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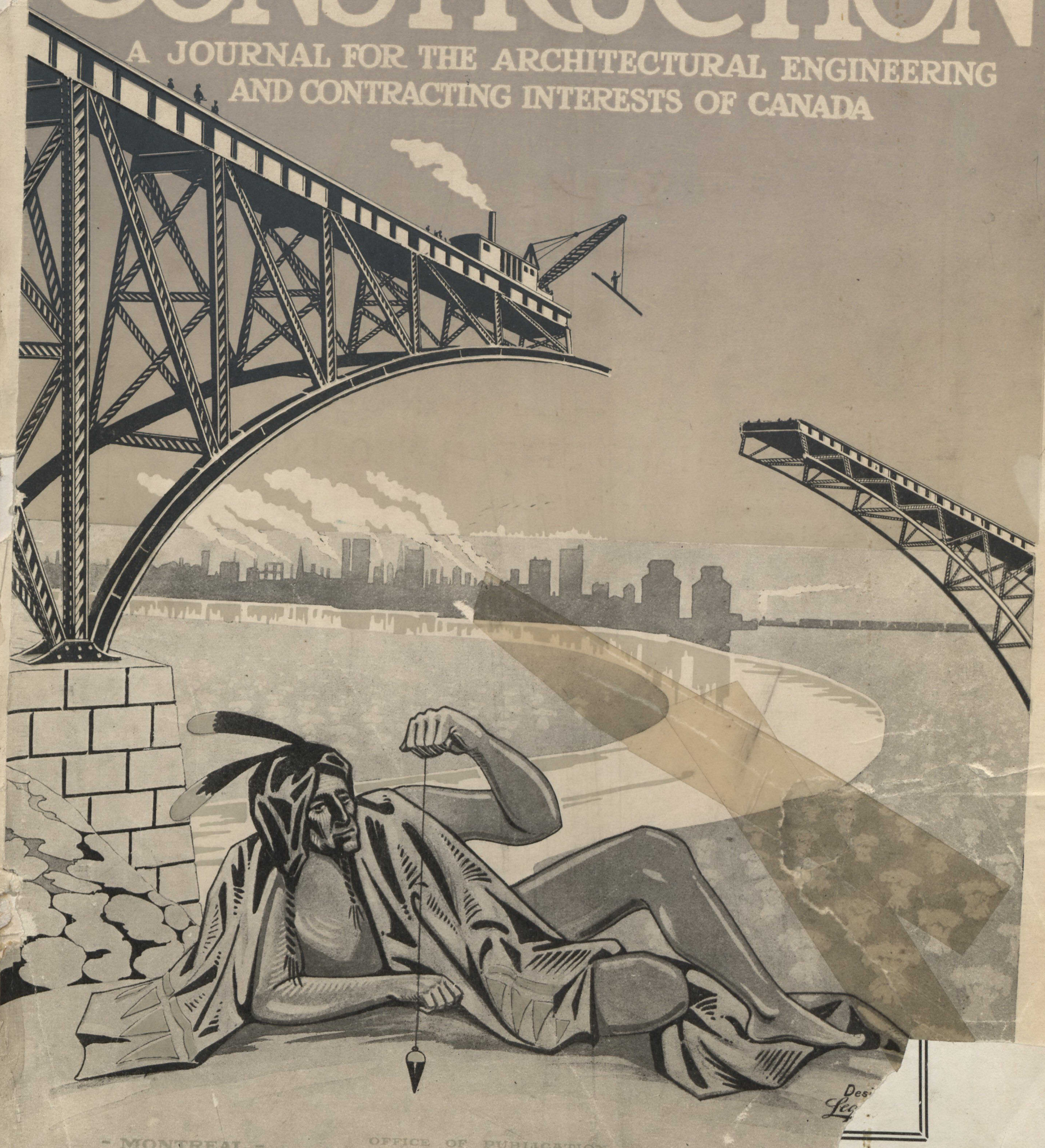

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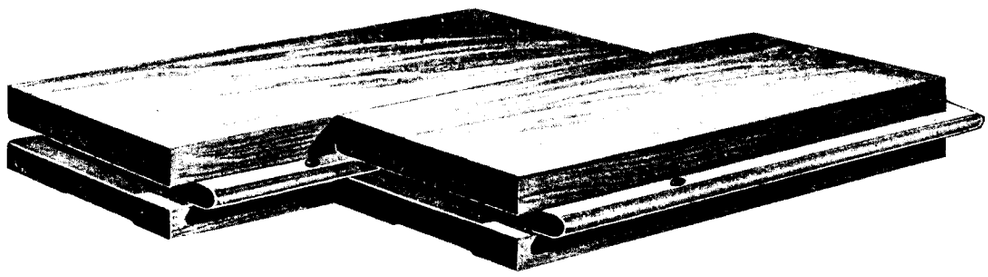

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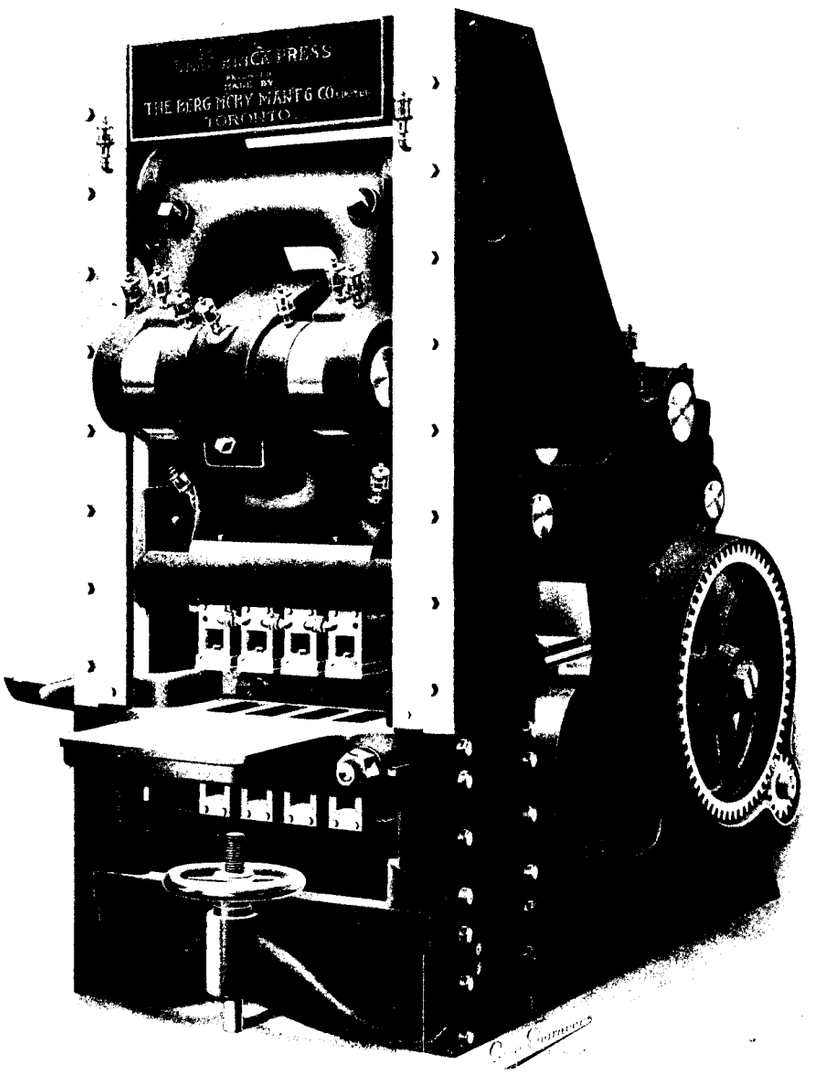

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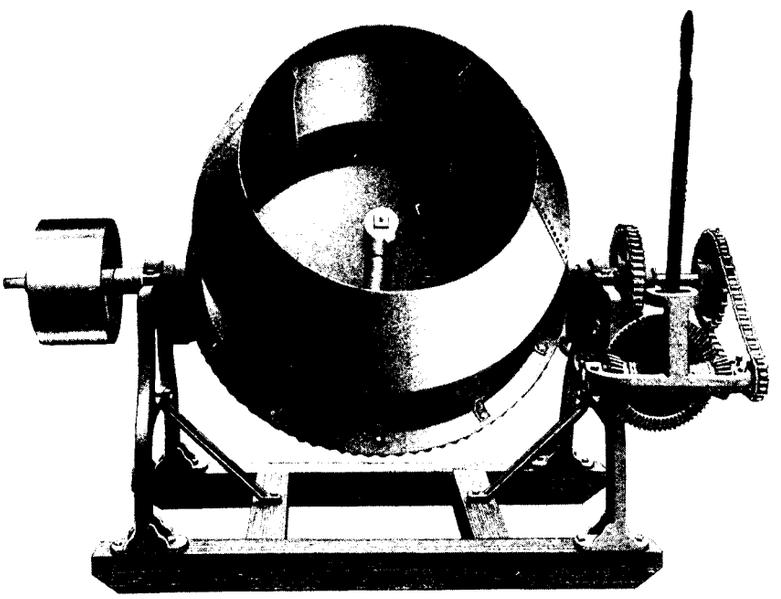

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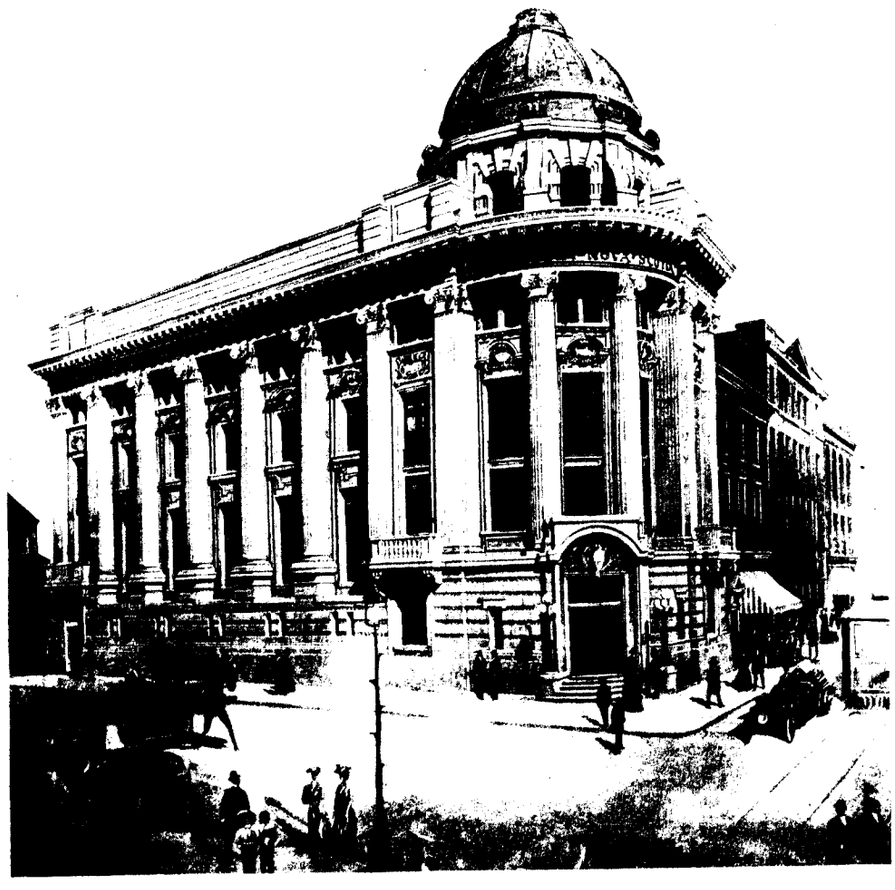

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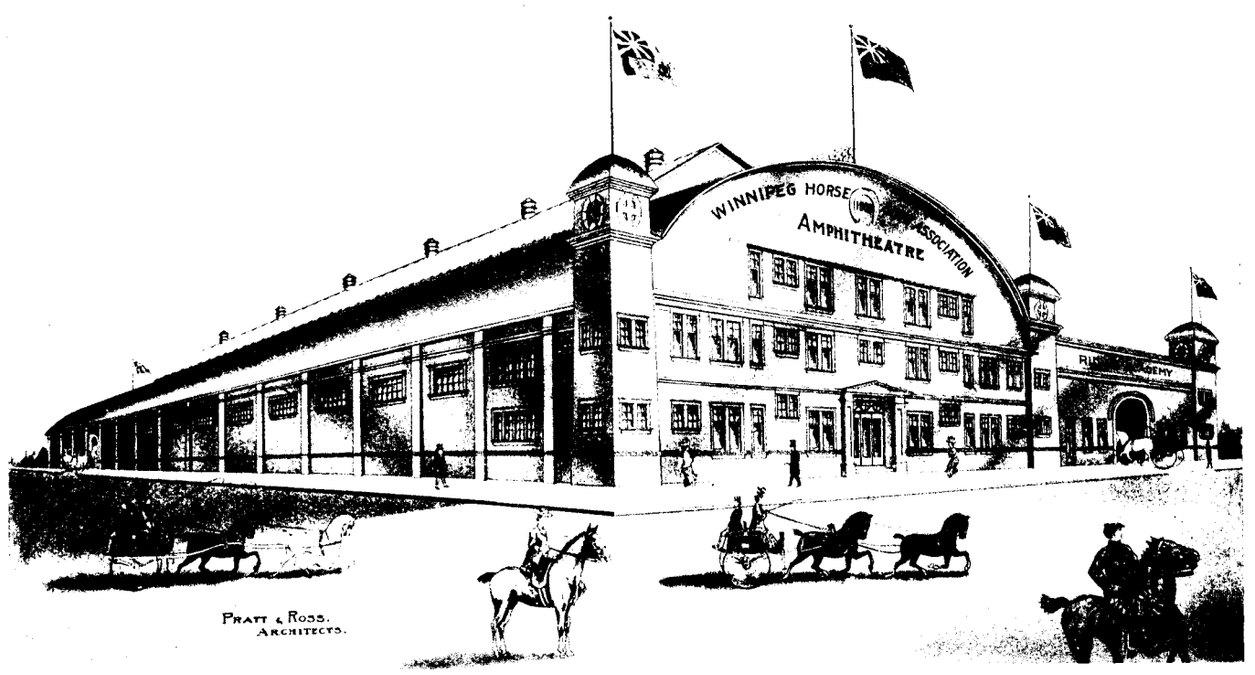

