherwise must inevitably have been deprived for many years, to enjoy the benefit of the gifts she has so bountifully provided.

At the main entrance to the building are two massive doors of solid bronze, with ornamental bronze grill work.

The main hall in this building is finished in white marble, and has a beautifully designed ornamental plaster ceiling finished in ivory tint. The same scheme obtains in the various halls throughout the building.

The floor of the main hall is likewise finished in white marble. The doors leading from this hall are of solid bronze, as well as the elevator doors and grill work surrounding the elevator shaft.

The first floor is occupied by the accounting and filing department. The second floor is devoted to executive purposes and contains the board room on the northwest corner, which connects with the chairman's office and private office for the use of the Commissioners, by a private passageway. The secretary's office, the chief engineer's office, and a large library and conference room complete this floor. The entire floor is finished in mahogany with hollow steel doors and trim in the main corridors and hallways and the principal offices. The board room is finished in solid mahogany panel which matches the steel trim.

The upper floors are finished in circassian walnut, hollow steel doors and trim, with cork linoleum floors. These floors contain the municipal, engineering, purchasing, operating, railway, construction and other depratment offices and drafting rooms.

The basement is divided into a dining-room, where meals will be served to the employees of the Commission, and the necessary kitchen equipment. The kitchen will be practically electrical throughout, all cooking being done on heavy duty electric ranges.

A vacuum cleaner system is installed in the basement in the switchboard room, and each floor is provided with two outlets connecting with the basement plant. This plant can be started or stopped from any floor by means of a switch located near the cleaning outlet.

The refrigerating system will be installed in

MAIN HALL, HYDRO-ELECTRIC ADMINISTRATION BUILDING, TORONTO.
E. T. BRANDON, ARCHITECT AND ENGINEER. GEO. W. GOUINLOCK, CONSULTING ARCHITECT.

this part of the basement, and will also be electrically operated. The automatic switchboards for the telephone system are also installed in this room.

The remaining space in the basement is taken up with offices and filing and stationery storage rooms.

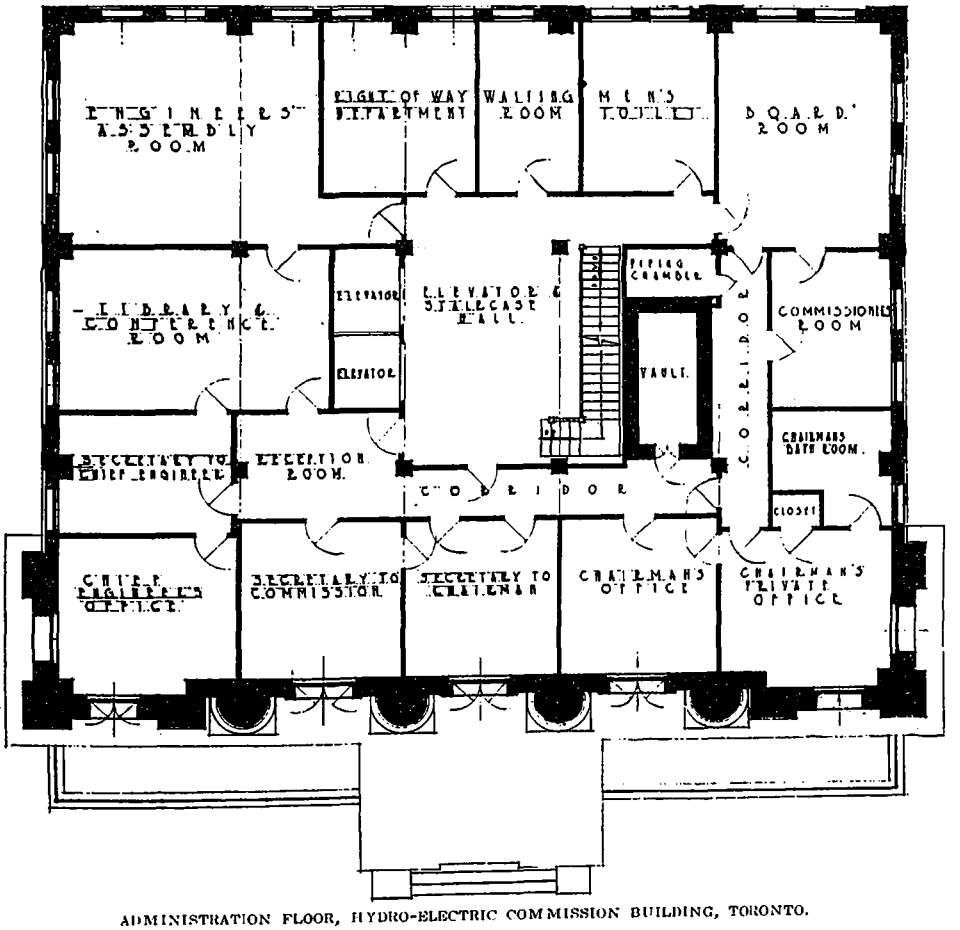
UPPER HALLWAY, HYDRO-ELECTRIC BUILDING, TORONTO.

LIGHTING AND POWER.

The entire building is lighted with fixtures of the most modern design, which were selected as the result of careful experiments as the most efficient method of lighting the building. In addition to the standard lighting outlets each room is equipped with baseboard plugs for dictating and adding machines, desk lamps or fans.

Power for the operation of the electrical equipment throughout the building is furnished by the company's system at twenty-three hundred volts, twenty-five cycles. General distribution throughout the building is by three-wire system, one hundred and fifteen and two hundred and thirty volts.

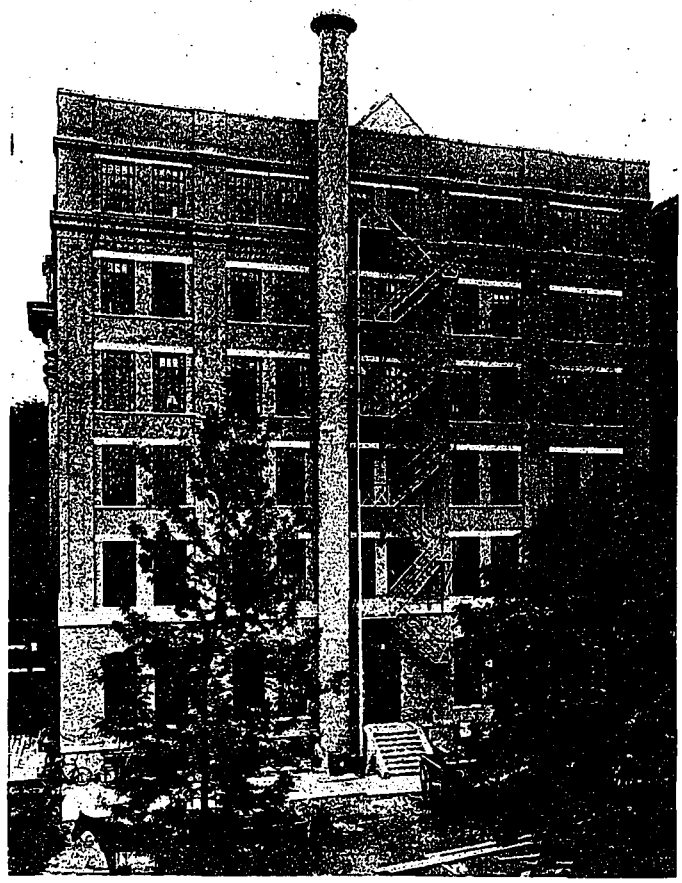
The power service enters the building underground on the north side into the transformer room, where three thirty kva. transformers for lighting are installed. From the transformer room lead cables transmit the power to the switchboard, which consists of two eighteen-inch panels seven feet six inches high, and two panels twenty-four inches wide, seven feet six inches high, of black slate. The metering equipment of the board consists of high tension volt meter, four hundred k.w. watthour maximum demand meter, two ammeters, one to measure the total load and the other to measure the load on any individual circuit. The incoming panels of the board are equipped with two automatic oil breakers, protected by overload relays. The feeder panels are equipped with switches for the individual feeder circuits. One of the ammeters is wired so that an indication of the current in any one of the circuits may be obtained.



ADMINISTRATION FLOOR, HYDRO-ELECTRIC COMMISSION BUILDING, TORONTO.

To facilitate rapid despatching of orders and correspondence the building is provided with an automatic electric dumb waiter. The shaft for this elevator houses all cables and conduits, etc. The control for the waiter is on the main floor, where the main filing room is located, and it is so arranged that pressing a button on the main floor sends the elevator to the floor corresponding to the button pressed. Upon reaching this floor it automatically stops. As a safeguard against possible accidents the waiter can only be operated when all the doors are closed.

The passenger elevator service for the building is provided by two elevators operated by twenty-five cycle motors.



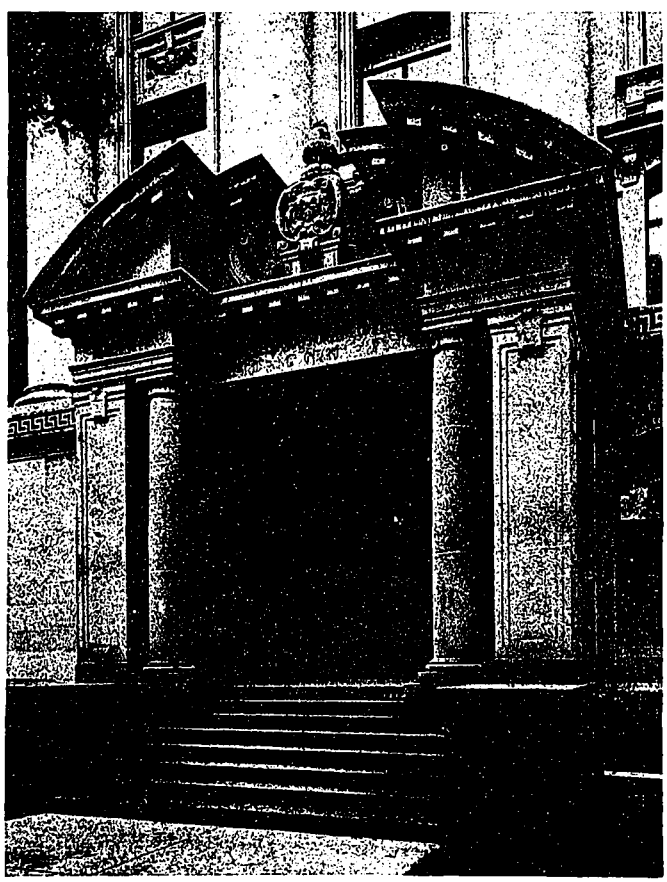
REAR VIEW, HYDRO-ELECTRIC BUILDING, TORONTO.
E. T. BRANDON, ARCHITECT AND ENGINEER.
GEO. W. GOUINLOCK, CONSULTING ARCHITECT.

An interesting feature of the electrical equipment is the automatic telephone system, by means of which any office may be called from practically any point in the building without delay, and communication can also be obtained with all the municipalities in the Province having the Commission's private line.

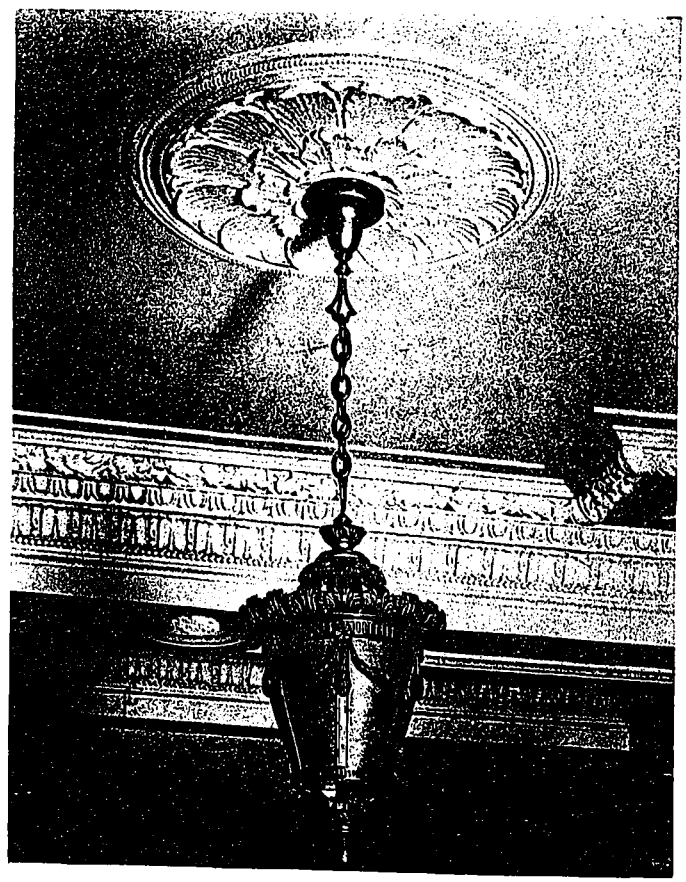
HEATING SYSTEM.

The heating plant, as designed by the Canadian Domestic Engineering Company, of Montreal, is installed on the forced hot water principle. Two water-tube magazine self-feed boilers are used as heaters, either of the boilers being large enough to supply all the heat required in ordinary winter weather.

This building being



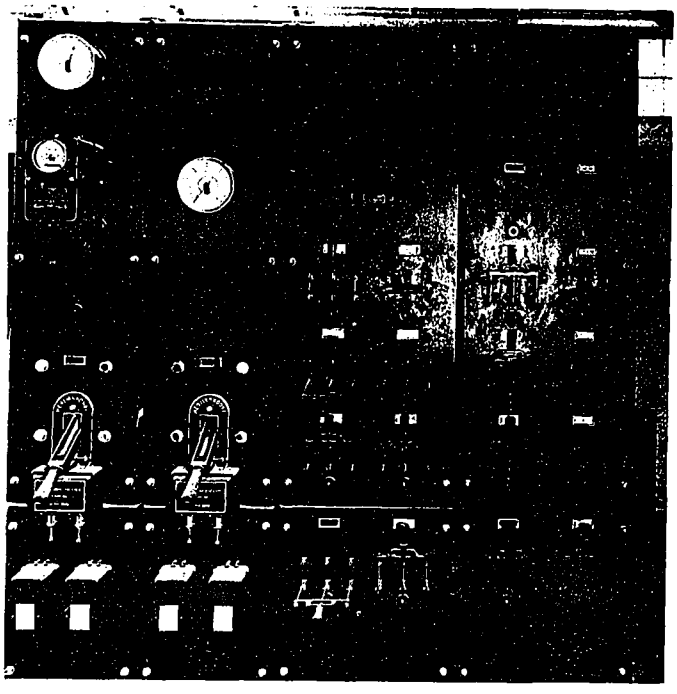
PORTICO, HYDRO-ELECTRIC BUILDING, TORONTO.



DETAIL OF ELECTRIC FIXTURE AND CEILING DECORATION.

situated in a district where the smoke nuisance must be avoided, anthracite coal is used as fuel. Because of the construction of the grates in these boilers, small anthracite coal, sold at the price of soft coal, is used.