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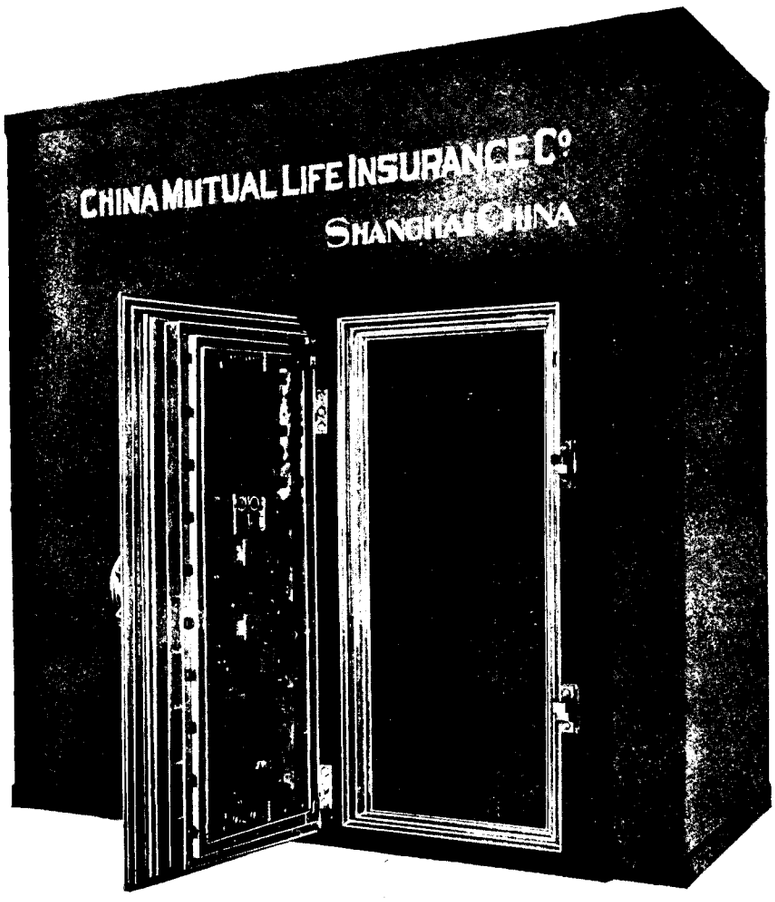

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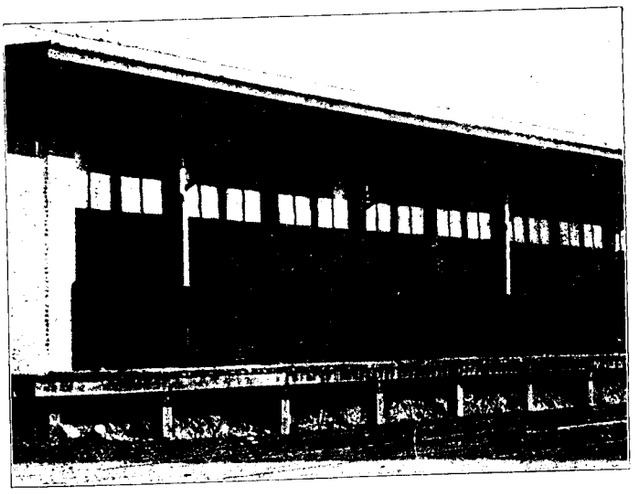

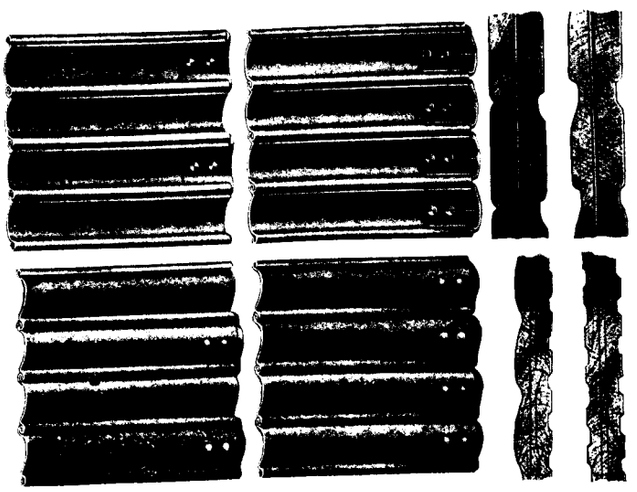

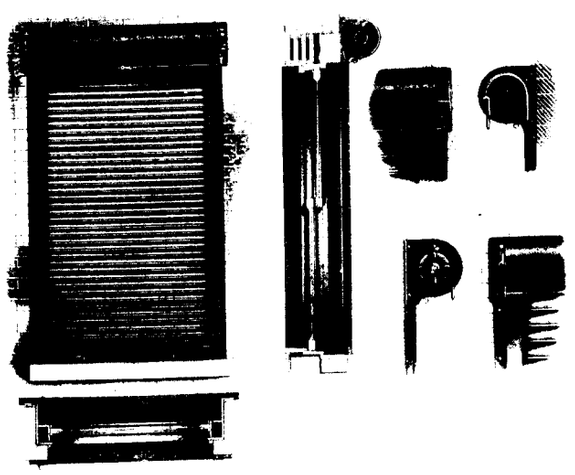

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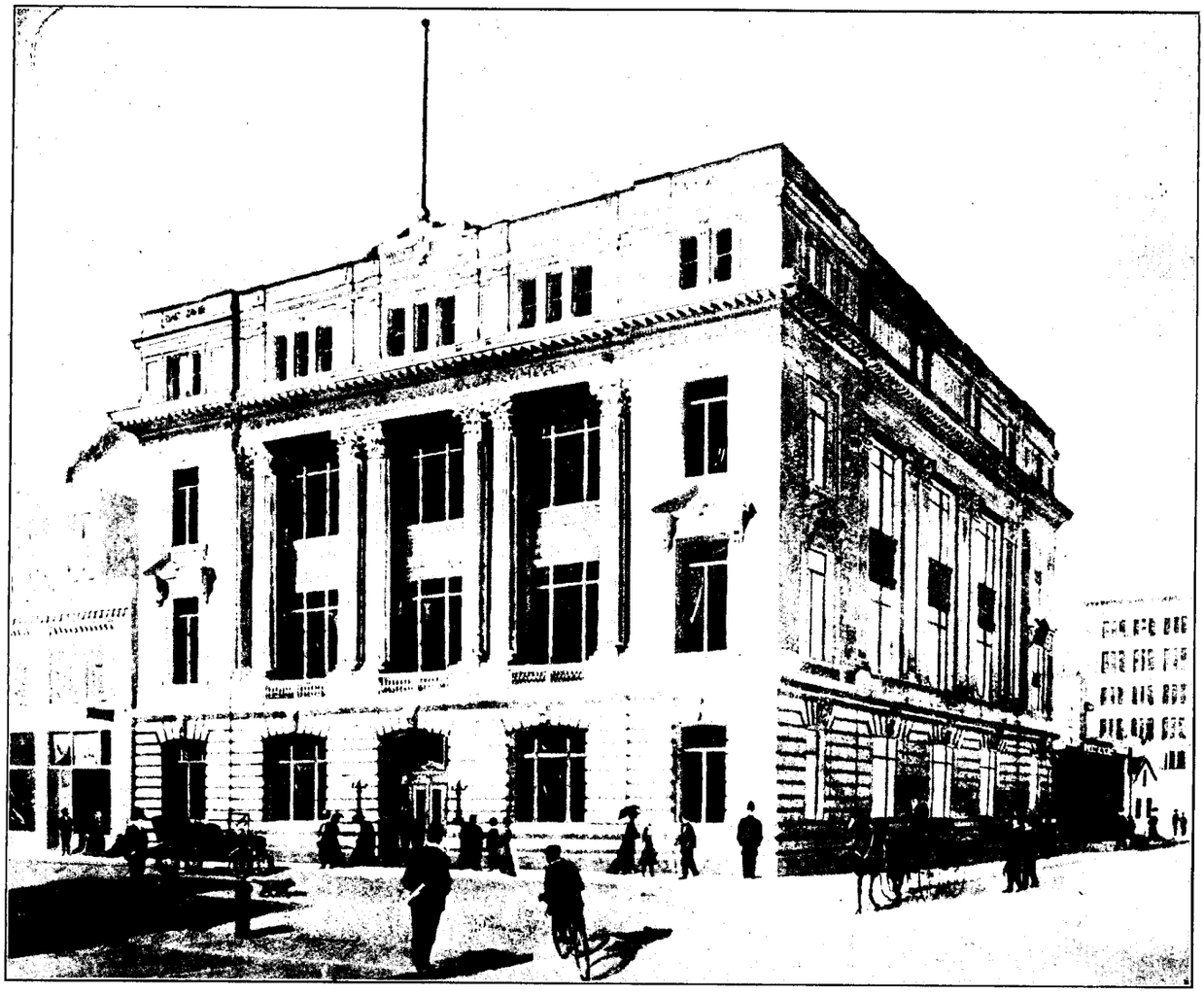

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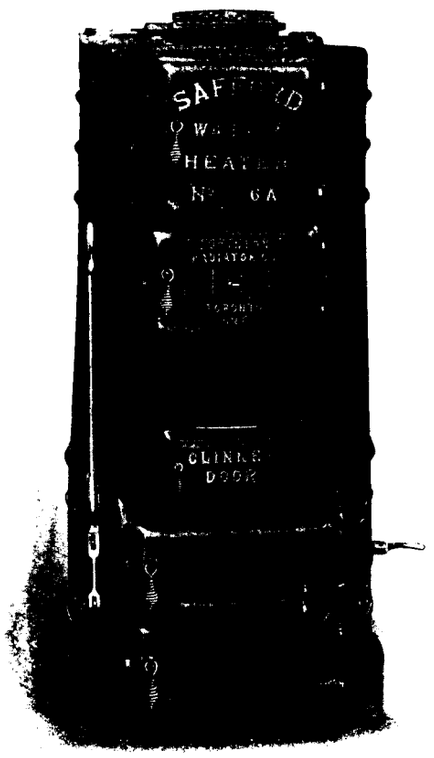

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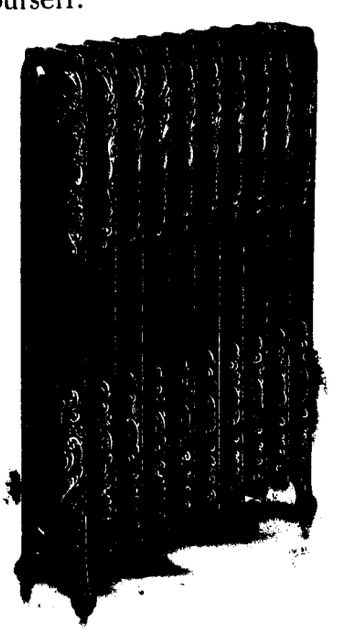

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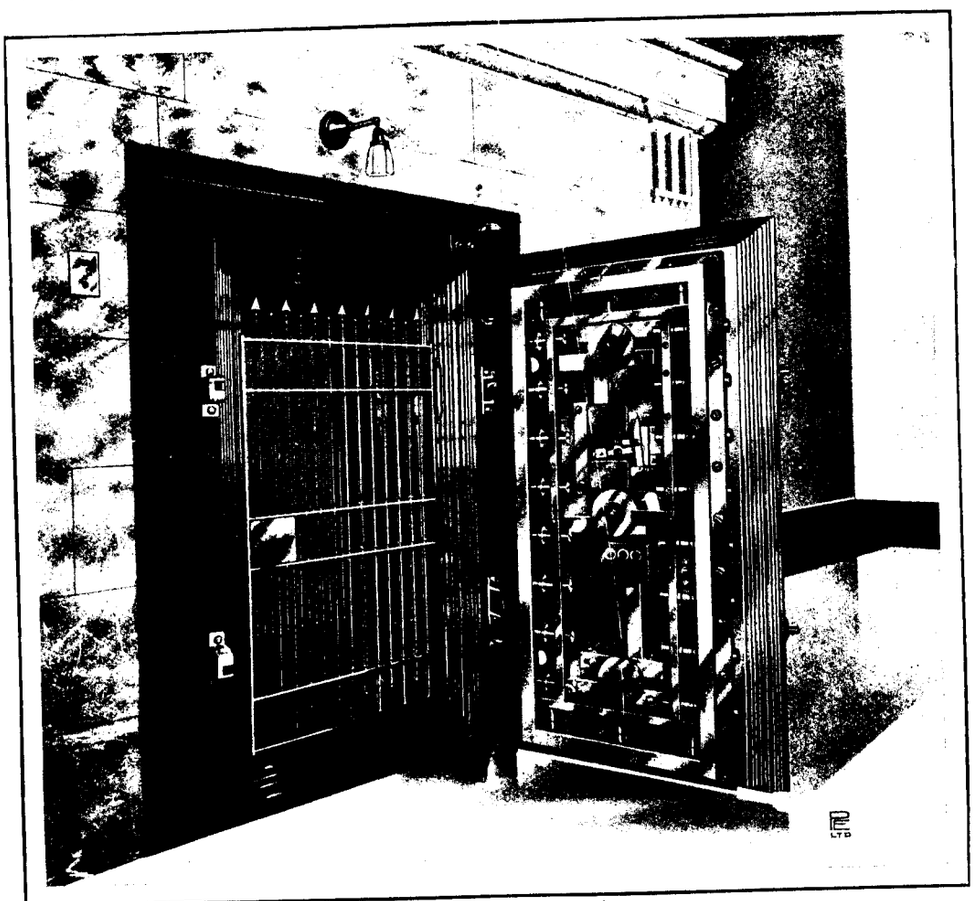

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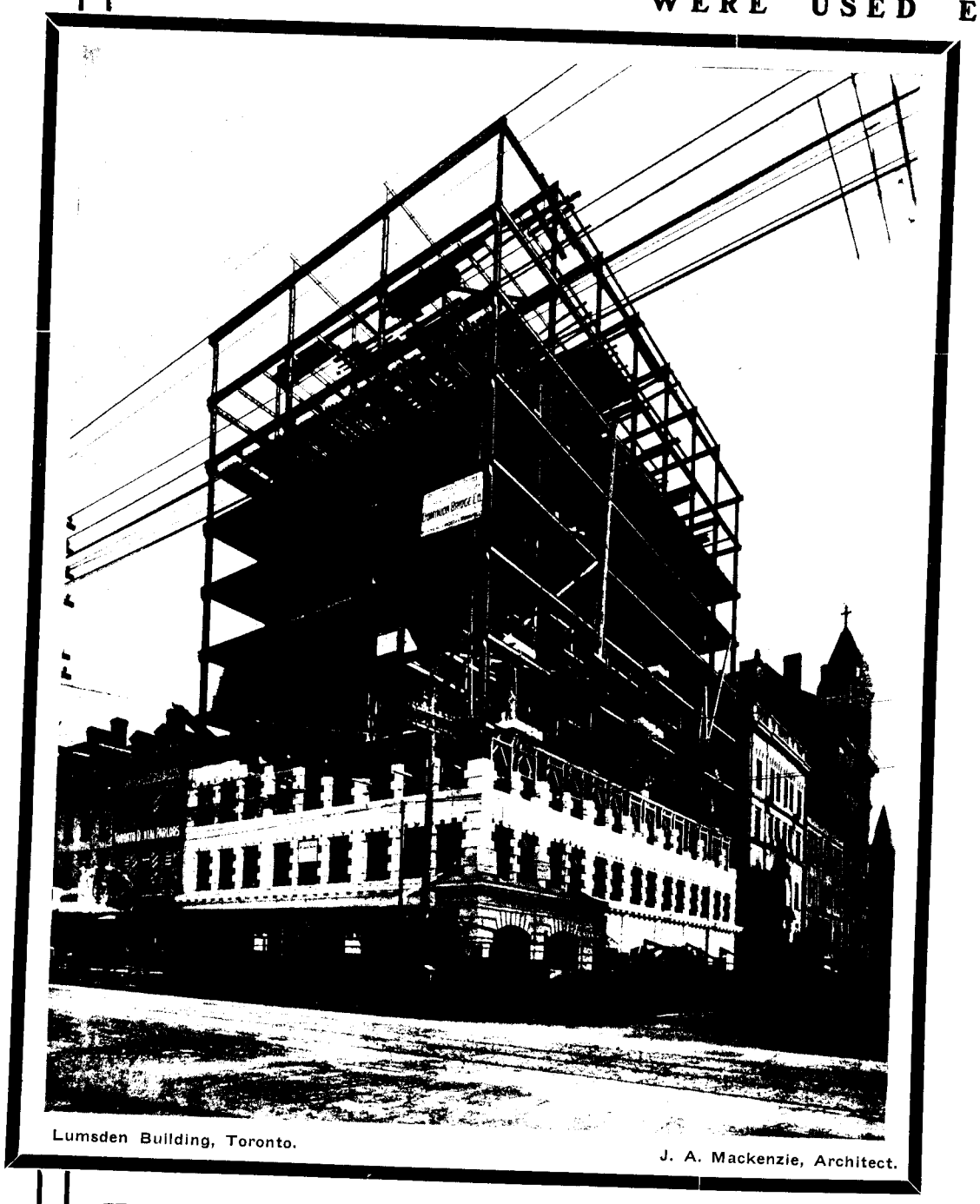

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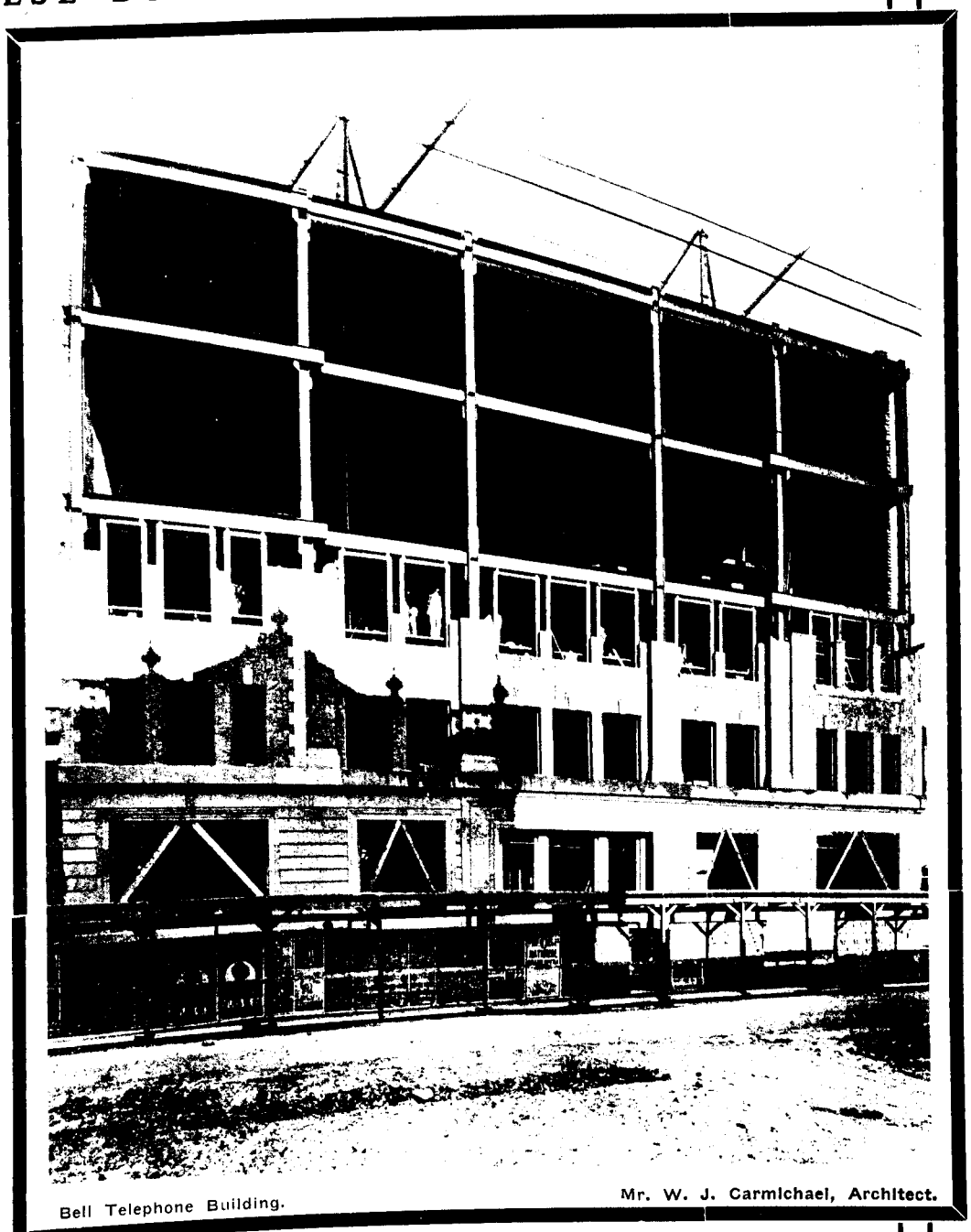

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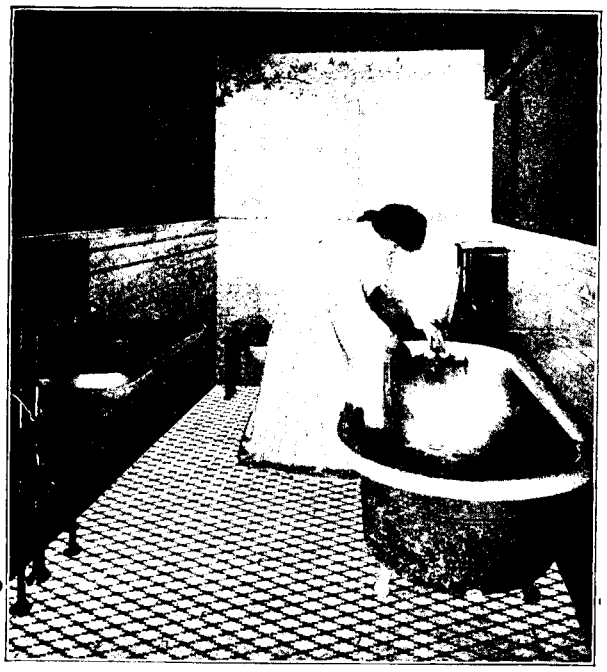

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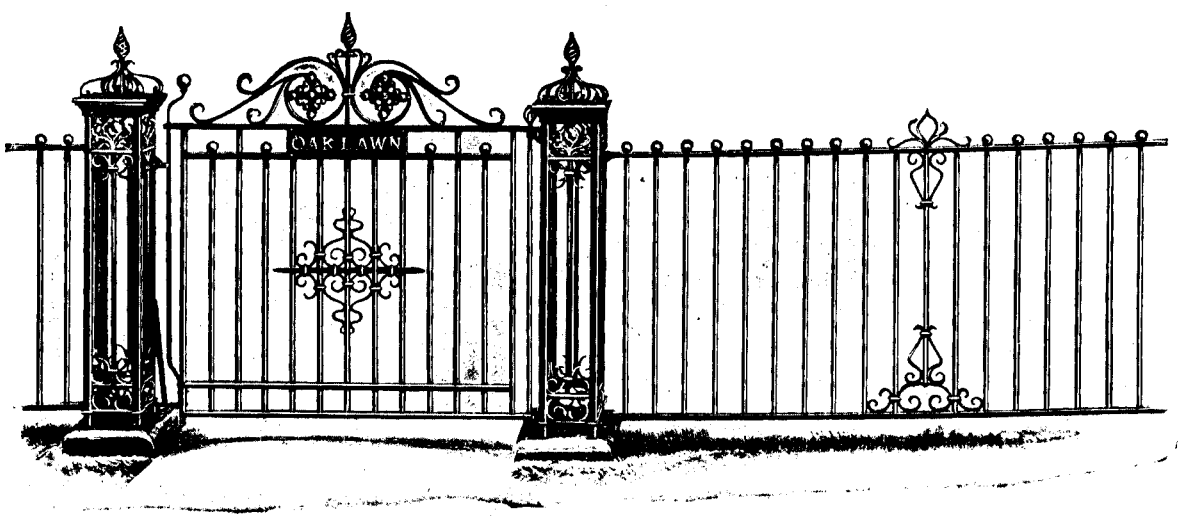

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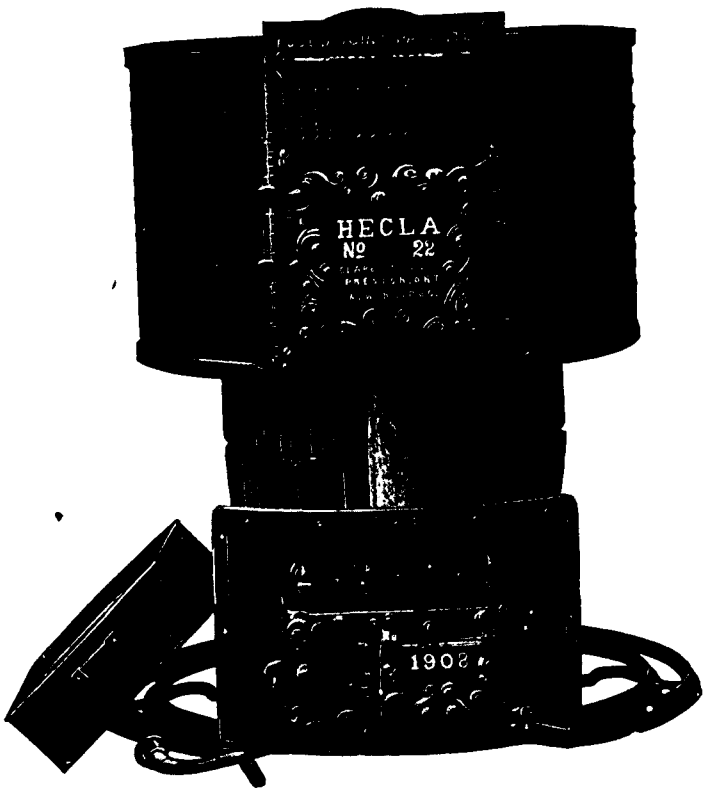

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Furnace

FOR COAL OR WOOD

The requisite for a successful Warm Air Heating System is a good furnace; one that will not only supply an abundant quantity of pure warm air, but will, in addition, be economical in the consumption of fuel, easy to operate, safe from dust and smoke, and that will give the greatest length of service. Some cheap furnaces fulfill one or more of these conditions, but the furnace you want must fulfill all. That is what the HECLA does.

"HECLA" Features

Automatic Gas Damper prevents gas puffs.
Gravity Catch locks door every time you shut it.
Double Feed Door for convenience when burning wood.
Damper Regulator enables you to operate the dampers without going to the basement.
Dust Flue carries all the dust up the chimney.
Water Pan in the best position for effective service.
Large Ash Pan with handle.
Double Tin and Asbestos Lined Case to prevent the loss of heat in the cellar.

STEEL RIBBED FIRE POTS
PATENT FUSED JOINTS
INDIVIDUAL GRATE BARS
CAST IRON COMBUSTION CHAMBER

CLARE BROS. & CO., Limited

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ICE MAKING and REFRIGERATING MACHINERY

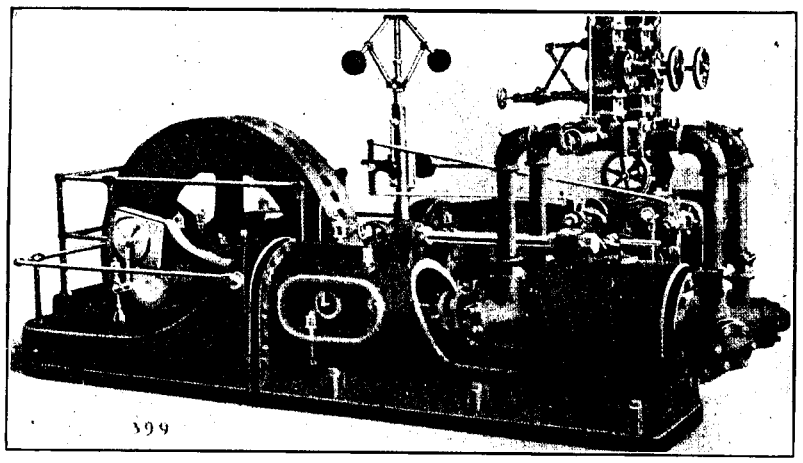
Supplied and Installed on

THE YORK MANUFACTURING CO. SYSTEMS

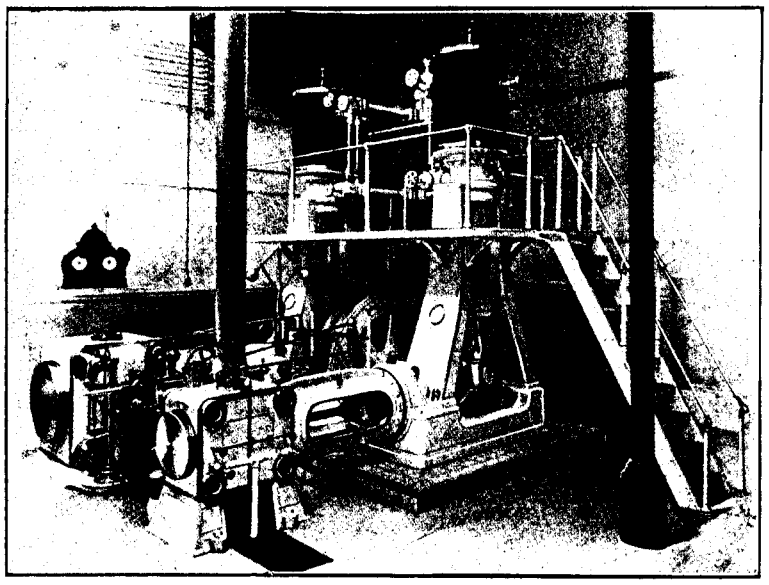
FOR

Ice-making Plants, Cold Stores, Abattoirs, Packing Houses, Breweries, Dairies, Hotels, Apartment Houses, etc.