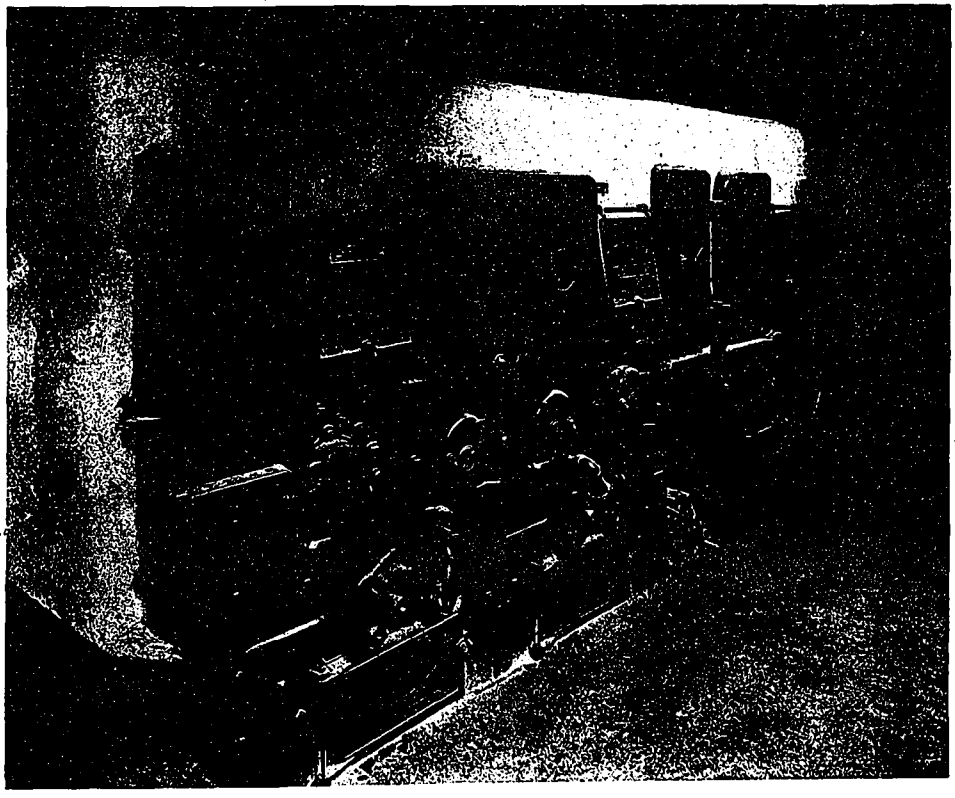
From the boilers a large main is carried to a space between the ceiling of the top storey and the roof. In this space distributing mains are run to various down-feed pipes. The return mains are run in the basement, and connected to the boilers by way of automatic pumps, fitted with by-passes. All of the radiators are supplied with two valves; the valve on the return end of each radiator being of the lock-shield type.



SWITCHBOARD, HYDRO-ELECTRIC BUILDING.

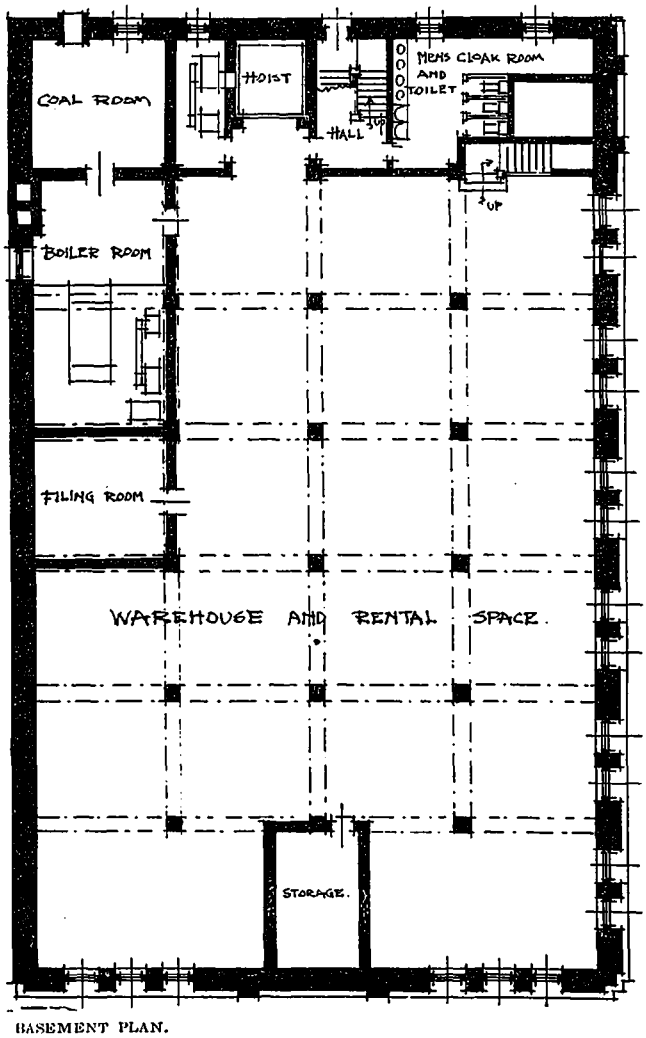
THE LADY ARCHITECT

The pages of the *Bystander* contain an eloquent plea for the lady architect and a vigorous denunciation of the sins of the ordinary men who fail so pitifully in that capacity. Why, it is asked, is woman, who lives most of her time in houses, which are shockingly planned by man, not to have any room she may call her own? The man has his dressing-room and his study all to himself; while woman is only allowed an uncertain share of the common rooms of the house. The article is illustrated, not with plans of an ideal house, or even diagrams showing the errors made by man in his planning, but by figure studies which, though charming and attractive, are scarcely germane to the subject. We have that hardy perennial complaint of the absence of cupboards which, until she comes to plan, the woman imagines takes up no space and costs nothing at all. There is a great opportunity which the pioneers of the woman's movement might seize at the end of the war. Why not have a garden city laid out by women, its houses built by women, and its finances organized by women? In such a city truly we might be a little nearer Heaven than elsewhere; in such a city every house might be a haven of refuge. No chimney would smoke, no draughts be felt; we should be surrounded with cupboards in every room; all windows would look due south except the kitchen and larder; all windows would have the best views. The rates might indeed be high, as such houses, though economical to build —for nothing would be forgotten or overlooked— would be so much sought after that rents and rates would rise, unless, indeed, the syndicate removed that difficulty by wise enactments. The only drawback would be the nuisance caused by the remaining men architects — the last of evil generation — who would be always measuring and sketching in the vicinity.

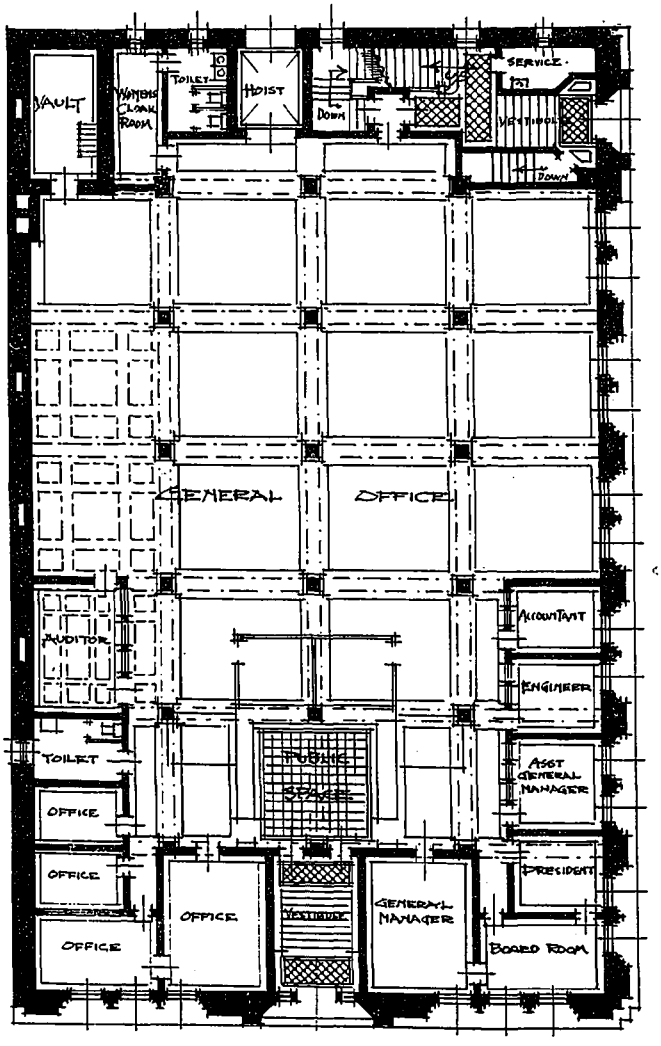


HEATING PLANT, HYDRO-ELECTRIC BUILDING, TORONTO.

VIEW OF SASKATCHEWAN CO-OPERATIVE ELEVATOR CO., LTD., OFFICE, REGINA, SASK.
STOREY & VAN EGMOND, ARCHITECTS.



BASEMENT PLAN.



GROUND FLOOR PLAN.

Reinforced Concrete Office Building

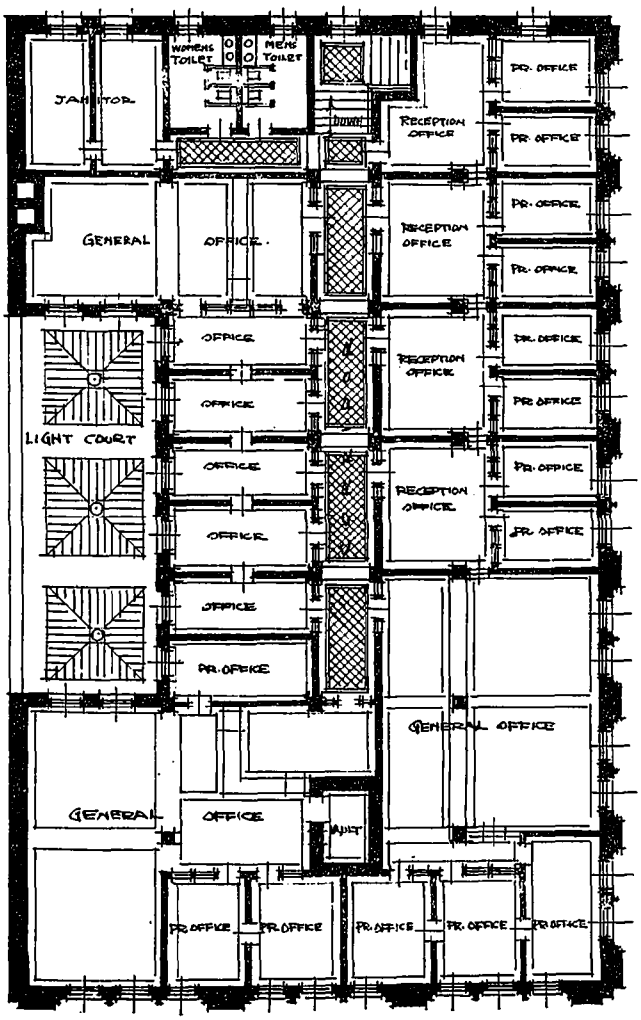
Erected For The Saskatchewan Co-Operative Elevator Co., Limited, Regina, Sask.

THE accompanying cuts illustrate an office building that has just been erected in Regina by the organized farmers of the Province of Saskatchewan.

When the proposal was first made that the Saskatchewan Co-operative Elevator Co. should abandon its rented quarters and build for itself, with its own money, a permanent home which should provide not only for the present needs but also for the great expansion which is expected in the next few years, some of the farmer shareholders were inclined to question the expenditure.

Nowhere else in Canada had the organized farmers reached that stage in development at which such a step would be the natural one for them to take, and the proposal therefore came to some not only as new, but as somewhat startling.

It was finally decided, however, that the farmers should erect a building on which they might look with pride, and which would stand as



FIRST FLOOR PLAN.

INTERIOR VIEW, SHOWING CONCRETE CONSTRUCTION.

a perpetual object lesson of the advantages of co-operation. As one shareholder stated: "The farmers of Western Canada have been engaged for long enough in erecting handsome buildings for others. Isn't it time we built one for ourselves?"

The absence of any spirit of niggardliness has resulted in the erection of a structure of which the sixteen thousand farmer shareholders may well feel proud.

Occupying a space of seventy-five feet by one hundred and twenty-five feet, and centrally situated on the corner of Smith street and Twelfth avenue, Regina, the structure presents a striking appearance, even in a quarter where stand many of Regina's largest and most imposing buildings. It is of two storeys, with a high basement, and has been so constructed with a view to future demands, that when the company require more space two additional storeys can be added, wells being left for future elevator service.

The building is of absolutely fireproof construction throughout, with reinforced concrete frame of beams, columns and floors, and with brick and tile walls and partitions, and each floor isolated by fire doors automatically controlled.

The main entrance, which faces Smith street, presents a most imposing appearance, being panelled in grey and brown marble, with marble floors and steps and domed ceiling.

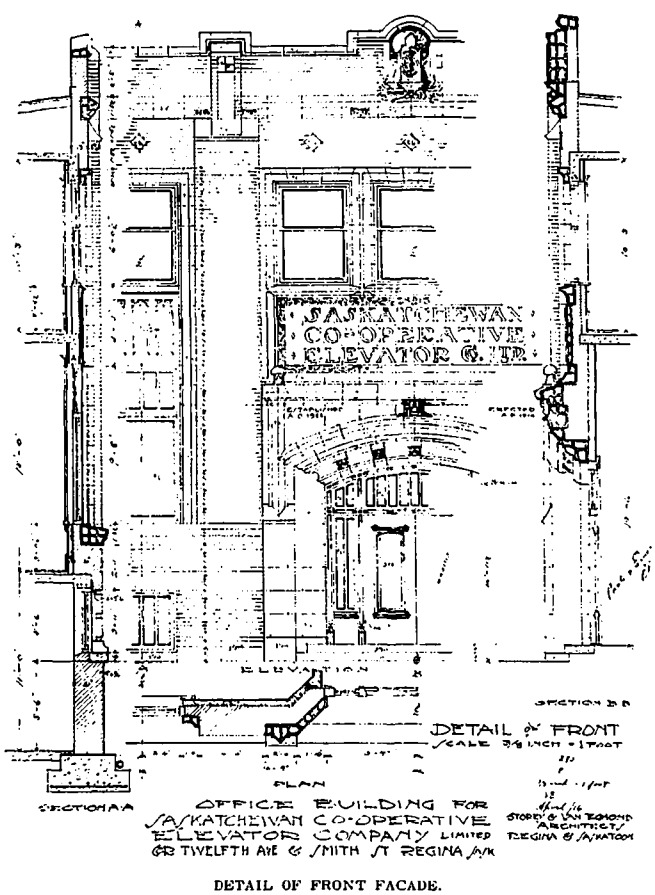
The design of the exterior is carried out in light cream terra cotta and rough grey astrakhan brick, laid with heavily raked joints, the terra cotta being ornamented in relief symbolical of the business of the company, green and blue

colors being used effectively in the ornamentation and in tile inserts in walls.