Special Machines for Small Plants, suitable for Butchers, Dairies, Fish and Game Dealers, etc.



Horizontal Double Acting Compressor Steam Driven.



Vertical Single-Acting Compressor Driven by Compound Steam Engine.

Horizontal and Vertical Compression Plants.

Absorption Plants.

Ammonia Fittings and Supplies kept in stock.

Catalogues sent on request.

The Kent Company, Limited

REFRIGERATING ENGINEERS

425-426 Coristine Building - - - Montreal, P. Q.

NONPAREIL CORKBOARD

Manufactured by ARMSTRONG CORK CO., Pittsburgh, Pa.

—FOR—

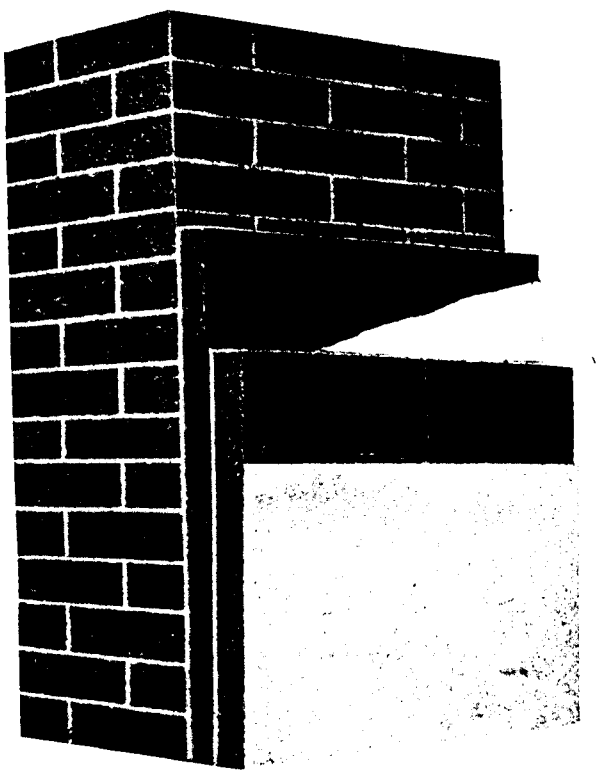
Insulating Cold Storage Warehouses, Abattoirs, Ice Plants, Breweries, Fur Storage Vaults, Dairies, Creameries, Candy Factories, Bakeries, Fish Freezers, Canneries, Freezing Tanks, Refrigerators, Etc., Etc.

NONPAREIL CORKBOARD consists of pure cork, slightly compressed, and subjected to a baking process that insures permanency of form. It is absolutely guaranteed to be 13% to 36% more efficient as a nonconductor of heat than any other insulating material.

Write for new booklet, "Heat Transmission Tests on Nonpareil Corkboard and Other Cold Storage Insulating Materials."

It is slow burning and fire retarding; the only cold storage insulating material approved by the National Board of Fire Underwriters.

It occupies little room and saves storage space.



It is strong and easily erected in any type of building.

Its cost is least in the long run.

It keeps free from rot, mold and offensive odors.

It will not absorb moisture and hence its efficiency remains constant.

NONPAREIL CORK FLOOR TILING, made of pure compressed cork, and is unequalled for ease and comfort in walking or standing, suitable for Bathrooms, Halls, Hospitals, Banks, Etc.

CANADIAN DISTRIBUTORS

THE KENT COMPANY, Limited

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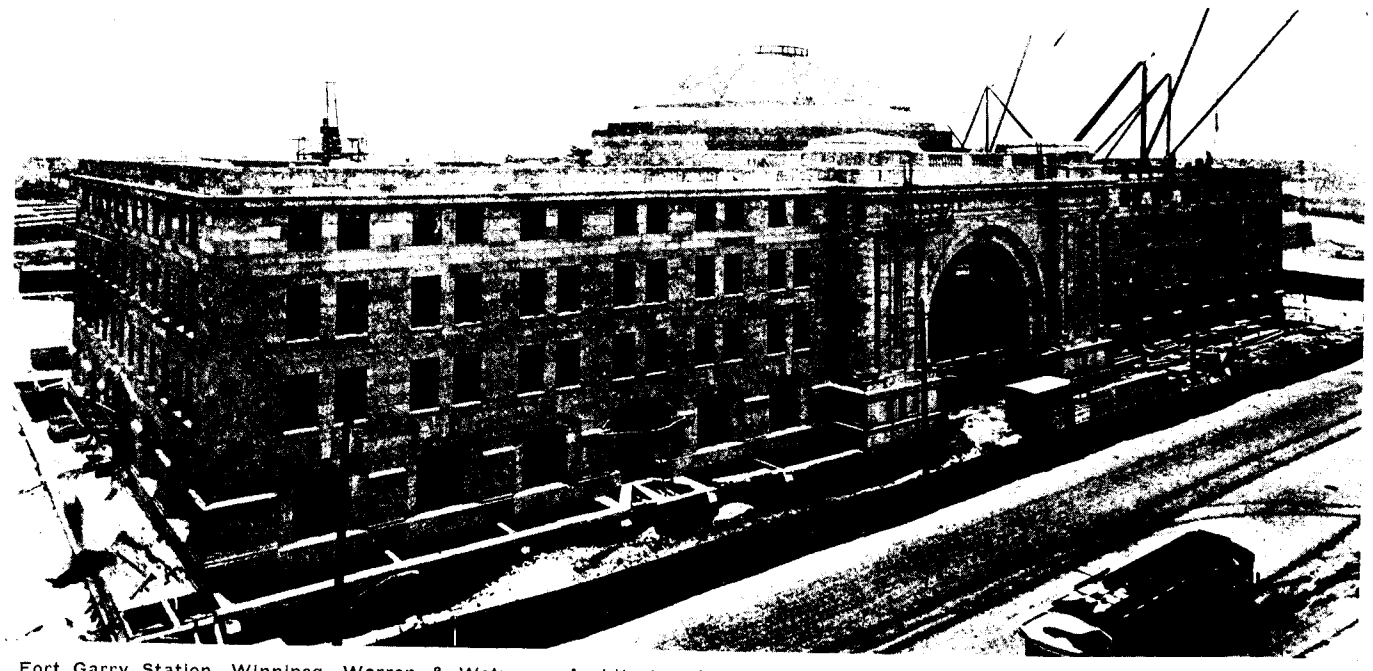
KAHN

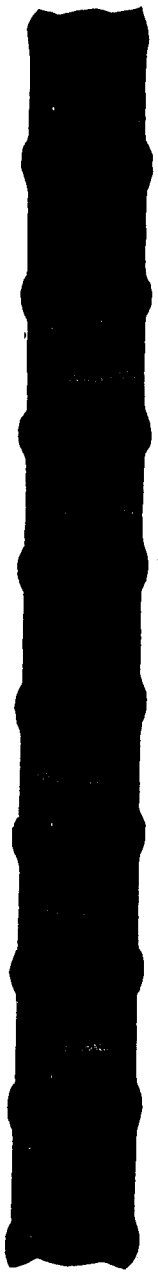
KAHN SYSTEM of **Concrete Reinforcement** has been used in



Fort Garry Station, Winnipeg, Warren & Wetmore, Architects. Lyall, Mitchell Co., Contractors. KAHN SYSTEM Reinforcement used in all concrete work.

Kenmore Apartment Block, Winnipeg, W. W. Blair, Architect. J. McDairmid, Contractor. KAHN SYSTEM Concrete Reinforcement used throughout.

Rosslyn Apartment, Winnipeg. W. W. Blair, Architect. Mills & Shepley, Contractors. KAHN SYSTEM Concrete Reinforcement used throughout.

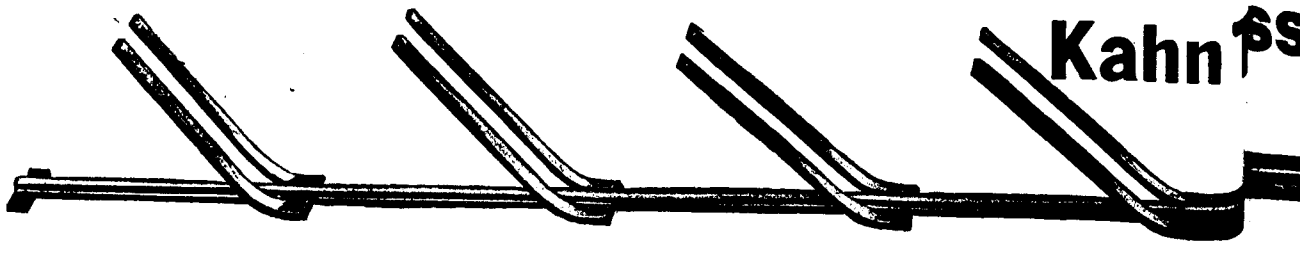


CUP BARS, from ⅜ in. to 1¼ in. area of cross section, same as square bars of like denomination, sold on immediate delivery

We originate and manufacture material to meet every requirement of Reinforced Concrete Constructio
Chemical Products. Let us know your requirements. We w

Works and Executive Office, Walkerville.

TRUSSED CONCRETE STEEL



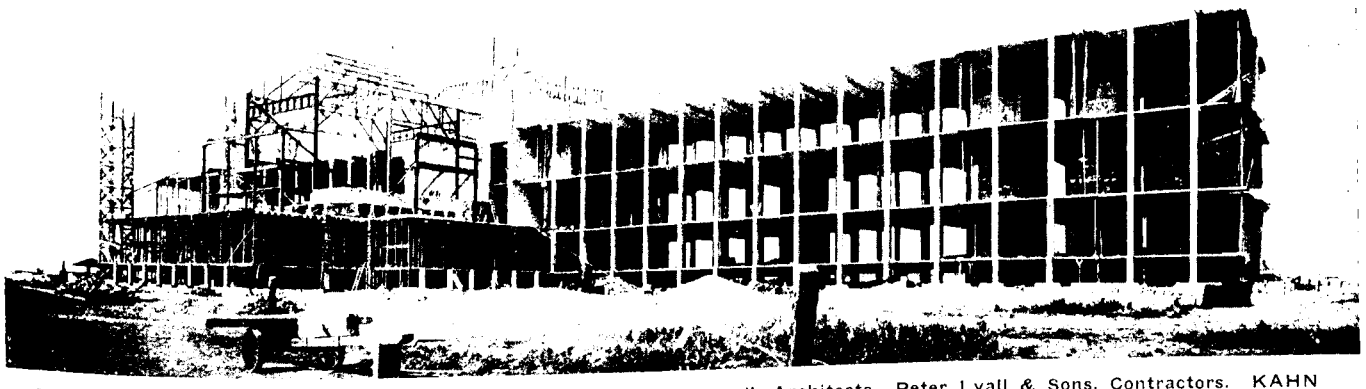
Branch Offices;

Union Bank Building, Winnipeg.

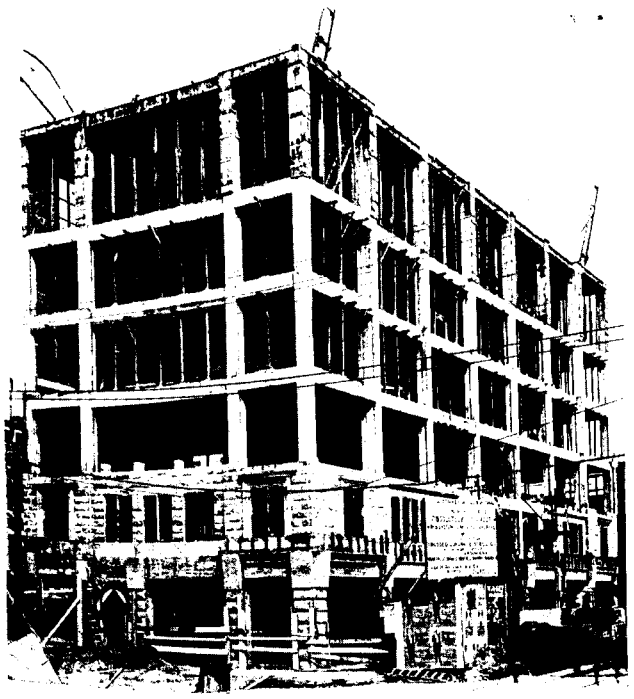
Loo Building, Vancouver.

SYSTEM

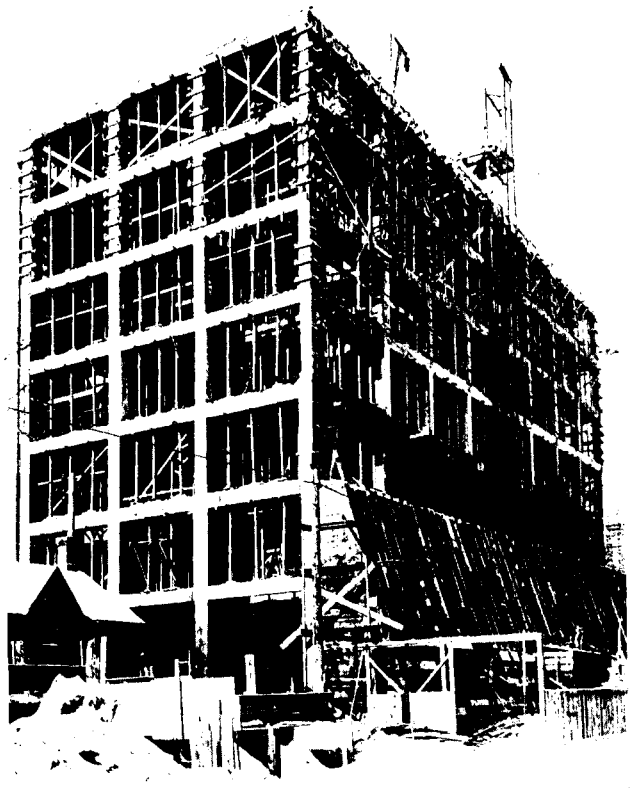
in more structures in Western Canada than all other known systems combined



Progress View, Parliament Buildings, Regina. E. & W. S. Maxwell, Architects. Peter Lyall & Sons, Contractors. KAHN SYSTEM Concrete Reinforcement used throughout.



Grain Exchange, Calgary, Hodgson & Bates, Architects. G. H. Archibald & Co., Contractors. KAHN SYSTEM Concrete Reinforcement used throughout.



Gutta Percha Rubber Co.'s New Warehouse, Winnipeg, J. D. Atchison, Architect. Lyall, Mitchell Co., Contractors. KAHN SYSTEM used throughout.

CUP BARS, from 3/8 in. to 1 1/4 in. area of cross section, same as square bars of like denomination, sold on immediate delivery

including KAHN Truss Bars, Cup Bars, Rib Metal, Hy-rib, Rib-lath, Column Hooping, Trussed Concrete cheerfully furnish Estimates, etc. Write for Catalogue.

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ROBERTSON'S MARBLE PUBLIC LAVATORIES

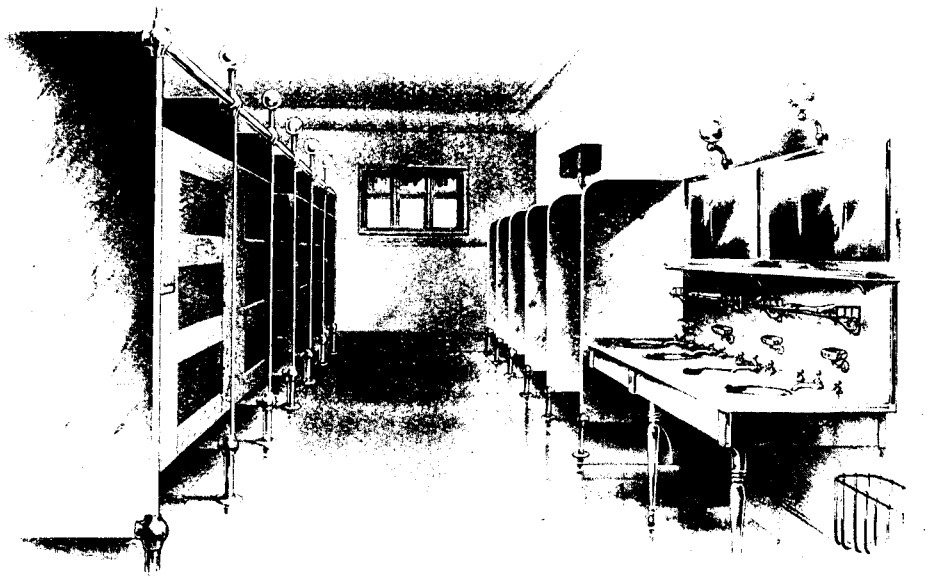


PLATE E—88.

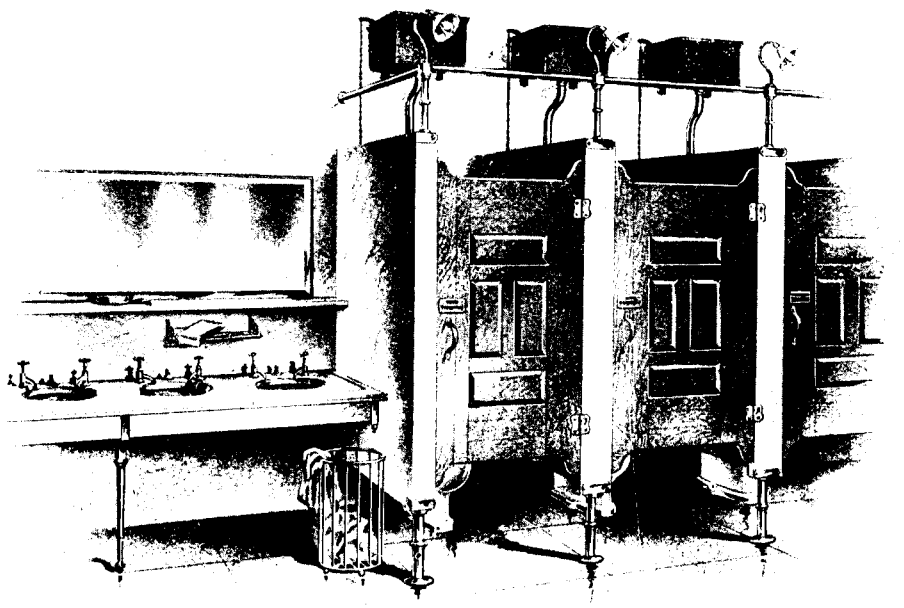


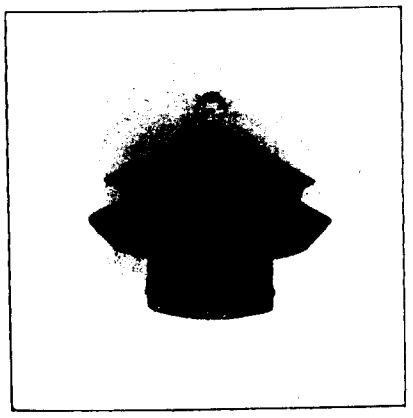
PLATE E—89

We show the above plates as suggestions for Marble Public Lavatories. Sanitary efficiency and handsome appearance are the paramount features in making these arrangements. Our facilities in marble manufacture enable us to furnish the most elaborate work at moderate figures.

Lavatories or Stalls of any kind of marble, any design or size made to order. Prices on application.

THE JAMES ROBERTSON CO., Limited

MONTREAL TORONTO WINNIPEG ST. JOHN, N.B.



Pullman Ventilating Cowl.

CONSIDER THE SCIENTIFIC PRINCIPLES

OF THE

PULLMAN SYSTEM of NATURAL VENTILATION

The Pullman System is based on Demonstrated Scientific Principles, determined by exact data gathered in a long series of actual tests.

BRIEFLY STATED—

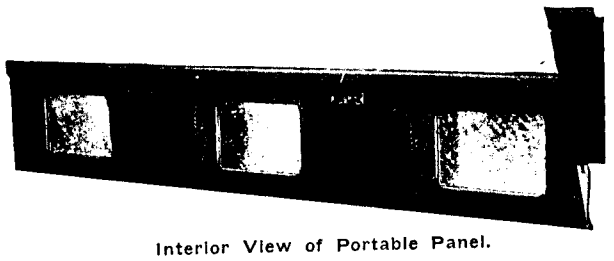
PERFECT ventilation is NATURAL ventilation—and that means a continuous supply of FRESH air (not baked or devitalized air) in exactly the RIGHT volume.

This we secure by introducing fresh air at the bottom of the lower window sash (see cut of panel), diffusing this air over the entire area of the room and exhausting the foul or vitiated air through properly spaced exhaust outlets into the atmosphere. Within the hood or exposed part of the ventilator is an angular valve which closes automatically against the wind and opens on the sheltered or low pressure side. This cuts off draughts while allowing the air to follow its natural movement.

Could any device be simpler or more reasonable?

The Pullman System is used in prominent buildings of all kinds throughout the world. Why not learn the Facts about it, and consider its adaptability to your own work?

Write for our Booklet "C."



Interior View of Portable Panel.

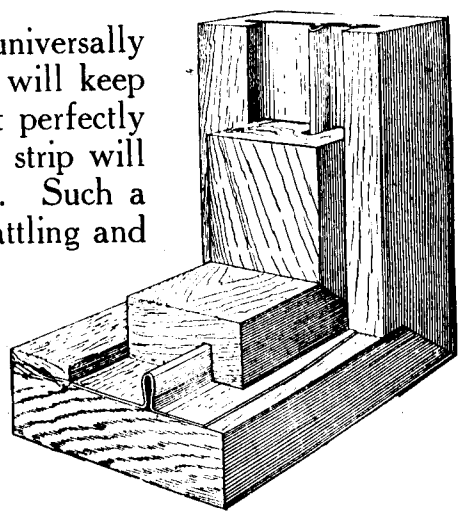
WILLIAM STEWART & COMPANY

CANADIAN AGENTS

Saturday Night Bldg., TORONTO — Board of Trade Bldg., MONTREAL

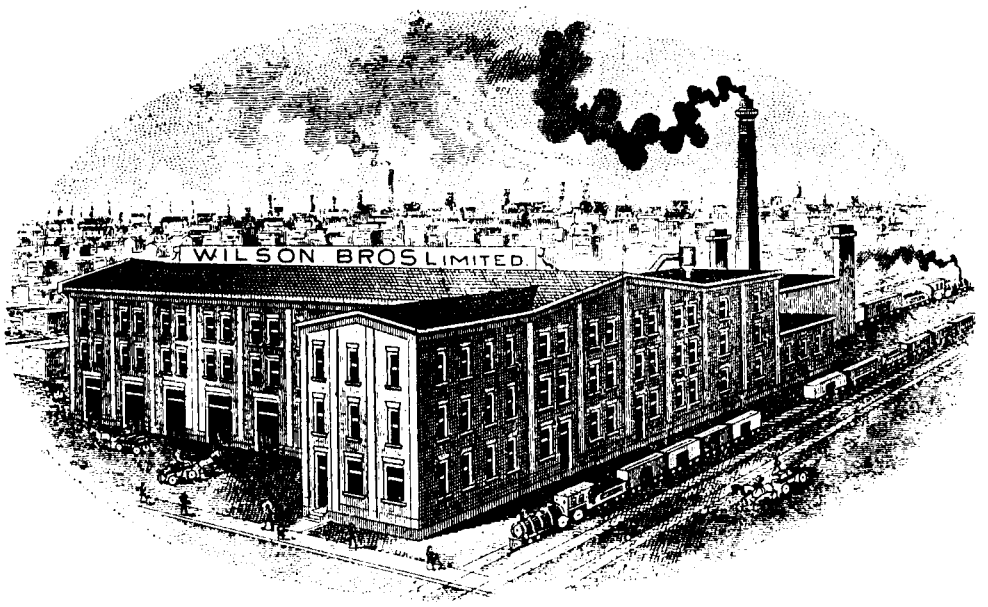
NOW—THE REMEDY

Architects, Engineers, Builders and users have universally conceded that a *Good Weather Strip properly installed* will keep out all the cold wintry air that blows through the most perfectly constructed windows. Obviously, then, such a weather strip will also keep out all dirt, dust, smoke, soot, rain and snow. Such a weather strip will also be a positive safeguard against rattling and bad fitting windows.



Why be plagued any longer with such conditions, for it matters not whether your windows be old or new, loose or tight, round or square, casement, swinging, bowed, arched or curved, *PULLMAN All-Metal Weather Strip* will forever banish these nerve-racking troubles.

USE PULLMAN WISDOM NOW.



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Wholesale and Retail Manufacturers of

Doors, Sash, Wood-turnings

INTERIOR FINISH

Hardwood and Pine Flooring

Our Flooring is Kiln Dried, Straightened, Hollow Backed, Bored, End Matched, Steel Polished and Bundled.

Our plant is one of the largest in Canada and equipped with machinery of the latest type. We obtain our raw material from the immediate neighborhood of the factory We are so situated as to provide the most excellent shipping facilities. All of these advantages enable us to produce the best material at the closest prices.

Special attention given Western business.

WILSON BROS., Limited

COLLINGWOOD ONTARIO

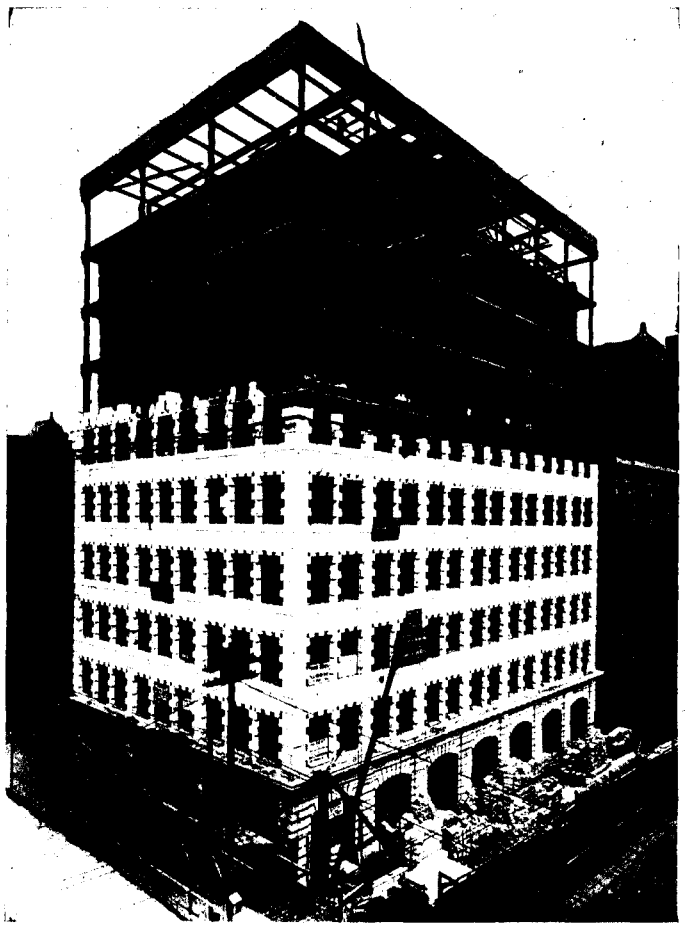
Bank of Nova Scotia, Winnipeg - Darling & Pearson, Architects

The beautiful marble interior of this building is to be finished entirely of

Missisquoi Marble

THE MISSISQUOI MARBLE CO., Limited

Philipsburg, Quebec. Coristine Building, Montreal



Lumsden Building, Adelaide and Yonge Streets, Toronto.
J. A. Mackenzie, Architect.

Roman Stone was used in the following buildings, illustrated in this number:

Norwood School ....**Edmonton**
Bank of Commerce..... "
Canada Permanent Building.....**Regina**
Bank of Commerce.....**Moose Jaw**

This Ten-Storey Building, on one of the most prominent corners in Canada, will have its two street fronts, (with the exception of the bottom storey, which is granite)

BUILT ENTIRELY OF

Roman Stone

(Trade Mark Registered)

The Stone that's the same all the way through

MADE AND SET BY

THE ROMAN STONE CO., Ltd.

100 Marlborough Avenue - TORONTO

T. A. MORRISON & CO.

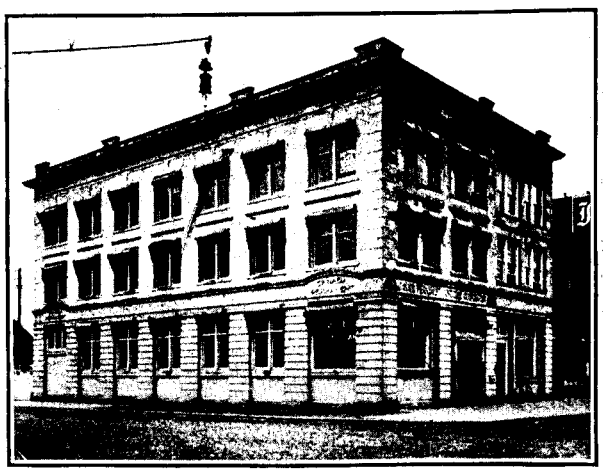
204 St. James Street - - MONTREAL
Representatives for Quebec

THE NORTHERN SUPPLY CO.