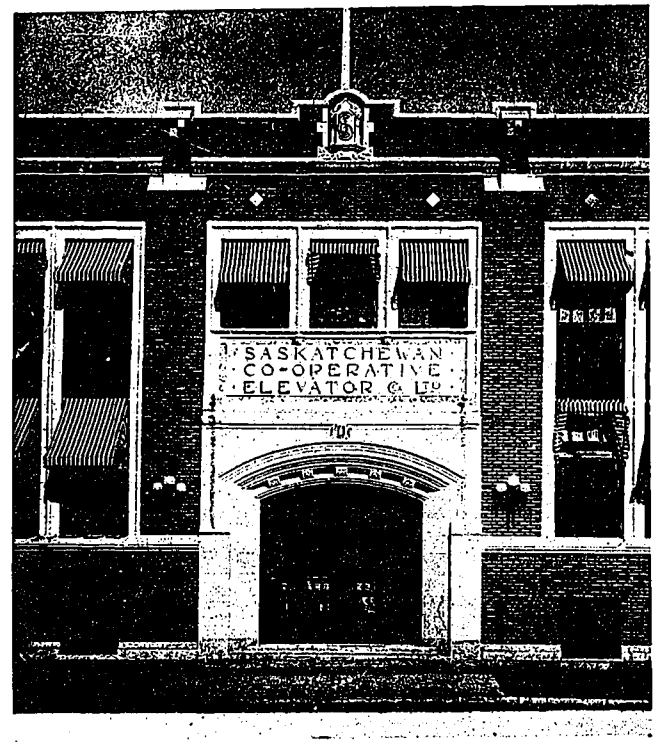
Sheaves of wheat and elevators serve as the motif for the ornamentation, and over the main entrance is the emblem of the company, executed in cream and blue terra cotta, and representing a large sheaf of wheat with elevator relief, on which is the monogram of the letters S.C.E. Co., and supported by a wheat garland. The windows and castiron panels are finished in a dark green oxidized finish, and the awnings were carefully selected by the architects to harmonize with the color scheme of the building.

The entire ground floor is given over to the head offices of the company, the main entrance from Smith street leading to a public space having marble floor and arranged around the public space are the private offices for the various officials. The general office is immediately behind the public space, and is exceptionally well lighted, and provides accommodation for seventy clerks. A large vault and women's cloak and toilet rooms are provided off the general office, and the men's cloak room and toilet are in the basement, adjoining the employees' separate entrance.

The first floor is divided up into various sized offices, which will be rented until this floor is required by the company for its own use. The entrance to this floor is from Twelfth avenue, and



DETAIL OF FRONT FACADE.



MAIN ENTRANCE, SASKATCHEWAN CO-OPERATIVE ELEVATOR CO., LTD., REGINA, SASK.

separate from the main entrance. Adjoining this entrance provision is made for the installation of an elevator when the building is extended in height.

The basement is so arranged that part may be rented and the remainder utilized as a warehouse, and for this purpose a hoist has been provided.

The building is finished in oak throughout, maple floors in offices, marble floors and panelling to both entrances, iron and marble stairs, terrazo floors to toilets and corridors, and all walls decorated in buff shades of tinting.

The heating system is a vacuum system, with automatic electrically-driven vacuum pump and smokeless down-draft boiler. All radiators on main floor are controlled by an automatic regulation system. Pullman ventilators are provided in windows, and ample vent ducts in walls to ensure efficient ventilation.

The architects for the building were Messrs. Storey & Van Egmond, of Regina, and the general contractors were Poole & Emery.

STATISTICS OF FIRE LOSSES

At the recent annual meeting of the Commission of Conservation a resolution was passed requesting the various provincial governments to take steps to secure complete reports of all losses from fires occurring within their boundaries, and the extent, if any, to which the property was insured.

Insulation Against Heat and Cold

A SUBJECT of great importance and one that is now receiving merited attention in the modern building, or the old building with newly installed modern equipment, is that of insulation against heat and cold.

From the largest power plants with high pressure boilers and miles of piping to be protected, to the smallest residence or apartment house with the usual installation of heating equipment, a saving can be effected of no small consideration by attention given to heat and cold resisting mediums, so that the engineers of to-day give special attention to insulation. In the power plant, the heat that is usually lost by radiation from the walls, arches and exposed parts of furnaces and ovens, represents a considerable wastage of fuel and increasing the temperature of the surrounding atmosphere, reduces the efficiency of the workers.

While there is no substance known that will not allow some heat to pass through, there are many materials which reduce the loss in heat emitted to a minimum. An excellent heat retardant is diatomaceous earth (kieselguhr), which is composed of small shells of almost pure silica, each one hollow and filled with air, this dead air making the substance an excellent non-conductor of heat.

The method of preparing diatomaceous earth for insulating purposes is briefly as follows: The earth is mixed with finely ground cork, moulded into brick form and then fired, the cork is in this way burned out leaving a porous insulating brick that will transmit only one-tenth as much heat as fire or ordinary brick.

By the use of this substance in this form the heat loss is greatly reduced and the temperature of the surrounding air made habitable. These bricks have sufficient strength to be built in the walls and arches of boilers, and will not crumble by weight or usage, and are also unaffected by steam or water.

As an example of the economy which results from the use of this substance in the above form a test has been made on a natural gas fired lehr operating with an inside temperature of 1,600 F., with the outside air at 70 F., the difference in temperature between the inside and outside was 1,530 F. With walls of fire brick 13½ inches thick the loss of heat per square foot of exposed surface was 7,554 B.T.U. per ten-hour day. With walls constructed of nine inches of fire brick and four and one-half inches of above material the thickness was equivalent to making them fifty-four inches thick with a reduced loss of 1,888.5 B.T.U. per ten-hour day. In refrigeration equipment it is estimated that one hundred and seventy-six lineal feet of bare two-inch pipe carrying brine at 15 F., with the surrounding air at 75 F., will lose one ton of refrigeration every twenty-four hours, which, figured on the usual basis of cost, would total approximately $180.00 per year, so that the total loss on the average installation if same were unprotected would be a considerable item.

Cork, because of its minute air-cell structure, is one of the best non-conductors of heat known and possesses maximum insulating efficiency; it will not take up moisture by capillary attraction (as do fibrous materials), and is therefore durable in service.

All coverings for insulation against heat and cold have merit in more or less degree, and all plants by careful attention given to this subject, can make a saving that will many times repay the initial expenditure involved.

AFTER THE WAR

A former president of the French Chamber of Commerce, Mr. Chouillou, who has just spent the past year in Paris studying the future of Franco-Canadian trade, gives some idea of the construction work that will be necessary in France and Belgium after the war and which will provide markets for Canadian manufactures and work for architects and contractors when he states that twenty million citizens in France and Belgium have had their cities, factories, stores and homes destroyed by the enemy. Some of the needed requirements will be portable houses of all descriptions, material for the construction of churches, homes and outbuildings, roofing materials, railway supplies and rolling stock, office and house furniture, heating apparatus and stoves, hardware and metal utensils, road machinery, agricultural implements, machinery used in cotton and woollen manufacturing, and numberless other articles.

Canadians have not yet learned to adopt the methods necessary to secure foreign business on a large scale. Just now, exporting firms and manufacturers have taken the advantage of high prices and are reaping a rich harvest. To get a fair share of the business that offers to building and contracting interests in the old world, a close study of the methods adopted in conducting international business will be required and the willingness to conform to these standards will be necessary. By accommodating ourselves to circumstances, a large share of this enormous business should be secured by Canada.

A Call to Construction Men

RESIDENTS in Toronto have ceased to be alarmed of a conflagration when they hear a loud and persistent ringing of bells in the main thoroughfares and the suburban districts. The noise is, in all probability, from the advertising car employed by the No. 1 Overseas Construction Battalion, now a popular sight in the city at noon-day, and more conspicuously at night, when it plies the streets, gaily illuminated, patriotically decorated, attracting attention to the imposing signs by the insistent ringing of bells.

Although only established a few weeks, Canada's first construction battalion is making big headway—more than one-half of total strength being recruited, and with the possibility of an enlarged field for recruiting activities the commanding officer has hopes that the new battalion may have its complement before the end of this month.

Construction men are urgently needed at the front, and as the British Government intimated this necessity to Ottawa, the Dominion, with characteristic spontaniety, will send her quota at an early date under command of Lieut.-Col. Ripley, late construction engineer C.P.R. Col. Ripley is selectnig his staff from men who have had civil engineering experience, as well as the requisite military certificates. Readers of CONSTRUCTION will possibly recognize the names of the following officers connected with No. 1 Construction Battalion: Capts. T. R. Loudon (adjutant), Ketterson, Holland, Byrne, Lieuts. J. B. Heron, G. O. Fleming, A. E. V. Steele, F. G. Cross, F. A. R. McNair, M. Saul and O. B. Hailyberg, who recently returned from Flanders, where he had the misfortune to get wounded and gassed. The functions of the battalion will be to assist in the lines of communication, which will embrace road-making, bridge building, rail laying and other means to facilitate the movement of troops. The majority of the men enlisting are of Canadian and Old Country origin, and have been mainly employed in the various departments of skilled labor.

So well officered and equipped, No. 1 Construction Battalion should be of valuable assistance to the troops now pending an advance.

CONSTRUCTION BATTALION RECRUITING CAR.

DOUGLAS FIR IN DEMAND

A newly discovered method of creosoting Douglas fir so that it does not lose any of its natural strength as it does under the old system of forcing the boiling creosote into the wood under pressure, was announced by O. P. M. Goss, of Seattle, at a meeting of the Forest Club at the Hotel Vancouver, Vancouver, B.C. The discovery is expected to greatly increase the demand for Douglas fir for bridge building, ties and wharf construction throughout the world.

R. D. Craig, Commissioner of Conservation under the Dominion Government, presided over the gathering and introduced the speaker, who is engineer for the West Coast Lumber Manufacturers Association. The address dealt largely with the methods of the association for developing the coast lumber trade and aroused great interest among the lumber manufacturers and loggers present.

Before accepting his present position Mr. Goss was engaged in the timber testing laboratories of the United States forest service and is regarded as one of the greatest authorities on questions relating to the strength, durability, uses and weights of timber. He emphasized the necessity for the proper grading of lumber for special purposes and for treating timbers to secure long life.

The old system of creosoting with boiling creotote under pressure, said Mr. Goss, depreciated the strength of the fibres by from 33 to 35 per cent. The new system of creosoting which promises to greatly extend the uses of Douglas fir, provides for injecting the creosote into the timber by low temperature and under a low vacuum. While a slower process than the old method, tests show that the wood retains 99.7 per cent. of its original strength. In some of the individual tests the creosoted portions were stronger than the uncreosoted. In no case had it less than 95 per cent. of the strength of the original timber.

CONSTRUCTION

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

H. GAGNIER, LIMITED, PUBLISHERS
WESTON WRIGLEY, GENERAL MANAGER
Corner Richmond and Sheppard Streets
Toronto - - Canada

BRANCH OFFICES :
MONTREAL---171 St. James Street
E. R. Milling, Representative.
NEW YORK---156 Fifth Avenue
A. R. Lowe, Representative

CORRESPONDENCE.—All correspondence should be addressed to "CONSTRUCTION," Corner Richmond and Sheppard Streets, Toronto, Canada.
SUBSCRIPTIONS.—Canada and Great Britain, $3.00 per annum. United States, the Continent and all Postal Union countries, $4.00 per annum, in advance. Single copies, 35c.
ADVERTISEMENTS.—Changes of, or new advertisements must reach the Head Office not later than the twentieth of the month preceding publication, to ensure insertion. Mailing date is on the tenth of each month. Advertising rates on application.
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 carefuly preserved and duy returned.
Entered as Second Class Matter in the Post Office at Toronto, Canada.

FRASER S. KEITH - - - EDITOR AND MANAGER

Vol. IX Toronto, July, 1916 No. 7

REMEDYING CONDITIONS

Complaints are being freely made, and not without reason, by architects and contractors in this country, that an injustice is being done them in the way of a large amount of Canadian construction work being designed by American architects and erected by American contractors. That there is no excuse for this needs no defence, since men in the architectural profession in Canada are as a class not one whit less competent than their brothers across the line. Some of the most beautiful and substantial buildings in Canada, such as the Parliament Buildings in Ottawa and buildings of the University of Toronto, had their conception in the brains of Canadian architects, and were erected by Canadian contractors.

Figures supplied by the secretary of the Associated Builders' Exchange of Ontario, go to show that during the year 1915 plans and specifications for structures in Canada were prepared by American architects amounting to $2,769,999. The result of favoring American architects was indicated by the fact that only $90,000 of this amount went to Canadian contractors. Further, during that period American architects prepared plans for buildings to be erected in Canada reaching a total of $4,545,000, a large part of which is under way at the present time.

The absurdity of this situation is obvious, and surely a remedy can be obtained to prevent such injustice being done these important bodies in Canada. The plea of patriotism evidently carries no weight, otherwise the situation would not exist. Loyal Canadians, who are bearing their share of the additional burden caused by the European struggle, and who have sent large numbers of their profession to the front, particularly at such a time as this should have the first consideration on every structure that is planned to be erected in this country.

Apparently the only solution of this problem, as a means of remedying an almost intolerable situation, is in securing adequate protection by legislation. There is at present a statute existing in Canada whereby plans of buildings that are designed outside the country should be taxed twenty-two and one-half per cent. plus seven and one-half per cent. of one per cent. of the cost of the building to be erected. The architects owe it to themselves, in case of laxity on the part of customs officials, to see that this law is enforced. It would be an easy matter for the American architect coming into this country to bring in plans, perhaps merely in a rough stage, on which no duty would be collected, and which could be completed here. If there is any virtue in this statute at all, it should enable the customs authorities to collect the duty on such plans. If this were done on the various buildings which were doubtless designed in the United States, the customs coffers would be considerably enriched. It is a matter that the architectural associations might deal with to advantage.

The situation outlined above should surely bring home to the men of the architectural profession of Canada the necessity of obtaining protection, not only against unfair competition from a foreign country during a time of stress through which we are now going, but also against the man who styles himself an architect, and whose only claim to the title lies in his own assurance, backed by neither training nor education to give him the natural qualifications.

Since the contracting interests are also affected disadvantageously by the condition that prevails in Canada at the present time, it would appear that an occasion is afforded by this for them to meet the architects on mutual ground with the common object of discussing ways and means of remedying conditions which at present have been thrust upon them. The contractors have displayed more energy in this direction than the architects, and inasmuch as the latter are most vitally affected, it would appear that no time should be lost in going into this subject, with a view to arriving at a definite plan of action, having as its object overcoming the present undesirable situation.

Architectural Digest

Articles of More Than Passing Interest From Our Contemporaries

COMPARATIVE EFFECTS OF WIND AND SUNSHINE ON HEATING BUILDINGS.

By Donald B. Prentice.

Rules for determining the heat loss from buildings invariably include a clause regarding the exposure, in effect as follows: "Ten (or fifteen or twenty) per cent. should be added to the heat loss calculated with the above constants, for a windy exposure." Nothing is ever said about decreasing the calculated heat loss because of sunny exposure, for the building must be heated on cloudy as well as sunny days, and the radiation installed must be designed for the maximum heat loss and the minimum heat gain from the sun's radiation.

Although the radiation allowed for warming a building can not be decreased because of a sunny exposure, yet the latter must have considerable effect on the annual coal consumption for heating. Has it more or less effect than a windy exposure? Is it better to build at a distance from other structures, which would be wind protectors, to secure a plentiful sunlight; or is it better to sacrifice the sunshine to gain wind shelter?

The test reported in this article offers some interesting information on the subject. Obviously it is difficult to compare heating records of different houses, for the construction can never be regarded as identical. But results observed in the same house from day to day, under varying weather conditions, are of considerable value, provided the house has wind and sun exposures sufficient to be materially affected by changes in these quantities.

The present test was made in an apartment covering the entire second floor of a frame-and-clapboard house. The building faces south and has a length of sixty feet on this and the north sides. The depth is about thirty feet, and there is a fifteen-foot space at the west end and twenty-two-foot at the east. The apartment is, therefore, especially well situated for this particular experiment. As the long sides are exposed to the sun and the north and northwest winds, with practically no protection (no buildings nearer than two hundred feet), and the rooms are entirely on the second floor, the effects of sun and wind are very noticeable.

The test was made with normal operation of the furnace. The living rooms were kept as near 70 degrees F. as possible and the bedrooms about 60 degrees. Enough coal was burned to maintain this temperature during the day, the fire being banked at night. The heating system was hot-air, the furnace having a nineteen-inch firepot and burning so-called yard-pea anthracite, about the size of No. 1 buckwheat.

The weather data was secured from the local office of the U. S. Weather Bureau.

Test of Hot-air Furnace, Serving Second Floor Apartment.

Date, 24 hrs. period.	Coal burned (lbs.	Mean outside temperature, deg. F.	Sunshine, per cent. of possible, hrs.	Average wind velocity, Miles per hr.
December 6	98	30	26	14.2
December 7	69	30	61	10.0
December 8	115	31	0	5.2
December 9	63	32	57	10.0
December 10	98	24	100	20.0
December 11	98	24	97	11.8
December 12	92	25	94	5.6

The effects of wind on the heat loss from the apartment are shown by the results for December 10, 11 and 12. An average wind velocity for twenty-four hours of twenty miles per hour, as on the 10th, is quite high. On the 11th the velocity was about one-half that of the 10th, and on the 12th about one-fourth. The sunshine for these three days was about the same, as was the outside temperature. And the daily coal consumption required to keep the apartment at the usual temperature was also practically the same, being a little less on the warmer day.

The first four days of the week give an interesting proof of the marked effect of sunshine. The wind and outside temperature were nearly the same, while the sunshine varied from none at all to sixty-one per cent. of the possible number of hours. The necessary fuel consumption varied nearly inversely as the sunshine. The slightly less coal used on the 9th as compared with the 7th, despite fewer hours of sunshine, may be explained by the difference in outside temperature and the fact that on the 9th the period of sunshine was more nearly in the middle of the day at the sun's greatest intensity. Comparing the results for the 6th with those for the 10th and 11th it is interesting to observe that the longer periods of sunshine on the latter days compensate for a difference of 6 degrees in the average outdoor temperatures.

This test may be criticized for its shortness, and the writer realizes that many more observations should be made to verify or disprove the results. But the perfect consistency of these seven days is certainly interesting and inevitably leads to one conclusion. It may be relevant to state that the weather records were not secured from the Weather Bureau until the week following the coal measurement, so it was not possible to prove a preconceived notion.

From this week's record it is apparently true that wind velocity has very little effect on the heat loss from a reasonably well-built house, and that sunshine plays a very important part in decreasing coal consumption for residence heating. One would be justified, therefore, in exposing a house to fairly severe wind conditions, provided thereby an appreciable increase in direct sunshine was secured.—"Heating and Ventilating Magazine."

CONFUSION CONCERNING FIREPROOF BUILDINGS.

It is doubtful if any single factor has done more to confuse the public mind concerning fireproof construction than the irresponsible outgivings of insurance agents and others connected in some remote and indirect way with buildings and the problem of making them as nearly incombustible as may be deemed wise or economical. Seldom it is that a convention of insurance men is held—particularly if the gathering is in some of the smaller cities—that the local papers do not contain a sensational statement purporting to be the opinion of some insurance "expert" to the general effect that the knowledge and ability required to construct a really fireproof building are not within human ken; at least are not possessed by modern architects and builders.

Of course it is now tolerably well established and understood among those who have even a limited knowledge of the subject that no degree of non-inflammability possessed by the structure proper will preserve the inflammable contents of a building from conflagration. On the other hand, it is also a recognized fact, demonstrated by a great number, if not innumerable experiences, that it is perfectly possible to build a building which in itself will not burn. Whether it is wise or economical to do so depends upon many factors, varying in almost every instance. If, however, it is desired and decided to build fireproof, and then care is taken to properly equip the building; if, in fact, nothing is used either in the construction of the building or in its equipment and furnishings that will support combustion, the danger from fire from within is obviously reduced to zero. Also, a fire from without could not by any possibility ignite such a building or its contents, if wall openings are adequately protected. In the case of a great conflagration, however, even such a building, surrounded by non-fireproof and highly inflammable structures and materials, might suffer, though not directly, from fire. If damage were done to it, such damage would probably be caused by the explosion of gases or the intense heat which might affect roofing, flashings, and other materials, even though they would not burn. It is admitted that even a fireproof building of the most advanced type is somewhat at the mercy of its neighbors, but the danger of fire is inversely in proportion to the number of such fireproof buildings in a city; and if it were feasible to construct only fireproof buildings in any given area, we would then find the fire hazard in that area very much reduced, if not practically eliminated. With the progress that has been made in fireproof construction, and the improvements in methods and materials recorded within recent years, there is every reason to believe that the unburnable city will be possible in the not remote future. The unburnable building is unquestionably a reality to-day, and can be produced whenever it is demonstrated that, all things considered, it is the part of wisdom to construct such a building. Under these circumstances, statements to the effect that there is no such thing as a fireproof building is attempting to attract attention, which at best can only be local and passing, at the price of creating false impressions that inevitably are productive of much harm.—"American Architect."

CONCRETE IN COTTAGE BUILDING.

In the course of the proceedings of the recent conference held at Westminster under the auspices of the National Housing and Town Planning Council, several references were made to the necessity for using cheap materials in the building of cottages. Mr. H. L. Paterson, A.R.I.B.A., of Sheffield, in a memorandum, discussed some of the newer methods of construction. With regard to solid or hollow concrete blocks, he said that these built up as walling stones and sometimes cast with a rough rock face to imitate them cannot be recommended from an aesthetic point of view. If smooth, or if covered with rough-cast, there is not the same objection. Solid continuous walling in concrete is filled in between movable boards, and the face is afterwards covered with stucco. There are houses standing to-day which were built on this system over forty years ago. Monolithic concrete walls are built up by an ingenious method whereby hollow spaces are left in the centre of the wall, tending to keep the house warm and dry. The whole may afterwards be covered with smooth or rough-cast stucco. Solid concrete walls reinforced may be made quite satisfactorily about seven inches thick up to the first floor, and five inches thick above, but the trouble is that by-laws will not usually allow such thin walls whatever the construction may be. There are several patented systems on the lines stated, and if covered with stucco they appear to be quite as good as brickwork, if not better, for there is a natural affinity between concrete and the stucco covering. Concrete roofs are economically formed of concrete reinforced by one of the approved forms of bars. Unless, however, there is a ceiling under the concrete, the rooms immediately below are very susceptible to changes in temperature. In cold weather the moisture in the house condenses on the under side of the concrete and distemper peels off. They are usually nearly flat, but a good method is to form them in a segmental shape with a channel and moulding projecting over the wall faces. It is quite easy to form them in this way, and also at the same time to form dormer tops and sides, the whole becoming a monolithic structure without the necessity of lead gutters. It is safer to use asphalt to cover these, or at any rate one of the systems of rendering concrete waterproof. Professor S. D. Adshead, F.R.I.B.A., who discussed the possibilities of the future village, said the materials of which the solid walls of the cottages were constructed would depend on the possibilities of the district. Where there was plenty of gravel the construction would be of concrete. In a brick district it might be cheapest to build in brick or with a combination of brick and concrete reinforced. Small buildings constructed of almost any material would prove satisfactory if they stood on a good concrete slab. The inner lining of cottages should be constructed of coke breeze concrete slabs, and such slabs manufactured in immense quantities would make cottage building 25 per cent. cheaper.—"Concrete."

FIRE LOSSES.

PLEASANT POINT, ONT.—Pleasant Point mill was destroyed by fire; loss $25,000.

HARROW, ONT.—C. F. Smith's planing mill was destroyed by fire; loss $8,000.

MONTREAL, QUE.—N. J. Valiquette's building, 447 St. Catherine street, was damaged by fire; loss $5,000.

BROCKVILLE, ONT.—Senator Fulford estate office building was damaged by fire; loss $50,000.

INFORMATION WANTED.

Architect C. H. Baindle, Souris, Man., desires information regarding hardware, metal ceilings and skylights.

Construction News

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

BUSINESS BUILDINGS.

BEAUCEVILLE, QUE.—La Banque Nationale, Quebec; P. Levesque, 115 St. Jonn street, Quebec, is preparing plans for a branch bank to cost $2,500.

CAMPBELLTON, ONT.—L. Belanger is having plans prepared for a brick house; cost $8,000.

CAPE TRAVERSE, P.E.I.—Cape Traverse Hall Co., P.E.I., have plans from W. Lord for a brick and frame house.

CARLETON, N.B.—Telephone Co. have awarded contract to R. C. Clark for the erection of a brick building to cost $12,000.

GALT, ONT.—Plans have been drawn by Architect W. Carmichael, Montreal, for Bell Telephone building, to be erected on Ainslie street.

GUELPH, ONT.—The Ontario Agricultural College have awarded contract to Secord & Son, Brantford, for a chemical building, to cost $15,000.

LINDSAY, ONT.—J. O'Reilly has awarded contract to Neil Gray for an office building.

MARKHAM, ONT.—J. Miller, Unionville, has commenced work on a Fair building for the Agricultural Society.

PETROLIA, ONT.—The Crown Loan Co. have awarded contract to Robert Jackson for a bank building. The heating and plumbing is to be done by Van Tuyl & Fairbanks, Petrolia. The cost will be $35,000.

PETERBORO, ONT.—Plans have been drawn for Crown building, to be reconstructed and one storey added.

PONOKA, ALTA.—The Provincial Architect, Calgary, has called for tenders on a bakery building for the asylum.

QUEBEC, QUE.—Melle Robitaille has had plans drawn for a brick house, to cost $4,500.

QUEBEC, QUE.—E. & G. A. Carette has had plans drawn for an office building, to cost $25,000.

SARNIA, ONT.—H. Mueller Mfg. Co., Ltd., has drawn plans for an office building, and has called for bulk tenders.

ST. CATHARINES, ONT.—A building is being erected for J. Clench, county clerk.

ST. JOHN, N.B.—Architect J. E. Fairweather has called for tenders on a telephone building for the N. B. Telephone Co.; cost $8,000.

TORONTO, ONT.—Plans have been drawn for showrooms and office building for the Singer estate, 133 Queen street west, to cost $8,000. Plans have been drawn by Curry & Sparling, 105 Bond street, and contract has been awarded to Cowlin & Son, Mail Building, for an office building for the Trust and Guarantee. Plans have been drawn by Burk, Horwood & White for an office building to cost $8,000. The Imperial Oil Co. has had plans drawn for a galvanized iron wagon shed, Esplanade, to cost $2,000. The Ideal Bedding Co. has had plans drawn for a brick factory to cost $2,000. Architect J. M. Lyle has drawn plans for a branch bank of the Bank of Toronto on Ossington avenue.

VICTORIA, B.C.—Plans have been drawn for a business building of the Investment and Securities Co., to cost $7,500.

WINDSOR, ONT.—Huron and Erie Loan Co. has secured site on Pitt and Ouellette for an office building. The work is to be started February, 1917.

CIVIL ENGINEERING.

BERGEN STATION, MAN.—Plans have been drawn by W. H. Beachill, Rosser, Man., for a concrete bridge to be erected over Loon Creek.

CALEDONIA, ONT.—Clerk J. W. Avery has called for tenders on concrete bridge abutments.

CHATHAM, ONT.—Tenders have been called for three steel and concrete bridges.

CORNWALL TOWNSHIP—Tenders have been called for 28,000 feet of concrete walks.

DUNDAS, ONT.—Secretary J. E. McGinty has called for tenders on concrete dam, 18x80.

DUNNVILLE, ONT.—Clerk J. W. Holmes has called for tenders on sewers on Fairview avenue.

ESSEX, ONT.—Tenders have been called for sidewalks.

ESSEX, ONT.—Clerk R. R. Brett has called for tenders for 50 ft. concrete bridge.

FERGUS, ONT.—Tenders have been called for concrete sidewalks.

FORD CITY, ONT.—Tenders have been called for water mains.

GUELPH, ONT.—Tenders have been called for sewage plant.

GUELPH, ONT.—Engineer F. McArthur has called for tenders on 1,200 feet 42-inch castiron pipe, and also for concrete sidewalks.

HALIFAX, N.S.—Tenders have been called for 110 feet of steel bridge.

KEMPTVILLE, ONT.—Engineer E. R. Black, Brockville, has called for tenders on a bridge.

MAIDSTONE TWP.—Tenders have been called for concrete bridge.

MELANCTHON, TWP., ONT.—Tenders have been called for two steel bridges, concrete abutments.

MOOSE JAW, SASK.—Tenders have been called for 875 feet pile dam.

NAWER, SASK.—Tenders have been called for concrete reservoir.

NEW BRUNSWICK—W. R. Fawatt, Temperance Vale, N.B., has been awarded contracts for Provincial bridges, to cost $40,000.

NORTH BAY, ONT.—Engineer H. J. McAuslan has called for tenders on concrete sidewalks.

OTTAWA, ONT.—Tenders have been called for pavements.

OTTAWA, ONT.—Contract has been awarded to Dominion Bridge Co. for a bridge to cost $84,158.

PORT ELGIN, ONT.—Tenders have been called for reinforced concrete bridge.

PORT HOPE—Plans have been made by J. W. Sanders and tenders have been called for sewers in several sections.

QUEEN'S COUNTY, N.B.—Tenders have been called for a steel construction to cost $20,000.

RIDGETOWN, ONT.—Clerk Geo. McDonald has called for tenders for concrete culverts.