EDMONTON and CALGARY
Representatives for Alberta

S. L. BEDSON

210 New Nanton Block - - WINNIPEG
Representative for Manitoba and Saskatchewan



Canada Permanent Building, Regina.
R. J. Edwards & Saunders, Architects.

All Floors in This Building Are Reinforced Throughout With

BEATH'S TRIANGLE MESH

Some Users:

Winch Bldg., Vancouver, B.C.

Victoria Sheds, Victoria, B.C.

Petrolea Bridge Co., Petrolea, Ont.

Filtration Plant, Toronto, Ont.

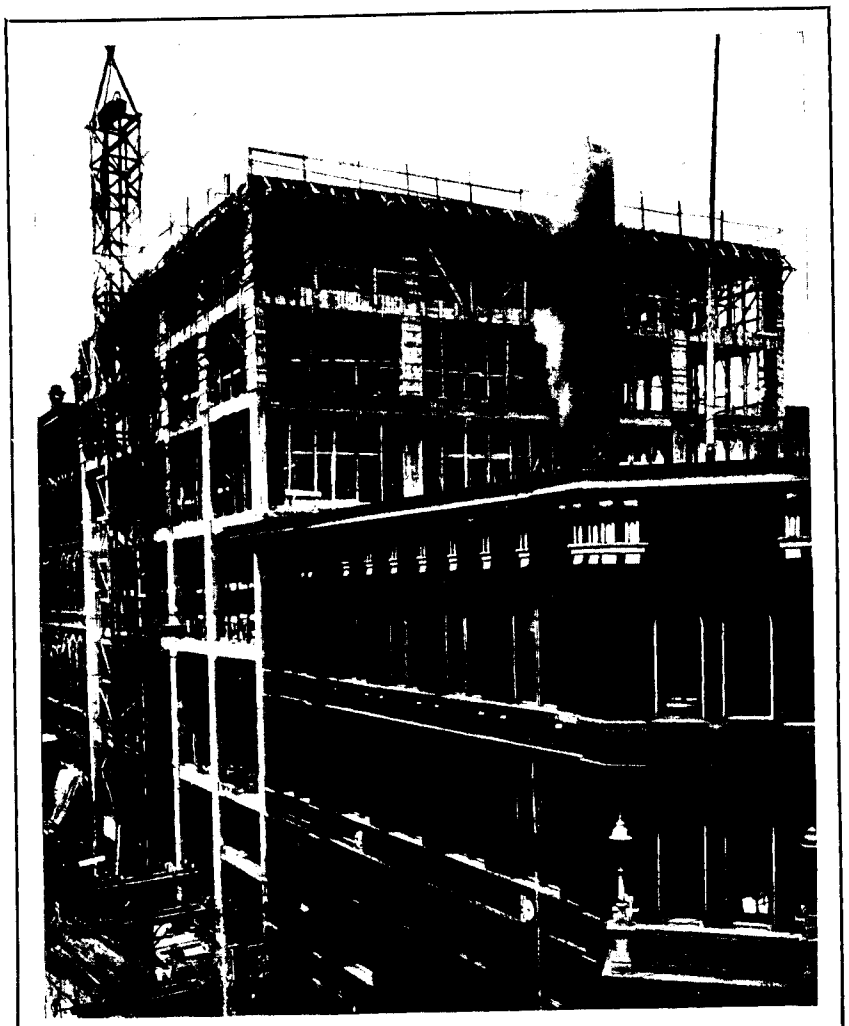
Thomas C. Watkins, Hamilton, Ont.

Halifax P.O. Halifax, N.S.

Dominion Exp. Co., Ottawa, Ont.

Erindale Power Co., West Toronto.

Dominion Concrete Co., Kempville, Ont.



Cut shows Reinforced Concrete Building under construction for the Thomas C. Watkins Departmental Store, Hamilton.

Some Users;

Joseph Vincent, Union, Ont.

Robert Simpson Co., Ltd., Toronto.

Murray Shoe Co., London, Ont.

Septic Tanks, St. Thomas, Ont.

Septic Tanks, Clinton, Ont.

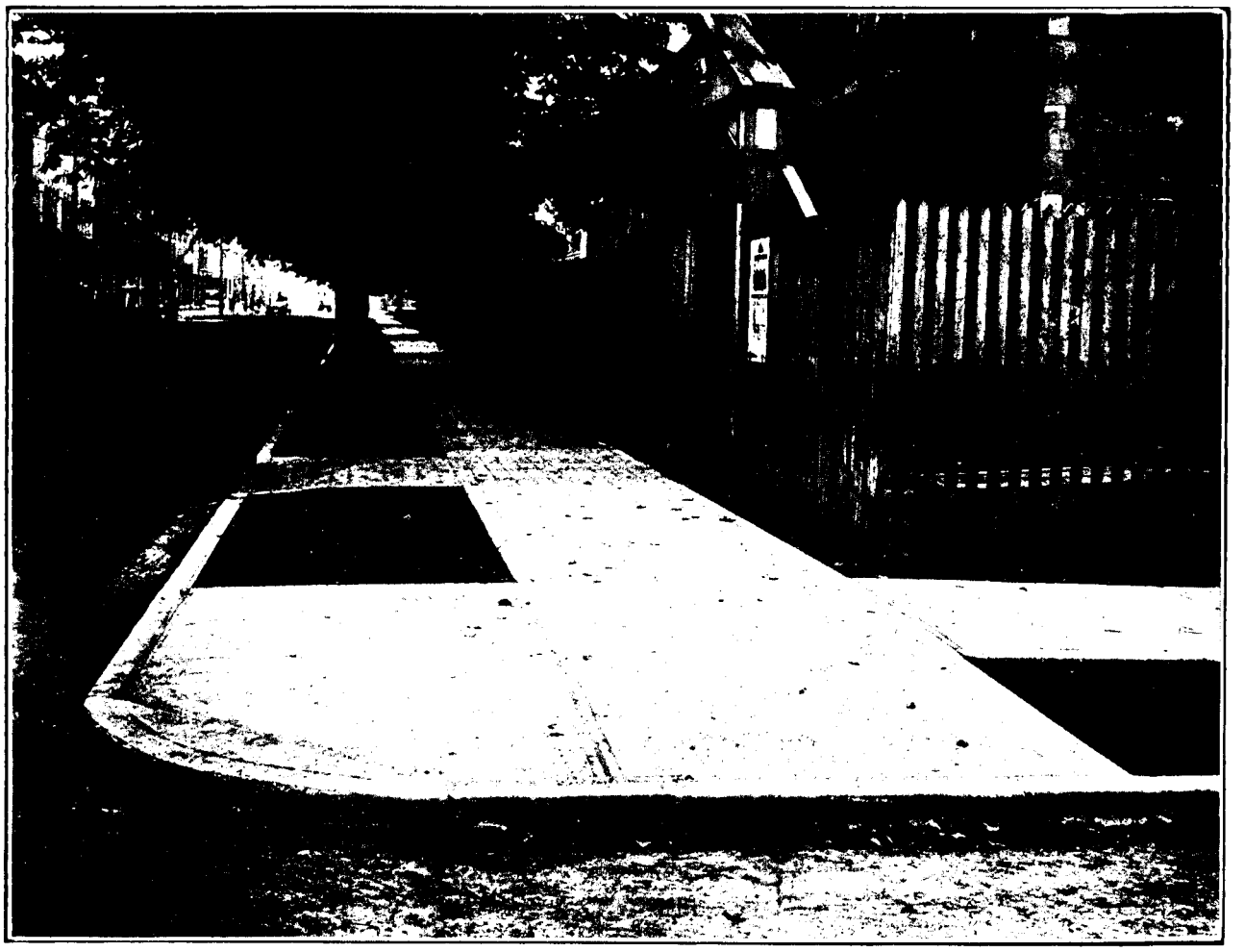
Transformer Stations at Toronto, Dundas, Niagara Falls, St. Thomas, London, Woodstock, Paris, Preston, St. Marys, Stratford, Guelph and Berlin.

This system of Concrete Reinforcement is rapidly becoming known as "The Most Satisfactory and Economical System" on the market. One million square feet of Triangle Mesh sold in Canada during 1909, its first year, attest its popularity among discriminating architects, engineers and contractors. If you are contemplating or have under construction a modern fireproof building it will pay you to investigate "The Beath System."

WE INVITE YOUR ENQUIRY

W. D. BEATH & SON, Limited

Toronto - - Canada



City of Fredericton, N.B., showing section of its fine system of pavements. Allan K. Grimmer, City Engineer; Robert S. Lowe & Co., Contractors; W. T.Chestnut & Sons, Cemert Dealers.

THE IMPORTANCE OF A GOOD PAVEMENT SYSTEM

throughout a city or town is vital to the best interests of the community.

The business and residential properties of a town are increased in value if the approach to them is made easy.

Traffic determines the value of a business premises and nowadays people refuse to pick their way along dangerous, uneven and unclean sidewalks. No section of a town, either business or residential, can afford to be without the most accessible approaches.

Fredericton, N.B., as a municipality fully appreciate these facts and are equipping themselves with the most up-to-date and serviceable system possible, knowing well that the expenditure will be fully returned in increased property value.

"VULCAN"

is the Cement that has been used throughout in these improvements, because VULCAN CEMENT is absolutely the best Cement made in Canada.

It is BEST, because—

It is made from Cement Rock, which surpasses in uniformity and composition any other cement-producing material in the world.

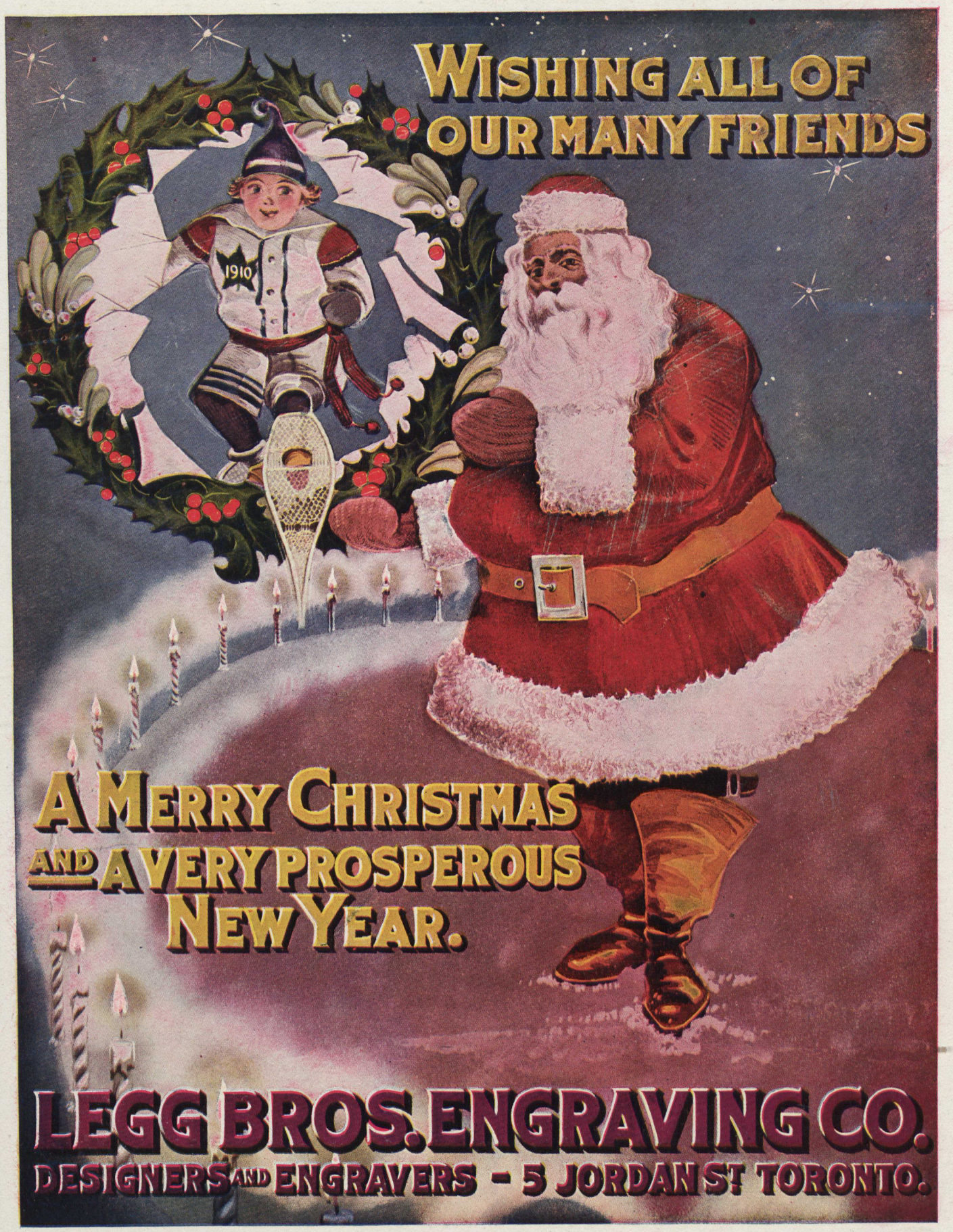
The plant in which it is manufactured is the most modern and complete in operation.

The Engineers and Chemists in charge are competent and expert.

Shipments can be made over any line entering Montreal and from our own dock on the St. Lawrence River.

WM. G. HARTRANFT CEMENT CO., Limited

Sole Selling Agents **MONTREAL, Quebec**


WISHING ALL OF
OUR MANY FRIENDS
1910
A MERRY CHRISTMAS
AND A VERY PROSPEROUS
NEW YEAR.
LEGG BROS. ENGRAVING CO.
DESIGNERS AND ENGRAVERS - 5 JORDAN ST TORONTO.

¶ The Festive Season is upon us, and we extend to our friends all the best wishes that the mind can conceive.

¶ Whether you have been a friend up to the point of our sharing your confidence and patronage, or if your friendship has only permitted you to stand off and watch our advancement, we are pleased to extend the same wishes for continued prosperity.

¶ In 1909 we introduced some new ideas into the Art of Engraving, the direct result of which has added to our long list of customers.

¶ We are upon the threshold of 1910, and no doubt you will be laying out plans for your Publicity Campaign. Are you counting us in on your designing and engraving needs?

¶ Our prices are consistent with good workmanship, but never exorbitant, speed the greatest consistent with good results, workmanship unexcelled.

¶ For sample of our work. The engraving in this number is the product of our house and is the kind that we are delivering every day.