ROSSER, MAN.—Tenders have been called for concrete bridge.

SASKATCHEWAN—Tenders have been called for telephone exchanges.

SAULT STE. MARIE, ONT.—Tenders have been called for 3,750 feet sewers.

SIMCOE, ONT.—Department of Public Works have called for tenders on fish-hatchery building.

ST. CATHARINES, ONT.—Tenders have been called for 13,800 square yards of concrete pavement.

ST. JOHN, N.B.—Clerk G. Murdock has called for tenders on sidewalks.

ST. JOHN, N.B.—Contract has been awarded to Maritime Dredging Co. for 400 feet of concrete breakwater.

TORONTO, ONT.—Department of Public Works have awarded Orpen Co., Ltd., contract for 4,107 feet of sewers on Argyle street. Murphy & Barner have been awarded contract for 1,827 feet of sewers on Ethel avenue. R. J. Moyes & Co. have been awarded contract for 4,147 feet of sewers on St. Clair avenue. Connolly & Agnew have been awarded contract for 2,428 feet of sewers on Maria street. Tenders have been called for sewers, pavements, roadways.

THE PAS, MAN.—Engineers Murphy & Lenderwood, Saskatoon, have called for tenders on sewers.

TRAIL, B.C.—B. C. Government will build $15,000 bridge. Engineer, T. Kilpatrick.

TRENTON, N.S.—Clerk W. Fraser has called for tenders on 3,000 feet of sewers.

VICTORIA, B.C.—Tenders have been called for 3,300 feet 12-in. castiron pipe and 600 feet 8-in. castiron pipe.

WATROUS, SASK.—Tenders have been called for construction of one mile road.

WELLAND, ONT.—Tenders have been called for sewers.

WELLAND, ONT.—Tenders have been called for repairs to Mooring's dock.

WESTBOURNE, MAN.—Tenders have been called for two concrete bridges.

WHEATLAND, MAN.—Tenders have been called for concrete bridge.

WINNIPEG, MAN.—J. Guilbault & Son have been awarded contract for tile sewers to cost $5,000.

WINNIPEG, MAN.—Secretary M. Peterson has called for tenders on sewers.

WINNIPEG, MAN.—Tenders have been called for reinforced concrete bridge.

WOODSTOCK, ONT.—Engineer F. J. Ure has called for tenders on concrete walks, curbs and gutters.

CLUBS, HOSPITALS, THEATRES AND HOTELS.

BRANDON, MAN.—Tenders have been called for stores and theatres.

FREDERICTON, N.B.—Plans have been drawn for the Victoria Hospital.

HAMILTON, ONT.—Architects Stewart & Wetton have called for tenders on a nurses' home.

KINGSTON, ONT.—Architect E. R. Beckwith, C.E., has called for tenders for lodge building.

MONTREAL, QUE.—J. H. Spence has called for tenders on a theatre owned by the Canadian United Theatres, Ltd., to cost $200,000.

NELSON, B.C.—When plans are drawn work is to proceed on a hospital to cost $80,000.

PORT ARTHUR, ONT.—Tenders have been called for hotel to cost $8,000.

STANSTEAD, QUE.—The Stanstead Inn Corp. propose building a hotel to cost $35,000.

ST. JOHN, N.B.—Tenders have been called for a hospital to cost about $60,000. Contract has been awarded for an isolation hospital.

TORONTO, ONT.—A picture theatre is to be erected at 581 Gerrard street east, and tenders have been called. Plans are being prepared for a theatre to cost $20,000. Plans have been drawn for a theatre on Queen street east.

VANCOUVER, B.C.—The plans are being prepared for a theatre on Hastings avenue.

WELLAND, ONT.—Plans have been drawn for a hospital to cost $35,000.

PLANTS, FACTORIES AND WAREHOUSES.

BERLIN, ONT.—Plans are being prepared for a factory on King street.

BRANTFORD, ONT.—Tenders have been called for a factory owned by the Hampel Paper Box Co., to cost $8,000.

BURFORD, ONT.—Site has been purchased by the Canadian Milk Product Co. for a milk factory, to cost $50,000.

CALGARY, ALTA.—The Automatic Thresher and Machinery Co. propose to build a threshing machine factory.

CHATHAM, ONT.—Tenders have been called for a factory owned by the American Pad and Textile Co., to cost $15,000.

DUNKIRK, ONT.—Plans are being prepared for a factory owned by the Merrill Silk Co., Hornell, N.Y.

FERGUS, ONT.—Tenders have been called for a factory owned by Beatty Bros., to cost $8,000.

GUELPH, ONT.—Tenders have been called for H. Walker & Son's new warehouse.

HALIFAX, N.S.—Three large shipbuilding concerns propose building plants here.

HAMILTON, ONT.—The Hamilton Foundry Co. have had plans drawn for a foundry. Victor Saw Works have had plans drawn for a factory to cost $6,000. Oliver Chilled Plow Works have had plans drawn for a factory on Burlington street to cost $2,000. Tenders have been called for a factory on Stirton avenue, owned by Appleford Counter Check Book Co., Ltd. Contract has been awarded to G. Frid & Co. for a factory owned by the Canadian Cartridge Co., to cost $20,000. Plans have been drawn for a factory owned by W. A. Freeman to cost $1,500. Plans have been drawn for a brick and frame construction owned by J. Marks to cost $5,000. Contract has been awarded to G.

Mills for a factory owned by the Hamilton Stamp and Stencil Works to cost $2,250. Plans have been drawn for a storage building owned by A. Krukowski to cost $4,000. F. F. Dalley Co. have purchased a site for a factory to cost $100,000.

LEAMINGTON, ONT.—Heintz Pickle Co., Leamington, are having plans prepared for a factory to cost $30,000.

LONDON, ONT.—Contract has been awarded by W. H. Heard, London, to James Patton for a factory to cost $4,000. Contract has been awarded to Hyatt Bros. for a warehouse to cost $18,000, owned by Webster-Harvey Co. Contract has been awarded to John Hayman & Sons, 432 Wellington street, for a factory to cost $10,000, owned by E. Leonard & Son.

LINDSAY, ONT.—Contract has been awarded H. T. Hickey, Peterboro, for a woolen mill, owned by Horn Bros.

MONTREAL, QUE.—The Misses Scott, 81 Redpath, have had plans drawn for a factory on Redpath street to cost $1,900. The Canadian Tube and Iron Co. have had plans drawn for an office in the rear of Hamilton street to cost $2,500. Lymburger, Ltd., 515 Commissioner, have had plans drawn for a warehouse to cost $8,000. Plans have been drawn for a warehouse at St. Adeline and Marlborough for a warehouse to cost $3,000. Contract has been awarded to John Quinlan for a plant owned by the Armstrong-Whiteworth Co. to cost $750,000. Plans have been drawn for a warehouse owned by H. Fortier to cost $7,000. The Dominion Oilcloth Co. have had plans drawn for a factory to cost $4,000.

NIAGARA FALLS, ONT.—Broas Bros. have commenced work on a factory owned by McGlashan-Clark Co. to cost $25,000.

ORILLIA, ONT.—Contract has been awarded to E. Webb & Son for a factory owned by G. Forbes, Hespeler, Ont.

POINT EDWARD, ONT.—Geo. Oakley, Toronto, and E. F. Giberson, Illinois, propose building a stone-cutting concern here.

QUEBEC, QUE.—The International Land and Lumber Co., Ottawa, are having plans drawn for a paper mill.

SIMCOE, ONT.—Tenders have been called for the factory owned by the Unique Shoe Co.

ST. CATHARINES, ONT.—Tenders have been called on a factory owned by Packard Electric Co. McKinnon Sash and Metal Co. have had plans drawn for a factory to cost $50,000.

ST. THOMAS, ONT.—C. Phillips propose building a glove factory.

TIMMINS, ONT.—Premier Mines proposes building a power plant.

TORONTO, ONT.—The Canadian Bag Co., Paton road, have had plans drawn for a factory. Contract has been awarded to W. Wheeler, 54 Tecumseh, for a warehouse owned by F. T. James. Church and Colborne. Northrop & Lyman Co. has awarded contract to Witchell & Son on a factory to cost $50,000. Work has commenced on the factory of L. White & Son, William street. Tenders have been called by the Department of Public Works on an examining warehouse to cost $500,000, on Front street. Henschien & McLaren, Chicago, have had tenders called on Wm. Davies Co.'s ice plant, Front street, to cost $45,000. Tenders will be called in three months on the Wm. Davies Co.'s packing plant, Don and Queen streets, to cost $1,500,000. Contract has been awarded to C. Tonkin, Oakwood avenue, on a factory owned by Soper & Co., Lawton avenue, to cost $5,000. Tenders have been called on a factory owned by Canada Cycle and Motor Works to cost $100,000. The Campbell Flour Mill Co. has awarded contract to Tromanhouser Co., Temple Building, for a warehouse. Architect F. R. Phillips has drawn plans for the new factory on Queen street east, owned by the Hamilton Carhartt Co.

VANCOUVER, B.C.—The Canadian Products have had a by-law passed for an evaporating plant to cost $30,000. Contract has been awarded to Cotton Co., Ltd., on the plant owned by Canadian Fishing Co., Ltd.

WALKERVILLE, ONT.—Motor Products Co., Detroit, propose building a motor plant.

WELLAND, ONT.—Architect A. E. Nicholas, St. Catharines, is preparing plans for the factory owned by Welland Valve Co. The Central Macaroni Works, Buffalo, N.Y., have purchased a site and propose building a factory at a cost of $10,000.

VICTORIA, B.C.—Parfitt Bros., contractors, have commenced work on the Department of Marine and Fisheries warehouse to cost $16,300.

PUBLIC BUILDINGS AND STATIONS.

LEVIS, QUE.—Tenders have been called for station and train shed.

MONTREAL, QUE.—Tenders have been called for comfort stations.

TILBURY, ONT.—M. C. Ry. Co., St. Thomas, are having plans prepared for a station to cost $10,000.

TORONTO, ONT.—Tenders have been called for a sub-station belonging to Toronto Hydro-Electric.

VANCOUVER, B.C.—Tenders have been called for a station owned by the C.N.R., which will cost $100,000. Tenders have been called for a station belonging to the Canadian Northern Railway to cost $1,000,000.

WINDSOR, ONT.—The Detroit and Windsor Ferry Co. are having plans drawn for a ferry dock and waiting room to cost $125,000.

RESIDENCES, STORES AND FLATS.

ARNER, ONT.—Plans are being prepared for a residence owned by A. Avner to cost $3,000.

ATWOOD, ONT.—Plans are being prepared for a residence for Mrs. B. Hanna to cost $4,000.

AUBURN, ONT.—Plans are being prepared for a residence belonging to C. E. Asmith to cost $3,500. Plans are being prepared for a residence owned by E. Helwid to cost $4,000.

AYLMER, ONT.—Contract has been awarded to C. M. Smith for a residence owned by John H. Strachan to cost $4,000.

BELLEVILLE, ONT.—Work has started on D. V. Doyle's residence to cost $4,000. Work has started on M. R. Doyle's residence to cost $3,600.

BELMONT, ONT.—Plans have been drawn for A. Harkness' residence to cost $3,500. Plans are being prepared for C. Baron's residence to cost $3,000.

BLENHEIM, ONT.—Plans have been drawn for H. L. Bisnett's store to cost $4,000.

BRANTFORD, ONT.—Plans have been drawn for H. W. Turnbull's residence to cost $2,000. Plans have been drawn for a galvanized iron warehouse owned by Ham & Nott to cost $3,000.

BRIGDEN, ONT.—Contract has been awarded to A. Blaikie, Inwood, Ont., for John Poland's residence to cost $4,000. Plans have been drawn for a manse for the Presbyterian Church to cost $4,000. Plans are being prepared for a residence belonging to Wm. Shaw to cost $4,000.

BROCKVILLE, ONT.—Plans are to be prepared for a business block owned by the Fulford estate to cost $30,000.

BRUSSELS, ONT.—Plans are being prepared for W. F. Stretton's residence to cost $4,000.

CAUGHNAWAGA, QUE.—Tenders are being called for a teachers' residence owned by the Department of Indian Affairs, Ottawa.

CHATSWORTH, ONT.—Tenders have been called for E. P. McConvey's residence to cost $4,000.

CHIPPEWA, ONT.—Plans are prepared for Norton & Co. residences to cost $2,500 each. The company will build twenty-five frame residences.

DORCHESTER, ONT.—Plans are being prepared for N. Nugent's residence to cost $4,000.

HAMILTON, ONT.—Plans have been drawn for E. R. Bond's residence to cost $3,500, and E. Wright's residence to cost $2,000. Plans have been drawn for A. V. Smith's five brick residences to cost $2,000 each, and for J. H. Stewart's brick garage to cost $2,500. Plans have been drawn for residence of Stuart Bros. to cost $4,000. Plans have been drawn for C. G. Hudson's residence to cost $3,000. Plans have been drawn for J. McNaught's residence, Somerset avenue, to cost $2,000. Hamilton Dwelling Co. have plans drawn for three frame residences to cost $4,000. Contract awarded to R. Isbister for residence owned by F. T. Moore to cost $8,000. Work commenced on residence belonging to S. Golden, cost $2,500. F. Havers has plans drawn for three residences, two to cost $3,500, and one to cost $6,000. W. E. Blatz has plans drawn for five residences to cost $10,000. W. E. McKim has plans drawn for two residences to cost $7,000. C. Widdup has plans drawn for residence to cost $2,400. A. J. McFadden has plans drawn for residence to cost $2,000. Contract awarded to J. E. Saddler for W. Cook's residence to cost $2,000. E. A. Seymour has plans drawn for residence to cost $2,000. Mrs. P. Wilson has plans drawn for residence to cost $3,000. J. W. Williamson has plans drawn for residence to cost $3,000. Mrs. Walton has plans drawn for residence to cost $2,000. W. Taylor has plans drawn for residence to cost $2,000. Ida M. Gilliard has plans drawn for six residences to cost $7,000. Contract has been awarded to W. Hobbs for W. Chiswell's residence to cost $3,500. Dr. Truman has plans drawn for residence to cost $5,000. C. Rudolph has plans drawn for residence to cost $2,000. Contract has been awarded to W. Teaker on two residences owned by F. New to cost $2,000 each.

HESPELER, ONT.—Contract has been awarded to Grill Bros. and Prestien & Bartles on seven residences to cost $2,000 each, belonging to F. Forbes Co.

LISTOWEL, ONT.—Plans are being prepared for bungalow belonging to Misses Hay, to cost $4,000. Plans are being prepared for residence owned by E. Bennett to cost $3,500.

LONDON, ONT.—Contract has been awarded to James Neilson, Pottersburg, Ont., for residence owned by F. G. Moore to cost $3,000. Work has commenced on W. Lane's residence to cost $3,000. Plans are being prepared for residence belonging to Major H. N. Abel to cost $10,000. Contract awarded to F. Corley on residence belonging to A. Speir to cost $3,000. Contract awarded to John Putherbough for Dr. Hadley Williams' residence to cost $12,000. Contract awarded to R. J. Kelly for residence belonging to Henry Taylor to cost $3,500. Plans are being prepared for four residences owned and built by Copp Syndicate to cost $4,000. Contract awarded to G. H. Wallis for residence owned by T. Dickson to cost $3,000. Contract awarded to Contr. Buzzard for residence owned by Fred Reelhoff to cost $3,000. Contract awarded to R. J. Kelly for residence owned by T. H. Janes to cost $3,000. Plans are being prepared addition to store and garage owned by West Floral Co. to cost $6,000. Excavating four residences owned by the Copp Syndicate to cost $12,000. Contract has been awarded on Charles Hunter's residence to cost $3,000. Contract has been awarded to Hyatt Bros. on residence owned by J. Routledge to cost $3,200. Contract has been awarded to T. Bottrill on residence owned by Geo. Pood to cost $3,500. Plans are being prepared for J. Henderson's residence to cost $7,000. Plans have been drawn for residence owned by J. Orme to cost $4,000. Plans have been drawn for residence owned by R. H. Smith to cost $3,000. Plans have been drawn for residence owned by W. Bossence to cost $4,500. Plans have been drawn for residence owned by F. H. Kilbourne to cost $6,500. Plans are being prepared for residence belonging to A. O. Hunt to cost $5,000. Contract awarded to Martyn, London, for residence owned by Geo. Howe to cost $4,000. Contract awarded to A. Dickinson for residence owned by Wm. R. Reid to cost $3,500. Contract awarded to Hopp for residence owned by Chas. E. Pratt to cost $3,500. Contract has been awarded to Hyatt Bros. for residence owned by Wm. Hardy to cost $3,500. Contract has been awarded to Tambling & Jones for apartments owned by Bank of Montreal to cost $7,000. Plans have been drawn for residence owned by D. Leckee to cost $4,000. Plans are being prepared for apartment house owned by R. McKnight to cost $4,600. E. Emery has plans drawn for two residences to Church of Redeemer congregation to cost $4,000.

MELFORT, SASK.—Gillespie & Murphy have purchased site for a garage on Alberta avenue. The work is to commence in the fall.

MILTON, ONT.—Messrs. J. E. Bell, J. W. Smith, J. W. Blight and J. D. Hume are erecting residences.

MILVERTON, ONT.—J. Eiben is having plans prepared for his residence on Main street to cost $3,500.

MITCHELL, ONT.—D. Etty has had work commenced on his residence to cost $2,000. A. B. Barley has had work commenced on his residence to cost $2,200. F. C. Horde has had work commenced on his residence to cost $2,500.

MONTREAL, QUE.—Jos. Gregoire has plans drawn for three residences to cost $2,000 each. John Walsh has plans drawn for two residences to cost $2,000 each. John Parisien has plans drawn for four residences to cost $6,000. White Construction and Realty have had plans drawn for two residences to cost $8,000. Spardokos has had plans drawn for two stores to cost $2,000 each. E. P. Wallace has had plans drawn for a residence to cost $4,500. E. Emery has plans drawn for two residences to cost $3,200. G. Paradis has plans drawn for two residences to cost $2,800 each. Lord Shaughnessy has plans drawn for alterations to residence on Dorchester west to cost $5,000. Geo. Blackett has plans drawn for two residences to cost $10,000. Geo. Winsper has plans drawn for residence to cost $1,500 M. Chromer has plans drawn for residence to cost $2,000. Jeane Bruinette has plans drawn for eight residences to cost $32,000. Arthur Clouthier has plans drawn for one residence on Old Orchard, near Church, to cost $3,300; two residences on Wilson, near Church, to cost $6,800; one residence on Harward, near Church, to cost $3,300. A. L. Brochu has plans drawn for a residence to cost $4,000. M. Lapienne has plans drawn for a residence to cost $5,000. St. Germaine has plans drawn for six residences to cost $8,000. H. Legault has plans drawn for two residences to cost $3,200. Russell Cowans has plans drawn for a residence, cost $7,000. John Dominique has plans drawn for two residences to cost $6,000. H. Wilinsky has plans drawn for two residences to cost $5,000. T. N. Southam has plans drawn for three stores and twelve residences to cost $2,000. H. Brunelle

has plans drawn for residence to cost $5,000. J. A. Colleret has plans drawn for store and flats to cost $2,500.

MOUNT FOREST, ONT.—W. J. Gilroy is preparing plans for a residence to cost $3,500.

NEW WESTMINSTER, B.C.—Mrs. J. C. Armstrong has awarded contract to J. C. Allen for residence to cost $6,000.

OWEN SOUND, ONT.—Lemon Bros. are preparing plans for a produce store to cost $60,000.

OTTAWA, ONT.—L. E. Stanley & Co. proposes building a departmental store.

PORT BURWELL, ONT.—A. R. Might & Son have awarded contract to Meyers Bros. for addition to store to cost $6,000.

QUEBEC, QUE.—J. E. Bedard has work commenced on his residence to cost $5,000; Alf. Couture has plans drawn for a residence to cost $4,500; Chas. Jobin has plans drawn for a residence to cost $5,000; Chas. Jobin has plans drawn for a residence to to cost $16,000; Alf. Bedard has plans drawn for a residence to cost $10,000; J. R. Demers has plans drawn for a residence to cost $7,000; Martel & Beaupre have plans drawn for residences to cost $12,000; Fred Cote has plans drawn for residence to cost $7,500; Ed. Tremblay has plans drawn for residence to cost $18,000; J. H. Jobin has plans drawn for residence to cost $6,000; La Caisse D'Economie has plans drawn for alterations to residence to cost $5,000.

RIDGETOWN, ONT.—Watson Taylor has plans drawn for a residence to cost $3,200.

RIPLEY, ONT.—W. Knight has plans drawn for residence to cost $3,000.

SAULT STE. MARIE, ONT.—W. H. Ewing has had work started on residence to cost $8,000.

SHERBROOKE, QUE.—J. O. Darche has commenced work on residence to cost $8,000.

STANSTEAD, QUE.—G. Coffey has commenced work on residence to cost $2,000; E. Brock has commenced work on residence to cost $3,000

STRATHROY, ONT.—E. Morron is preparing plans for residence to cost $4,000.

SYDNEY, N.S.—J. J. Power has awarded contract to R. C. Bully for residence to cost $6,000.

SUDBURY, ONT.—Woodward & Co., Winnipeg, have awarded contract to Laberge Lumber Co. for 50 residences.

THAMESFORD, ONT.—G. Hamilton has plans drawn for residence to cost $3,000.

TORONTO, ONT.—Joseph Hill has plans drawn for two residences to cost $5,000. Architect P. A. Finney has drawn plans for Mrs. W. A. Wilson's residence to cost $6,500. H. Moore has plans drawn for residence to cost $3,000. Tenders have been called on stores owned by M. Hambly on St. Clair avenue. S. Jackson has plans drawn for residence to cost $3,200. Tenders have been called on three pair residences owned by Dr. Grimshaw. Dr. J. B. Hall has had plans drawn for store and flats to be built by Jas. Paterson. Wm. Edmonds has plans drawn for residence to cost $3,500. Architect has drawn plans for one pair residences owned by R. G. Hammill to cost $4,500. S. F. Lankin has plans drawn for residence to cost $3,200 H. A. Johnston has plans drawn for residence on Pine crescent to cost $3,500. D. Bunker has plans drawn for stores and apartments on Royce avenue to cost $12,000. Architects Wickson & Gregg, Kent Building, have drawn plans for store front at 95 Bloor west, owned by Mrs. John Wilson. A. F. Walford has commenced work on one pair residences at Golfview and Gerrard to cost $4,000. F. Forsythe has awarded contract to Sharp & Brown for residence at 138 Runnymede road to cost $4,000. S. R. Foxall, 123 McRoberts avenue, has plans drawn for addition to his residence. Architect E. G. Wilson, 77 Victoria street,, has plans drawn for alterations to residence at 96 Albany avenue, owned by M. H. Cook, 501 Bloor west, to cost $3,000. S. G. Smith, 98 Pacific avenue, has plans drawn for residence at 261 Windemere to cost $3,500. E. Scofton, 33 Taunton road, has plans drawn for a residence on Taunton road to cost $2,500. J. Lucas is having plans prepared for one pair residences on Gilliard, near Pape. Architects William & Ure has drawn plans for residence for E. J. Lavitz, 20 Lowther, on Glenholme, to cost $4,500. Architect C. A. Cobb, 71 Bay street, has called for tenders on residence on Lonsdale to cost $25,000. C. MacIntosh, 110 Hiawatha, has had plans drawn for a residence on Hiawatha to cost $3,000. J. Slade, 189 Beach avenue, has plans drawn for two pairs residences at 181 Beach avenue to cost $14,000. W. Ostygen, 11 Cobourg avenue, has plans drawn for residence on Coburg avenue to cost $1,800. Kerr & Martin have had plans drawn for residence on Golfview avenue to cost $3,500. W. Mellish, 128 Boon avenue, has plans drawn for alterations to residence on Boon avenue. R. Lankin, 85 Hogarth avenue, is having excavation done at 34 Arundel for residence to cost $3,000. Architects Molesworth, West & Secord, 2 College street, have plans drawn for H. L. Kerr, Kent Building, for residence on Douglas avenue to cost $8,000. Max Velisk has plans drawn for store front at 2171 Dundas street. Dodge Mfg. Co. has plans drawn for a garage to cost $2,000. A. W. Clendennan & Son, 262 Brunswick avenue, have plans drawn for one pair residences at 797 Euclid avenue to cost $4,500. W. W. Dale, 12 Butternut avenue, has plans drawn for residence on Ellerbeck to cost $2,500. Architect W. R. Gregg, 23 Jordan street, is preparing plans for store front and painting for John Wanless, 243 Yonge street. Architect C. S. Cobb, 71 Bay street, has called for tenders on cottage at Weston, owned by the National Sanitarium Association, to cost $5,000. Wm. Davies, 331 Front street, has plans drawn for a garage at Mill street to cost $3,000. Architects Sproat & Rolph, 34 North street, are preparing plans for a residence at York Mills to cost $25,000, owned by H. S. Strathy, 71 Queen's Park. M. C. Charters, 110 Caroline, has called for tenders on residence on Caroline avenue. Architect F. R. Barry has drawn plans for a residence and garage on Lytton avenue to cost $6,000, owned by S. N. Hughes, 35 Roxboro. W. R. Gibb, 24 Stacey, has drawn plans for a residence on Stacey street to cost $2,200. F. W. Smith, 178 Sheldrake, has commenced work on his residence in Lawrence Park. H. C. Warren, 178 Howick, has had plans drawn for cottage on Howick to cost $2,000. J. Montgomery, 326 Gladstone avenue, has plans drawn for one pair residences on Blackthorn avenue to cost $4,500. Chas. Gibson, 70 Lynhurst, has called for tenders on residence. B. Grant has plans drawn for one pair residences on Eaton avenue to cost $5,000. M. H. McLeod, 32 Leonold, has plans drawn for alterations to residence. L. J. Wookey has called for tenders for residence in Castle Frank to cost $10,000. W. J. Hill, 35 Woolfrey, has called for tenders on duplex residence at 133 Hamilton to cost $5,000. Architect P. H. Finney, 79 Adelaide east, is preparing plans for two residences on Beach and Balsam to cost $6,500, owned by Mrs. Wilson, Beach avenue. Contracts have been awarded by McEachren & Son, Royal Bank Building, for additions to residence; carpentering, S. Coombs, 66 Curzon; heating, McFadden; electric, S. A. Newman; plumbing, R. Nelson. M. C. Charters, 110 Caroline avenue, has plans drawn for residence on Caroline avenue to cost $3,000. S. F. Fowler, 101 Bowood, has plans drawn for residence at 103 Bowood to cost $3,000. F. A. McCake, 56 Mountview avenue, has plans drawn for residence at Clendenan avenue to cost $3,000. Geo. Warrell, 1482 Bathurst street, has plans drawn for residence and garage on Westmount avenue to cost $6,000. J. A. Russell, 1514 Yonge street, has plans drawn for stores and flats to cost $7,000. W. Millichamp, 237 Poplar Plains road, has awarded contract to A. Webb, 13 Shirley street, for additions to residence on Poplar Plains road to cost $5,000. Architect J. A. Thatcher, 37 Cowan avenue, has called for tenders on stores and apartments on Morley and Gerrard to cost $15,000. C. Evans, 163 Westminster, has awarded contract for additions to residence on Glen road. Mrs. E. Taylor, 162 Deleware, has called for tenders on apartment house at 29 Breadalbane street to cost $5,000. J. Devan, 51 Bird avenue, has the walls up on his residence on Lauder avenue to cost $7,000. Chas. Howell has plans drawn for alterations to residence. W. A. Wilson, 9 Fernwood avenue, has plans drawn for two sun rooms. D. Rosana, 137 Vanhorne, has plans drawn for store front. S. Kevan, 255 Queen west, has plans drawn for store front. J. Cameron has awarded contract for residence on Warren road. G. Martin, 100 Wood street, has plans drawn for residence at 67 Sellers avenue to cost $2,500. Erection is to commence of residence on Rainsford road, owned by Miss Isabella Mitchell, Fairford road. W. P. Leveck, 519 Roxton road, has plans drawn for residence on Geoffrey street to cost $6,000. H. Lucas, 118 Felstead, is preparing plans for one pair residences to cost $2,000. Architect J. G. Hedges, 1028½ Ossington avenue, has prepared plans for alterations to residence on Cherrywood Gardens, owned by F. Button, to cost $2,500. Architect W. G. Hunt has prepared plans for one pair residences on Concord avenue to cost $5,000, owned by J. J. Schoolery. Nightscale & Smith, 79 Woodbine avenue, have plans drawn for one pair residences on Neville Park boulevard to cost $4,500. E. R. Hurst has plans drawn for garage and conservatory at 272 Poplar Plains road. A. P. Burrett has had plans drawn for garage on Maple avenue. W. J. Neeley, 262 Dovercourt road, has plans drawn for a residence and garage on Indian road to cost $6,500. Dr. W. S. Grimshaw, 462 Avenue road, has plans drawn for three pairs duplex residences on Kent road to cost $15,000. Dr. W. S. Grimshaw, 462 Avenue road, has plans drawn for three pairs residences at 16-26 Ashdale to cost $15,000. G. J. Veale, 73 Drayton avenue, has plans drawn for residence on Drayton avenue to cost $2,000. B. Alwood, 30 Bastedo, has plans drawn for additions to residence to cost $1,800. Architect W. Bredin Galbraith, 22 St. Leonards avenue, has plans drawn for a residence on Oriole road to cost $6,000, owned by R. J. Maclennan, Kent Building. E. C. Hurlbut, 44 Castlefield, has plans drawn for a residence at Briar Hill to cost $3,000. N. J. Craig, 137 Marchmont road, has had excavation started on the residence on Marchmont road to cost $4,500. Hayard & Whitehorn, 17 Lauder avenue, have plans drawn for residence on Lauder avenue to cost $6,000. W. W. Dundas has plans drawn for alterations to residence at 2143 St. Clair avenue. Engineers James, Loudon & Hertzburg, Toronto street, have called for tenders for residence on Oakwood avenue, owner 490 Oakwood avenue.