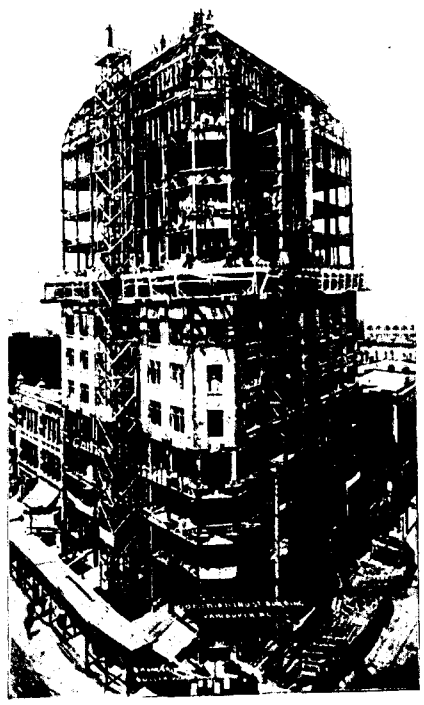
Remember Your Printing Plate Needs
can be Supplied by The House of Design
Destinctions and Engraving Exeellence

LEGG BROS. ENGRAVING CO.

5 JORDAN STREET TORONTO, CANADA

New Dominion Trust Building

VANCOUVER, B.C.



Building in course of erection Sept. 1st, 1909. Mr. Jno. S. Helyer, Architect, Vancouver, B. C.

The Dominion Trust Building is the largest office building in Canada, west of Toronto, and one of the finest in the Dominion.

The **Ornamental Iron** was made by us, comprising :

Iron Staircases
Elevator Enclosures (4)
Iron Grills and Railings
Brass Railings
Ornate and Massive Cast Iron Front Entrance (Duplex Copper Plated)
Fire Escapes, etc.

Some of the Western Banking Offices for which we have recently furnished Metal Railings and Loges:

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Bank of Hamilton, Vancouver.
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Canadian Bank of Commerce, Edmonton.
Canadian Bank of Commerce, Calgary.
Canadian Bank of Commerce, Saskatoon.
Canadian Bank of Commerce, Regina.
Canadian Bank of Commerce, Wetaskiwin.
Canadian Bank of Commerce, Moose Jaw.
Dominion Bank, Fort William.

Fire Escapes and Iron Work:

Flanagan Hotel, Saskatoon.

Ornamental Iron:

Winch B'lding, Vancouver.

Iron Stairs and Elevator Enclosures:

Carter-Cotton Building, Vancouver.

Ornamental Entrance Gates:

Provincial Government Buildings, New Westminster, B.C.

Some Other Recent Ornamental Iron Contracts:

Caisse d'Economie, Quebec.
St. Rock Public Building, Quebec.
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Crescent Turkish Bath Buildings, Montreal.
Jacob A. Jacobs Departmental Stores, Montreal.
St. Henri College, Montreal.
T. Eaton Co., Limited, Toronto.
Dale Presbyterian Church, Toronto.
J. C. Eaton, Esq., Residence, Toronto.
Smallman & Ingram, New Departmental Store, London.
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House of Providence, Kingston, Ont.
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We are equipped for supplying **Ornamental Iron and Bronze** for the largest and best class of buildings.

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"QUEEN'S HEAD" Famous the world over for its working qualities, bright finish, and flatness. Will outwear any other brand.

"FLEUR DE LIS" Thoroughly galvanized, and easy to work. Superior to any sheet except "QUEEN'S HEAD."

"REDCLIFFE" The most popular Corrugating Sheet in Canada. Well finished, soft and uniform in weight.

Also **BLACK SHEETS** of superior quality.

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We are equipped to undertake contracts for Plumbing, Heating and Ventilating, in any part of Canada, and have to our credit some of the finest and most satisfactory systems that are installed in the Dominion. Do not close your heating or plumbing contract without consulting us.

Our Engineering Department is at your service, and will provide you with valuable advice, free.

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Ashbury College, Rockliffe. Weeks & Keefer, Architects.

Tuberculosis Hospital, Merivale Road. Weeks & Keefer, Architects.

Ottawa Separate School, O'Meara Avenue. C. P. Meredith, Architect.

Ottawa Separate School, Armstrong Avenue. C. P. Meredith, Architect.

Canada Life Building, Sparks Street. Weeks & Keefer, Architects.

Wilton Apartments, Laurier Avenue West. Weeks & Keefer, Architects.

Fire and Police Station, Exhibition Grounds. W. E. Noffke, Architect.

Museum Building, Experimental Farm. Dominion Government. Doran & Devlin, General Contractors.

General Supply Co., Large Warehouse, Sparks Street. W. E. Noffke, Architect.

Fuel Testing Plant, Division Street. Dominion Government. Doran & Devlin, General Contractors.

Fire Station, Sussex and John Street. M. C. Edey, Architect.

R. Gordon C. Edwards, Esq., Residence, McKay Street.

James Ker, Esq., Residence, Rockliffe. Weeks & Keefer, Architects.

And several other large Private Residences, Shops, and Overhauling Jobs.

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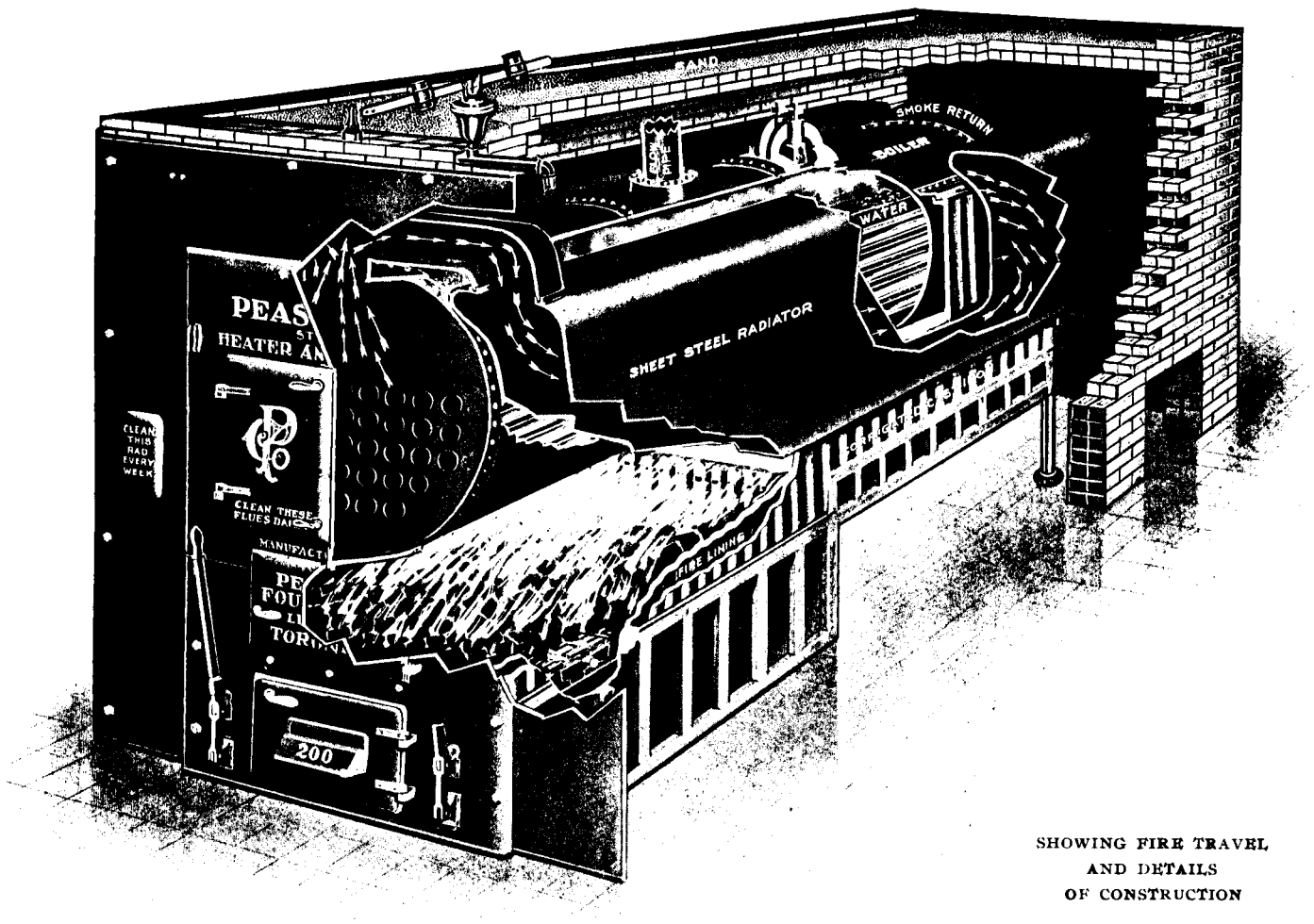
Pease Economy Steam Heater and Ventilator

For Heating and Ventilating Schools, Churches, Stores, and other large buildings where it is desired to HEAT BY DIRECT STEAM SURFACES, and at the same time furnish large volumes of FRESH TEMPERED AIR for VENTILATION at NO ADDITIONAL FUEL COST. Can be operated on gravity principle or with fan.



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AND DETAILS
OF CONSTRUCTION

A few of the cities and towns in which these heaters are doing excellent service in heating and ventilating school buildings at moderate fuel cost:

ONTARIO: Barrie, Brampton, East Toronto, Guelph, Kemptville, London, Midland, Mimico, Mount Denis, Oshawa, Peterboro, Picton, Preston, Sault Ste. Marie, Sterling, Waterloo, Weston, York.

NORTH-WEST PROVINCES: Battleford, Calgary, Carlyle, Davidson, Edmonton, Killarney, Lacombe, Lethbridge, Melita, Moose Jaw, Olds, Prince Albert, Rapid City, Red Deer, Regina, Rosthern, Saskatoon, Selkirk, Strathcona, Vermillion, Dauphin, Raymond, McGrath, McLeod, Medicine Hat, Fernie, Cranbrook, Vernon.

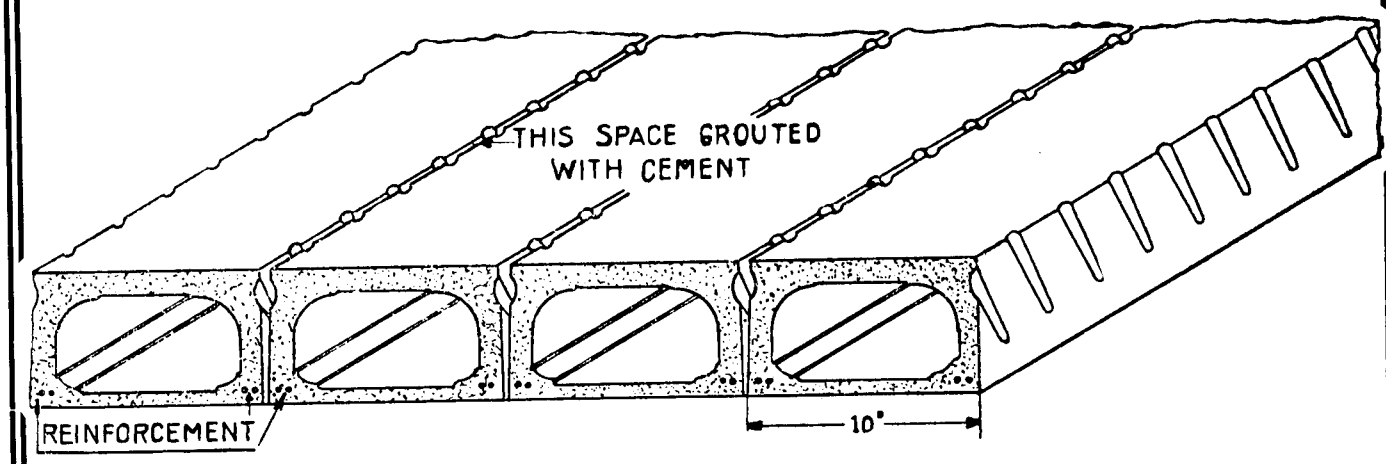
WRITE TO-DAY FOR DETAIL INFORMATION.

WESTERN SALES OFFICE:

PEASE-WALDON CO. LIMITED

WINNIPEG, CAN.

THE SIEGWART FIREPROOF FLOOR



VIEW SHOWING SECTION OF FLOOR.

Depth in inches		Weight per sq. ft in lbs.		Span in feet for various floor loads in lbs. per sq. ft.				
S. B.	Slab	S. B.	Slab	50	100	150	200	250
7"		45.8		15.6'	12.4'	10.7'	9.6'	
	8"		97.2	13.5'	11.7'	10.5'	9.5'	
8¼"		54.1			15-2'	13.1'	11.7'	10.7'
	10"		121.5		13.9'	12.6'	11.5'	10.7'
9"		71.6			17.1'	15.0'	13.5'	12.5'
	12"		145.7		16.3'	14.8'	13.7'	12.8'

SOME ADVANTAGES OF THE SIEGWART SYSTEM

(1) Great lightness; (2) low first cost; (3) rapidity of erection; (4) economy of erection as no forms are necessary; (5) placing into position independent of weather or temperature conditions; (6) uniformity in quality, inherent to any manufactured product; (7) high fire resisting qualities; (8) sound proof and bad conductor of temperature due to presence of air spaces; (9) no centering required; (10) a strong floor provided for working immediately upon laying beams; (11) floor is erected when perfectly dry, and brings no dampness to building, hence, floors and ceilings may be finished at once; (12) adaptation to all circumstances, easy to cut holes and apply fixtures; (13) only machine mixed concrete is used; (14) method of manufacture insures proper position of reinforcement.

THE Siegwart Floor can be briefly described as a reinforced concrete floor, quickly placed in position without centering, absolutely set and dry and hence, ready to take the load at once, while the handling for erection is reduced to a minimum. Being provided with hollow spaces, the Siegwart Floor is a bad conductor of sound and temperature.

The floor consists of hollow beams made of concrete, with steel rods imbedded therein. These beams are made in workshops, and sent to their destination in an absolutely dry and mature condition. They are placed on their supports close together and after the narrow space between is grouted, form a floor ready to bear the full load and perfectly serviceable for other building operations, as well as to receive any desired floor finish. Pipes or electric conduits can be placed inside the beams if desired.

The design of floors is based upon scientific principles, to give the greatest possible bearing capacity with the least possible dead weight. The concrete being machine mixed is of great uniformity, and the method of manufacture insures the proper location of the reinforcement.

The beams are made of a uniform width of 10½ inches and of the following depths, viz.: 4, 5, 6, 7 and 8¼ inches, while the strength of the reinforcement is made to suit the span and load to be carried.

Siegwart beams are made for all spans up to 20 ft., the usual lengths being 10 to 16 ft.

MANUFACTURED BY

The Canadian Siegwart Beam Company, Limited

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A LACQUER-ENAMEL OF QUITE UNIQUE PROPERTIES

Glossy or Flat (Dull), White and all Colours, for both Interior and Exterior Work.