TRURO, N.S.—P. O. McCurdy has commenced work on stores on Princess street to cost $7,000.

VANCOUVER, B.C.—R. M. Tod has plans drawn for residence at 2378 York street to cost $4,000.

WELLAND, ONT.—F. Adley, Scotland Woollen Mills store, has called for tenders on residence. S. L. Lambert has plans drawn for residence on Main street to cost $5,000. J. A. Morris has plans drawn for residence to cost $2,500.

WHEATLEY, ONT.—J. Crowther is preparing plans for residence to cost $3,500.

WOODSTOCK, ONT.—E. J. Coles, Dundas street, has awarded contract to A. J. King for alterations to general store to cost $12,000.

ZURICH, ONT.—F. W. Hess is preparing plans for residence to cost $7,000. W. Ruby is preparing plans for residence to cost $4,000. F. Kalbfleish is preparing plans for residence to cost $4,000.

SCHOOLS, COLLEGES AND CHURCHES.

AMARANTH TWP.—The School Board have awarded contract to Leitch & Hughson, Shelburne, for a school.

BEETON, ONT.—Tenders have been called for a school.

BRAMPTON, ONT.—Secretary J. D. Gordon has called for tenders on a school.

BRANTFORD, ONT.—The Separate School Board have called for tenders on a school. Secretary H. Attwell, Tutela P.O., has called for tenders on a school.

BRANT, ALTA.—Secretary Wm. Thomas has called for tenders on a new school.

BIG VALLEY, ALTA.—Secretary W. Wamsley has called for tenders on a new school.

CAINSVILLE, ONT.—Architect L. D. Barber, Brantford, has called for tenders on a church, owned by the Baptist congregation, to cost $15,000.

CALGARY, ALTA.—The School Board has awarded contract to Rodger Bros. for a new school on Centre avenue to cost $16,000.

CARLTON, P.E.I.—Tenders are called on a new school to cost $6,000.

CHATHAM TWP.—Secretary John S. Knight has called for tenders on a new school to cost $5,000.

CHINOOK, ALTA.—Competitive plans wanted for a new school; secretary, L. Proudfoot.

CLANDEBOY, MAN.—Tenders have been called for a new school; secretary, G. Sutherland, Boyd Building, Winnipeg.

DUNDURN, SASK.—F. E. Livingstone, secretary of School Board, has called for tenders on a new school.

ELMVALE, ONT.—Architect John Wilson is preparing plans for a new school to cost $12,000.

ELROSE, SASK.—Dr. R. H. Burrell, secretary of School Board, has called for tenders on the new school.

FERRIS TWP., ONT.—Angus & Angus, architects, North Bay, Ont., have called for tenders on the new school.

FORD, ONT.—Architect J. C. Pennington, Windsor, has called for tenders on the new school to cost $40,000.

FOREMOST CONSOLIDATED S.D., NO. 2, ALTA.—Secretary G. L. Schinnour has called for tenders on the new school.

FREDERICTON, N.B.—Plans have been drawn for St. Paul's Presbyterian Church. The School Board proposes to build a school to cost $5,000.

FRANKLAND, ALTA.—Tenders have been called for the new school; secretary, A. L. McPhee.

GALT, ONT.—Architect J. Evans, 30 North Water street, is preparing plans for additions to school to cost $10,000. Tenders

have been called by the Separate School Board for the new school on Rose avenue.

GLENSIDE, SASK.—J. B. Stoehr, secretary, has called for tenders on the new church to cost $4,500.

GRIFFIN, MAN.—Tenders have been called for the new school to cost $6,000.

GRIFFIN, SASK.—Architect G. J. Jarrett, Weyburn, has called for tenders on the new school to cost $6,500.

GUELPH, ONT.—The Agricultural College has awarded contract to Secord & Son, Brantford, for a chemistry building to cost $20,000.

HAMILTON, ONT.—Architect F. W. Warren, Bank of Hamilton Building, has called for tenders on the new church owned by the Union Protestant Church. Architects Stewart & Witton have drawn plans for a Sunday school owned by Christ Church Cathedral to cost $15,000.

HEBRON, MAN.—Architect C. H. Brindle has called for tenders on the new school.

HOUGHTON, SASK.—Secretary A. C. Story has called for tenders on the new school.

HOUSE LAKE, ALTA.—W. A. Stickle, trustee of the School Board, has called for tenders on the new school.

KINGSTON, ONT.—Tenders have been called on the new riding school owned by the Department of Militia to cost $18,000.

LONDON, ONT.—The Board of Education has awarded contracts for the new Technical school to cost $200,000. Architect Miller, Toronto, is preparing plans for the new Salvation Army citadel to cost $15,000.

MELFORT, SASK.—Secretary Carl Haggland has called for tenders on the new school.

SANDY LAKE, MAN.—Secretary C. Ramsden has called for tenders on the new school.

MINDEMOYA, ONT.—Secretary A. J. Wagg has called for tenders on the new church.

MONTREAL, QUE.—The Jacques Cartier Normal School, 992 Sherbrooke street, have had plans drawn for a new church to cost $65,000. The Protestant School Board have had plans drawn for a new school. The School Board has awarded contract to L. Beaudry, Fairmount avenue west, for new school on Robin street.

MONTROSE, MAN.—Secretary J. Muirhead, Carberry, has called for tenders on the school.

OTTAWA, ONT.—Secretary J. Bethune has called for tenders on the new school on Albert street.

PARRY SOUND, ONT.—Secretary J. D. Broughton has called for tenders on the new school.

PEMBROKE, ONT.—Architect W. C. Keighleys is preparing plans for a new school.

PETERBORO, ONT.—Secretary G. Thompson has called for tenders on alterations to South Central School. Secretary A. E. Prest, 242 Lansdowne street, has called for tenders on the new church owned by St. James' Methodist Church.

PORTAGE LA PRAIRIE, MAN.—Architect F. E. Evans has called for tenders on the new school to cost $65,000.

PORT CREDIT, ONT.—Architect D. C. Cotton, Adelaide street east, Toronto, is preparing plans for a new school to cost $20,000.

PRICEVILLE, ONT.—Secretary F. P. Reiley has called for tenders on the new school.

QUEBEC, QUE.—Architect E. Tanguay is preparing plans for the new school on St. Luke street to cost $12,000. Plans are to be prepared for the new Girls' Home, owned by the Y.W.C.A., to cost $50,000.

RAPID CREEK, ALTA.—Rapid Creek S.D., Alta., has awarded contract to Contractor Beaton for the new school.

SARNIA, ONT.—The Separate School Board has awarded contract to James Shanks for the new school to cost $16,000. The Board of Education has awarded contract to Schultz Bros., Brantford, for the new school to cost $58,000.

SASKATOON, SASK.—The School Board is having plans prepared for alterations to the school.

SELKIRK, MAN.—Secretary J. E. Hoover has called for tenders on the new school.

SHERBROOKE, QUE.—Tenders have been called on the new school owned by the East Sherbrooke Mothers' School.

SIMCOE, ONT.—Architects Chapman & McGiffin, Toronto, are preparing plans for two schools to cost $40,000.

STRATFORD, ONT.—Tenders have been called for the new school to cost $15,000.

ST. DAMASE, QUE.—The R. C. congregation propose building a new church.

ST. ELIE ORFORD, QUE.—The Presbyterian Church are having plans prepared for a church and presbytery to cost $20,000.

ST. THOMAS, ONT.—Contract has been awarded to A. E. Ponsford for the new Sunday school to cost $10,000.

SUDBURY, ONT.—Secretary J. Fowler has called for tenders on the new school on College street.

TAVISTOCK, ONT.—Architect Russell, Stratford, has called for tenders on the new school to cost $9,000.

TORONTO, ONT.—Work has commenced on the additions to the Separate School at 783 Bathurst street. The Board of Education have called for tenders on repairs to schools. Architect A. A. Post, Brisband Building, Buffalo, is preparing plans for a training school on Kingston road to cost $250,000. Rev. F. Carr, of St. Michael's College, is to have plans prepared for a college building. Plans are being prepared fo ra church to be built on Weston road, owned by Weston Road Baptist Church. Tenders have been called on the mission hall on Davisville avenue, owned by Davisville Baptist Mission.

TRAIL, B.C.—Secretary F. E. Dockerill has called for tenders on additions to a school.

VANCOUVER, B.C.—Tenders have been called for alterations to the university building.

WALPOLE ISLAND, ONT.—Tenders have been called on additions to a school owned by the Department of Indian Affairs.

WEBB, SASK.—Secretary J. B. Austin has called for tenders on a school.

WEST LORNE, ONT.—The School Board has awarded contract to Horton Bros., St. Thomas, for a school to cost $7,500.

WEST SHEFFORD, QUE.—The Methodist congregation has awarded contract to Geo. Wallace, Sherbrooke, Que., for a Methodist church.

WIARTON, ONT.—Secretary W. M. Newman has called for tenders on additions to High School.

WINDSOR, ONT.—The School Board has awarded contract to Wells & Gray for a new school to cost $165,000.

WINNIPEG, MAN.—Tenders have been called for a new school to be erected on Aberdeen street. The School Board is preparing plans for a new school on McPhillips street to cost $27,500.

MISCELLANEOUS.

ARNER, ONT.—Chester J. Quick is building a stock barn to cost $3,000.

BERLIN, ONT.—Plans are being prepared for a pavilion.

BLAIR, ONT.—Contract has been awarded to Preston Metal Shingle Co. for a barn to cost $5,000.

BROCKVILLE, ONT.—Tenders are being called up to July 5 on J. McCaw's garage.

CLINTON, ONT.—The Doherty Piano Co. is erecting a dry kiln to cost $4,000.

CORNWALL, ONT.—Tenders are being called by the Department of Public Works, Ottawa, up to July 12, for the interior fittings of post office.

BROME, P.Q.—H. A. Holden has had work commenced on a creamery.

DAUPHIN, MAN.—Tenders are being called by the Department of Public Works, Winnipeg, on a public building.

DAVIDSON, SASK.—Contract has been awarded to Geo. Golleymore for barns.

DUTTON, ONT.—J. Dant is preparing plans for his saw mill to cost $5,000.

EDMONTON, ALTA.—The C. N. Railway, Toronto, is preparing plans for a roundhouse.

ELORA, ONT.—D. J. Smith is preparing plans for a tannery to cost $12,000.

FREDERICTON, N.B.—Tenders are being called on track supplies by the I. C. Railway.

GREY TWP.—Charles Knight is having plans prepared for stables to cost $3,000.

HALIFAX, N.S.—The Naval Department, Ottawa, are calling tenders for a watch house.

HARRISTON, ONT.—The School Board are calling tenders for school plumbing.

HARROW, ONT.—C. F. Smith is preparing plans for a planing mill to cost $7,000.

KINGSTON, ONT.—Contract has been awarded for a lodge building owned by L.O.L.

KINGSVILLE, ONT.—Tenders have been called by the Department Naval Service for fish hatchery and residence.

LEAMINGTON, ONT.—The Town Council proposes building a firehall. Contract has been awarded to A. E. Law for a house of refuge to cost $7,000.

LONDON, ONT.—Contract has been awarded to J. McDonald for a stable to cost $3,500. B. F. Kingsmall is having plans prepared for a garage to cost $8,000. Plans are being prepared by Inspector Piper, City Hall, for garbage stables to cost $12,000.

MONTMORENCY, QUE.—The Dominion Textile Co. are building a cotton mill.

MONTREAL, QUE.—Secretary R. L. Deschamps has called tenders for a heating system.

NEW WESTMINSTER, B.C.—The Canadian Produce Co. have had plans drawn for an evaporator.

NORTH DUMFRIES, ONT.—J. Milroy is having plans prepared for stock barns on St. George road to cost $3,500.

NINETTE, MAN.—Architect J. D. Atchison has plans drawn for an infirmary.

OTTAWA, ONT.—Contract has been awarded by the Isolation Hospital to A. E. Farley for sun rooms to cost $9,473. The Isolation Hospital Board have called tenders on sun rooms to cost $7,500.

PORTAGE LA PRAIRIE, MAN.—Woodward & Co., Winnipeg, has awarded Western Improvement Co. contract for an elevator, capacity 60,000 bushels.

PORT COLBORNE, ONT.—Tenders have been called for an elevator dock.

PORT GLASGOW, ONT.—Plans are to be prepared for storehouses owned by Galbraith & Dromgale to cost $4,000.

QUEBEC, QUE.—Y.W.C.A. have had plans drawn for a Girls' Home to cost $57,000.

SAULT STE. MARIE, ONT.—Tenders are being called up to July 21 for the court house.

SOUTH NORWICH TWP.—Contract has been awarded to W. Hall, Tillsonburg, Ont., for stock barn owned by W. Oatman, to cost $3,000.

STRATHROY, ONT.—Secretary G. M. Haldane has had plans drawn for the seating repairs of the Methodist Church.

ST. BONIFACE, MAN.—Plans are being prepared for an abattoir to cost $500,000.

ST. JOHN, N.B.—Work has commenced by P. W. Carson on his garage. Site has been purchased by C.P.R., Montreal, for a roundhouse.

ST. THOMAS, ONT.—The Neal Bread Co., London, Ont., propose building a bread factory.

THREE RIVERS, QUE.—Wayagamack Pulp and Paper Co. are preparing plans for a pulp and paper mill to cost $1,500,000.

TORONTO, ONT.—The city of Toronto has awarded contract on car barns: Masonry, R. Chalkley, 34 Victoria street; carpentering, T. Lewis, 329 Davenport road; steel, Dominion Bridge; plumbing and heating, McNaughton & McKenzie, 1029 Shaw street; plastering, Gander & Son, 250 Gladstone; roofing, A. Matthews, 556 Adelaide west; painting, J. Casey, 30 Dalhousie street. Tenders have been called by A. Senn, 100 Barton avenue for brickwork and carpentering. Plans have been drawn for a garage at 387 Keele street, owned by Mrs. K. Devaney, to cost $1,400. Tenders have been called by Dr. Grimshaw, 16 Ashdale avenue, and F. Wainwright, 5 Sword street, for plastering, heating, electric wiring, masonry. Tenders have been called 754 St. Clair, 351 Clinton, 3 Scarborough road. Contract has been awarded to Witchell & Son by the Sick Children's Hospital for a power house. Tenders have been called H. Wakeman, 62 Auburn, tenders open for drains, concrete work and plastering; 3 McMurrich, tenders open for gasfitting. H. J. Harron, 876 Bathurst, tenders for two verandahs and sun rooms. Tenders for painting 32 Columbine street. Tenders have been called for a mission erected by Beulah Hall to cost $20,000. Work has been commenced by W. Charlton, 397 Brunswick avenue, on his garage to cost $2,000. Suroff Hardware, 872 Bloor street west, is erecting a garage. Tenders being called for plastering and tinsmithing on Boon Avenue Baptist Church. Plans have been drawn for Canadian Alis Chalmers, King and Simcoe, for a storehouse. Plans have been drawn for dining room, rest room and lavatory for the Canadian Alis Chalmers, King and Simcoe, to cost $7,000. Plans have been drawn by Architect W. Connery for a blacksmith shop belonging to W. R. Trayer. Contract has been awarded to McLeod & Co., 110 Church street, for a dormitory to cost $53,000. Tenders are being called by Wells Bros., 96 Gould, for the home owned by R. Simpson Co. to cost $200,000. Plans have been drawn by Architects Denison & Stephenson for a garage owned by J. P. Rogers to cost $1,800. Plans have been drawn for the work shop owned by J. L. Wilson & Sons to cost $3,000.

Barrett Specification Roofs

Guaranteed for 20 Years

MADE IN CANADA

"The roofing shall be laid according to The Barrett Specification dated May 1st, 1916, and the roofing contractor shall, on completion of the job, deliver to us a twenty year Surety Bond Guaranty in accordance with Note No. 1 of such Specification."

This is the new way of prescribing roofing in your building specifications when you want a Barrett Specification Roof.

The twenty year Guaranty Bond is *a new feature of our service.*

It will be given on all roofs of fifty squares or more in all towns of 25,000 population and over throughout Canada and the United States *and in smaller places where our inspection service is available.*

This Guaranty Bond exempts the owner from all expenses of maintenance and repairs for a period of twenty years and the bond is issued by the United States Fidelity & Guaranty Company, one of the largest surety companies in the world.

The roofer, in order to secure this Guaranty Bond, must be satisfactory to us, and must notify us as soon as a contract is taken and give us the right to inspect the workmanship and materials to see that both are in strict accordance with The Barrett Specification dated May 1st, 1916.

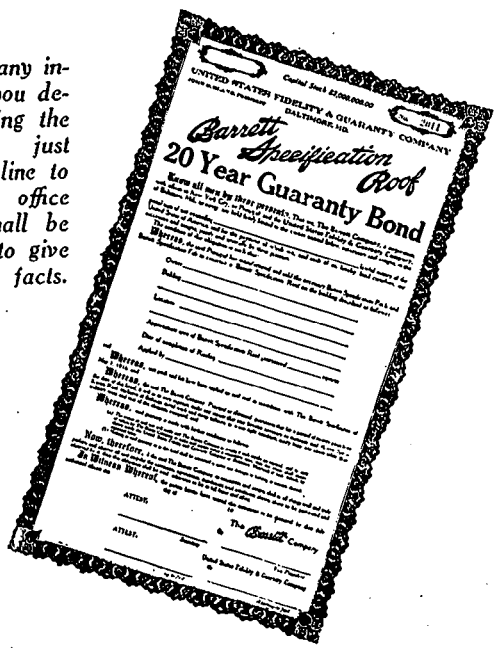
A copy of The Barrett Specification, with roofing diagrams, sent free on request.

Naturally, if we are to give a twenty year Guaranty Bond, we must be assured that the proper amount and kinds of material are used so as to insure the roof giving the maximum service.

We know from experience of almost fifty years that a roof laid strictly according to The Barrett Specification with the workmanship properly safeguarded will last twenty years and more without repairs of any kind, and we are issuing this twenty year Surety Bond so that owners of these roofs will get the benefit of that experience.

The principal architects, engineers and roofing contractors throughout the Dominion are familiar with the plan.

If there is any information you desire regarding the proposition, just drop us a line to our nearest office and we shall be very glad to give you further facts.


UNITED STATES FIDELITY & GUARANTY COMPANY
BALTIMORE, MD.
Barrett Specification Roof
20 Year Guaranty Bond

THE PATERSON MANUFACTURING COMPANY, LIMITED
MONTREAL TORONTO WINNIPEG VANCOUVER

THE CARRITTE-PATERSON MANUFACTURING CO., LIMITED
ST. JOHN, N.B. HALIFAX, N.S. SYDNEY, N.S.

Contract has been awarded to Hand, Harris & Merritt, 7 King street east, for a bakery owned by the Bowles Lunch. Plans have been drawn by Architects Bond & Smith for a bakery belonging to the Ideal Bread Co. to cost $4,000. Plans have been drawn for storage bins owned by the Bowden Machine Co. Tenders have been called by A. H. Henderson, 63 Wells Hill, for an apartment house. Tenders have been called for painting two residences owned by J. A. Shier, 61 Standish. Tenders have been called for the Board of Education for painting and plumbing. A. W. Corlis has had plans drawn for a lodge to cost $1,800. Conger Lehigh Coal Co. has had plans drawn for a coal elevator to cost $8,000.

VANCOUVER, B.C.—Plans have been drawn for a lumber mill owned by Wilson Bros. Revised plans have been prepared for the garage belonging to B. C. Sugar Refinery Co. to cost $15,000. Tenders have been called for lighthouse and residence. Plans have been drawn for a ship building plant, owned by Cameron, Genoa, Mills, Ship Builders, Ltd.

WINNIPEG, MAN.—Plans are to be prepared for an institute belonging to the Oddfellows to cost $35,000. Plans have been drawn for an elevator owned by the Dominion Government Railway, Ottawa. Tenders are being called for a building owned by the Manitoba Sanitorium for Consumptives.

CONTRACTORS and SUB-CONTRACTORS

As Supplied by The Architects of Buildings Featured in This Issue

Building, St. Denis Theatre. 286 St. Denis street.
Brick, Interprovincial Brick Co., Toronto.
Boilers, L. E. Moulton (plumbers).
Casements and window construction, also doors and window trim, MacFarlane-Douglas Co., Ottawa.
Concrete work, Norcross Bros. Co.
Consulting engineer, Fred M. Headley, Montreal.
Electric fixtures, Tiffany Studios, New York.
Electric wiring and apparatus, L. K. Comstock. Douglas Milligan, Canadian agents.
Elevators and hoists, Walker Hardware (ash hoist).
Expanded metal, Pedlar People.
Fire doors, MacFarlane-Douglas.
Fire escapes, Estey Bros., Montreal.
Fire extinguishers, L. E. Moulton.
Wood flooring, Seaman-Kent.
Special flooring, The Marbleoid Co. Archibald & Co., agents, Montreal.
Fittings, mill work, V. E. Traversy.
Furniture, American Seating Co., New York.
Glass (plate), mirrors, Hobbs Mfg. Co.: (wired), MacFarlane-Douglas Co., Ottawa; (light globes), Tiffany Studios, New York.
Grille work, Estey Bros., Montreal.
Hardware, Durand Hardware Co. (Ruswin).
Interior fittings, cabinet, woodwork and decoration, L. E. Traversy.
Inter-phone system, Northern Electric Co., Montreal.
Marble, Missisquoi Marble Co., Montreal.
Ornamental iron, Estey Bros.
Paints, Shag Pat Studio, 6 Beaver Hall.
Plumbing, L. E. Moulton.
Plaster work (ceiling), R. D. Clark.
Refrigeration equipment, Audifern.
Refrigeration machinery, Griscom-Russell, Toronto.
Power machinery, L. K. Comstock.
Reinforcements, Slab Floor.
Radiators (manufacturers), L. E. Moulton.
Roofing, MacFarlane-Douglas.
Sprinkler equipment, Moulton.
Stone (artificial and natural), Jas. Brodie & Sons.
Structural iron and steel, Dominion Bridge Co.
Tile, Mueller Mosaic Co.
Terra cotta (face), New York Architectural Terra Cotta Co.
Vacuum cleaners, B. F. Sturtevant Co.
Varnish (floor and wall), C. W. Goodall.
Ventilating system, B. F. Sturtevant Co.
Weather strip, "Athey," Montreal Mosaic.
Contractors (general), Norcross Bros.

Building, Hydro-Electric Power Commission.
Awnings, T. Eaton Co.
Brick, Interprovincial Brick Co., Ltd., Sun Brick Co.
Boilers, Walden Heating Co.
Carpets and rugs, Murray-Kay.
Casements and window construction, also doors and window trim, A. B. Ormsby.
Chimneys, Witchell & Son.
Electric fixtures, Tallman Brass and Metal Co., Hamilton.
Electric wiring and apparatus, Hydro-Electric Co.'s own construction force.
Elevators and hoists, Otis-Fensom.
Expanded metal, A. B. Ormsby.
Fire escapes, Dominion Ornamental Iron.
Flooring, Witchell & Son.
Fittings, Witchell & Son.
Furniture, Hydro-Electric's own furniture.
Glass, Toronto Plate Glass.
Hardware, Aikenhead Hardware Co., Ltd.
Interior fittings, cabinets, woodwork and decoration, Jones Bros.
Marble, Can. Glass Mantel and Tile Co.
Ornamental iron, A. B. Ormsby Co.
Paints, Dominion Paint Works, Walkerville.
Plumbing, Imperial Products and Keith's, Ltd.
Plaster work, R. C. Dancy.
Power machinery, motors, Westinghouse.
Reinforcements, Witchell & Son.
Radiators, Steel and Radiation.
Roofing, Duthie & Son.
Stone, Cement Products, Witchell & Son.
Structural iron and steel, Dominion Bridge Co.
Telephones, Canadian Independent Telephone Co., Ltd.
Tile, Can. Glass Mantel and Tile Co.
Terra Cotta, Don Valley Brick Co.
Vacuum cleaners, Invincible Vacuum.
Vaults, J. J. Taylor Co., Ltd.
Wall tile, Sun Brick Co.
Contractors, Witchell & Son.

Building Materials in South Africa

Limited Building at Cape Town.

Owing to excessive overbuilding during the boom immediately succeeding the Boer war, as well as on account of unusual public and private improvements necessitated in the Transvaal by the fixing of the administrative capital in Pretoria, the demand at Cape Town for building materials has been relatively small for several years. This will more fully appear from the following from the Cape "Times":

There is, however, a gradual recovery of normal conditions in the building trade in this district.

Style of Construction.

The great majority of private houses put up here are of brick. Most of them are plastered on the outside and inside. In the better class of these buildings a large percentage of cement is used. Where much cement is used, it is difficult to drive in nails. Where too little is used, the nails will not hold. This is overcome in many cases by fixing picture moulding before the plastering is put on.

In the majority of the buildings here, both public and private, the partitions are of brick, so that wall boarding or laths are not needed. Where needed, various supports for the plastering are employed. A considerable amount of expanded metal lathing (principally of English make) is used. The Germans have a wall boarding on the market here made of asbestos and cement, which is landed at about 19s. ($4.62) per square (10 by 10 feet). They also sell roofing tiling of the same material, landed at 32s. 6d. (7.79) per square. This is slightly harder and heavier than the wall boarding. The boarding is three-sixteenths of an inch thick and comes in sheets 4 by 8 feet. The tiles are one-eighth of an inch thick and 16 x 16 inches square.

How to Introduce New Articles.

There is nothing manufactured here to compete with American wall board or the German asbestos-cement board. Clay tiles, however, are locally made. For this market it is suggested that the trade is not large enough to justify the effort of general distribution of American products of this character. It would appear advisable to arrange with one manufacturer's agent for the exclusive sale, who would be free to get in touch with the architects, on whose specifications the builder would have to buy any particular material designated. Probably the best way to introduce such an article would be to select a manufacturer's agent and get him to submit samples to the architects and then supply him free with enough of the board to put up in at least one room in some new house under the architect's direction. It will be necessary to introduce building novelties before any large orders may be expected. Material men here will not stock any article heavily until it has been demonstrated that there will be a reasonable demand.

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

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

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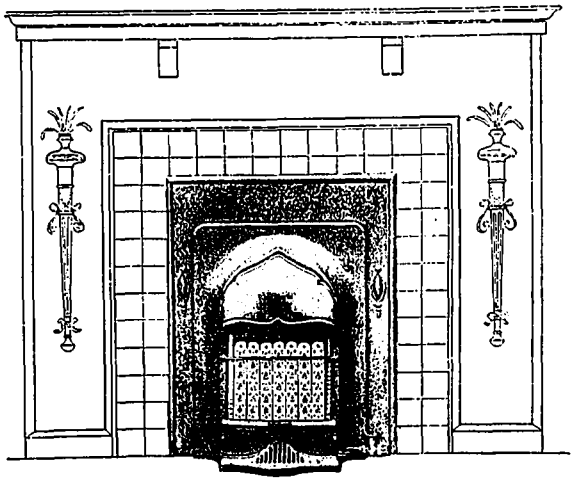
DEVELOPMENT IN GAS APPLIANCES

As in many other lines progress in gas appliances has been slow until late years, and the many interesting and wonderful appliances that are now being shown are indeed worthy of investigation. Gas in America has now been in use a full century, but it is only of late that the many benefits to be obtained from its use have been given the publicity that has been deserved. In the abatement of the smoke nuisance gas has played no inconspicuous part. The hygienic value of gas as an illuminant, and the health value of gas when properly used for heat, has lately been aptly dwelt upon by a number of eminent medical authorities. Gas can truly be called "The Silent Servant," and the user of the modern gas appliance can minimize life's little worries. Perhaps the most striking example of the development in modern appliances is the radiant gas fire. In appearance these fires are equal to anything that can be purchased, and with the economy of operation that is possible and the absolute control of the heat are well worth investigating. The heat that is radiated is odorless. Prof. Leonard Hill, M.B., F.R.S., etc., has emphasized the health value of radiant heat. There are two distinct forms of heat—radiated and convected. Convection is the warming of the air by contact with a warm body. Radiation is the warming of the walls, floors and objects in the room by the direct issue of heat rays from the source of heat. Radiant heat does not noticeably warm the air, but passes through it, warming any material surfaces which intercept the rays. These surfaces gradually warm the air by convection to a comfortable degree. Heat and light radiations are given out by these heaters, and they correspond more closely in appearance to a coal grate than any other gas operated heater. The radiating power is speedily developed, and with freedom from dirt and noise accomplish a great deal in satisfactorily solving the domestic heating question. The designs and finishes of the panel and inset fires are adaptable to almost any surroundings, and consequently they rather lend attraction to the furnishings of a room.

RADIANT GAS FIRE INSTALLED IN HOUSE ON HUNTLEY ST., TORONTO, ONT.



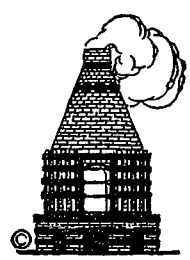
INSET FIRE RADIANT GAS APPLIANCE.

ATLANTIC Terra Cotta can be used for so many different kinds of buildings that it is hard to give definite information unless we know something about the building you have under consideration.

If at any time you find it convenient to write us a description or send us a few rough sketches we shall be glad to answer personally and in detail.

Perhaps we can supplement our answer with a copy of our monthly magazine, *Atlantic Terra Cotta*, containing illustrations of particular interest.

Anyway, we shall do our best to give you the information you want, and we shall *not* subject you to a long and mechanical series of "follow-up" letters and folders.



Atlantic Terra Cotta Company

1170 Broadway, New York