For Painting Walls, Doors, Woodwork, Ceilings and Outsides of Houses, Hospitals and Institutions, Also for Railway Coaches, Locomotives, Tramcars, Steamers and Yachts.

The Advantages of PARIPAN

FOR HOUSES.

Applied with a brush in the usual way, Paripan forms the most artistic, durable and washable surface possible.

Over twenty years' practical use proves that Paripan will last in perfect condition for ten years and upwards and "the more you wash it, the better it looks" is literally true.

Nearly all the trouble of re-painting and annual cleaning is done away with.

Paripan, by reason of its durability, costs far less than ordinary paint.

Paripan Glossy gives a surface like glass, the Flat (dull), a delicate, dull silk-like effect—both perfectly washable.

FOR HOSPITALS.

Paripan for walls and ceilings of wards, corridors and operating theatres furnishes a surface far superior to glazed tiles at a mere fraction of their cost.

Paripan may be washed with soap and water or the usual disinfectants and lasts for years. The London Hospital has about Fourteen Acres of Paripan work and has proved that this enamel is cheaper than even distemper.

Paripan is largely employed for the painting of radiators and hot water pipes.

FOR RAILWAY COACHES, ETC.

The Paripan method of painting produces a finer and more durable effect than the usual treatment, with a less number of coats.

It means a very large saving in maintenance charges and a great increase in efficiency.

Paripan stands all climatic conditions perfectly. After washing and leathering in the usual way, it always comes up fresh and new.

No varnish is required.

Architects, Surveyors, Engineers, Railway Companies, and all interested in Paripan are cordially invited to send for our Illustrated Book with Color Chart, prices and "Opinions," mailed free by return. We will gladly answer any special queries and send samples for trial.

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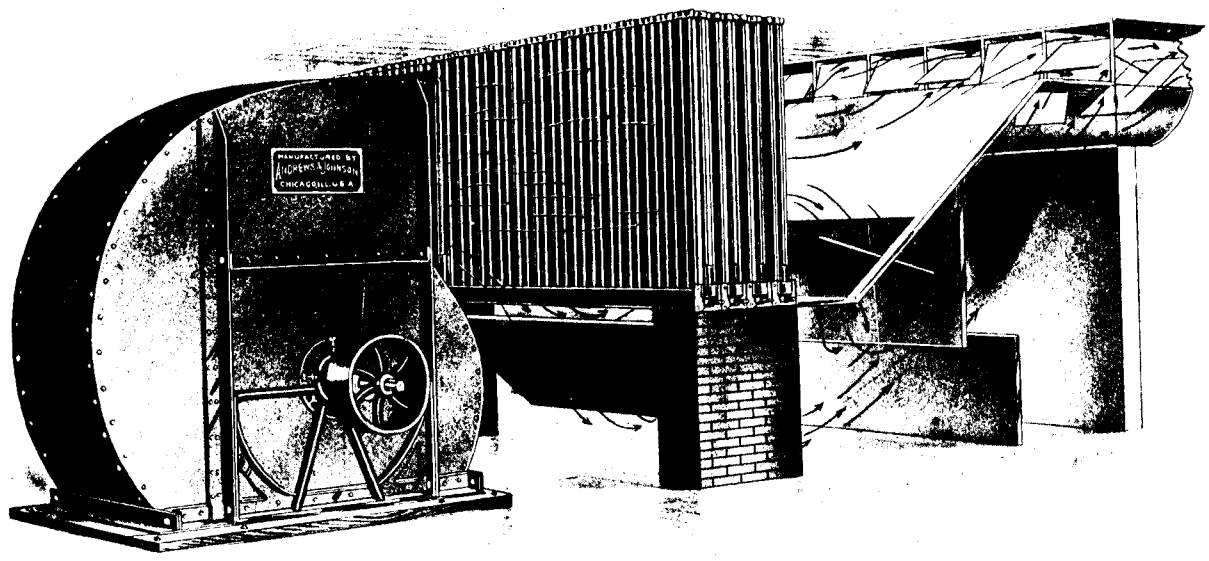
Heating and Ventilating Systems



Plenum Chamber, showing blower, coils, heater and mixing dampers.

Effective heating and ventilating systems depend as much on the installation as the kind and quality of the material.

The plant must be carefully designed and properly proportioned to suit the requirements of the building.

This is the work of an expert and the Architect looking for good work will suit his own and his clients' interests when he entrusts work of such importance only to those who know how to install as well as design a system that will be at once economical as well as effective in operation.

We take contracts for heating and ventilating buildings of all descriptions, guaranteeing a regular and proper quantity of air for heating and ventilating, free from drafts and unpleasant air currents, and so arranged that the temperature of any part of the building will not vary more than one or two degrees from the normal.

The systems we employ provide for the use of all waste heat from the engines and can be used at or below atmospheric pressure.

Let us have your plans. We can design a system that will be satisfactory and will save you money.

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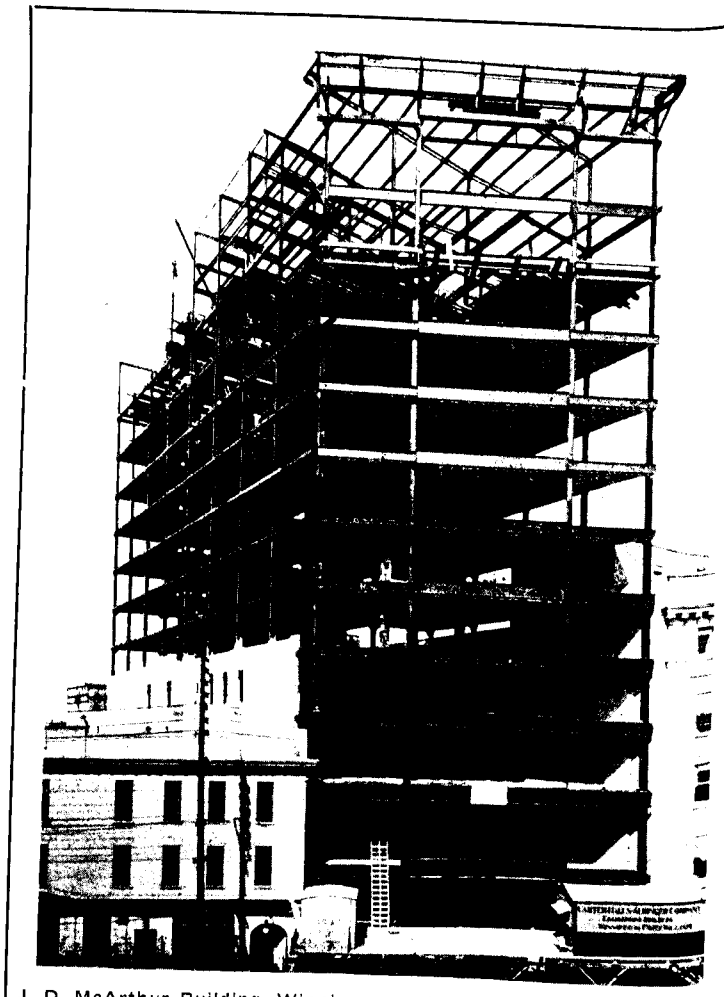
A few of the many buildings in Western Canada i w

Union Bank Building, Winnipeg. Darling & Pearson, Architects.



J. D. McArthur Building, Winnipeg. J. H. G. Russell, Architect.

FROM the simplest hoist operated by hand to the most comprehensive elevator equipment, embracing in one instance over 40 elevators in a single building, we are prepared to successfully cope with any elevator problem. We manufacture and install dumb waiters, escalators (moving stairways), hoists for mines, docks, warehouses, building operations, blast furnaces, etc., whip hoists, inclined railways, gravity conveyors, etc.

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EVATORS

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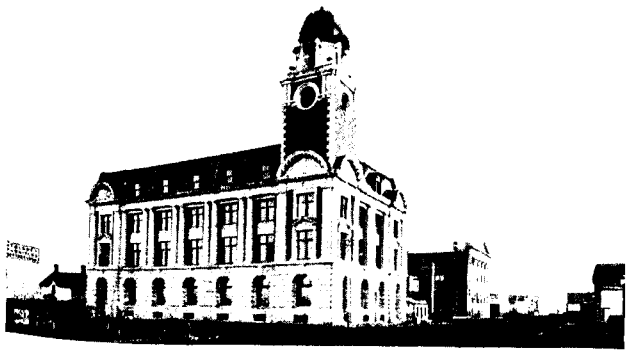
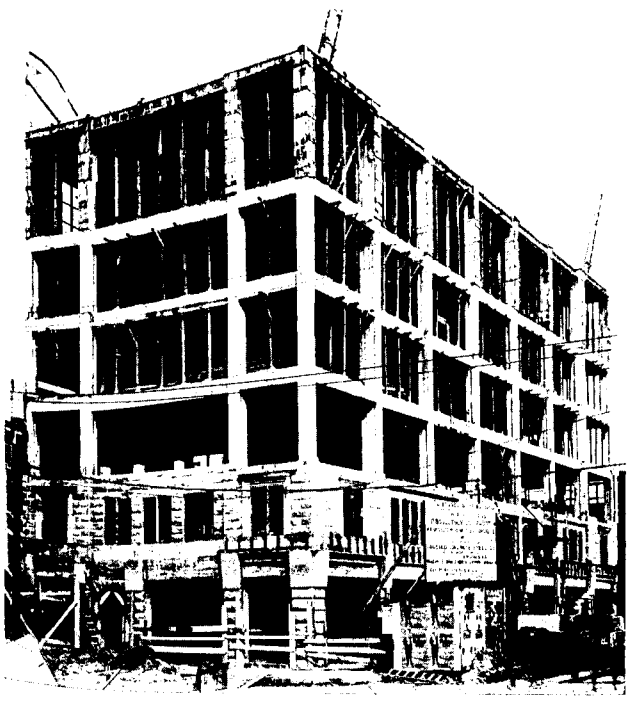
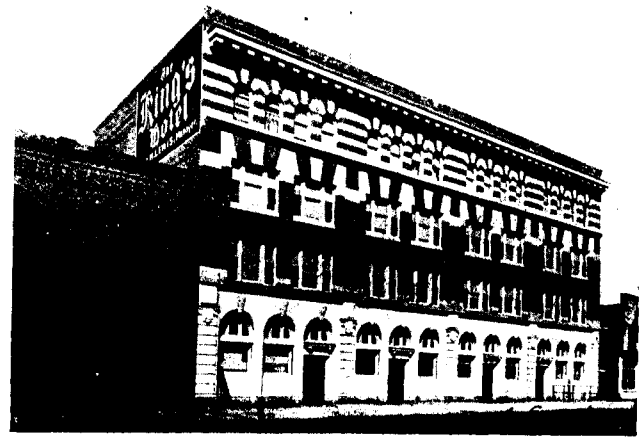


Post Office, Edmonton. David Ewart, Architect.



Grain Exchange, Calgary. Hodgson & Bates, Architects.



King's Hotel, Regina. Storey & Van Egmond, Architects.

Drinkle Block, Saskatoon. W. W. La Chance, Architect.

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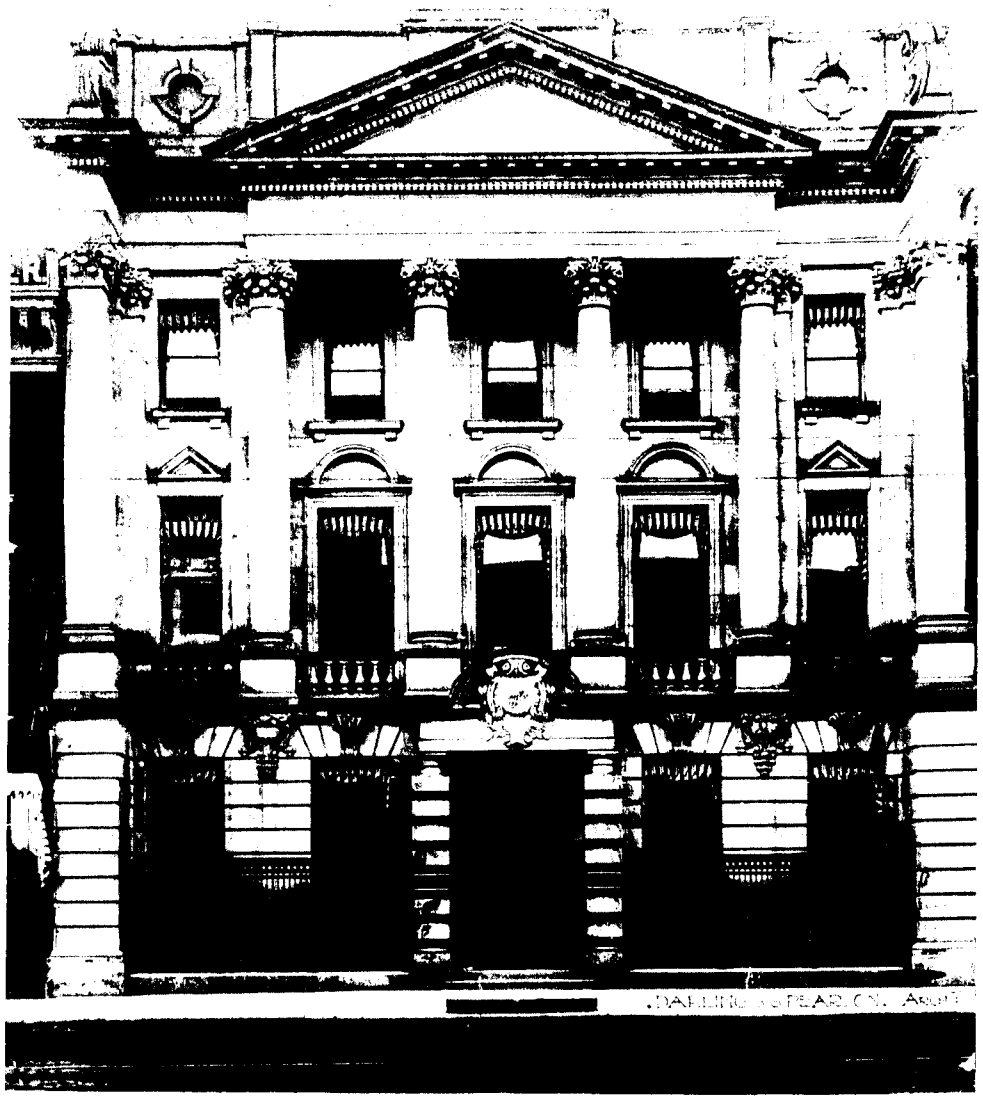

Bank of Commerce, Winnipeg. Darling & Pearson, Architects.

The concrete floors and the concrete fireproofing of the columns of this structure are reinforced with "STEELCRETE" EXPANDED METAL.

This is one of the many Western Structures in which "Steelcrete" is used. You will find "Steelcrete" the most practical and efficient system of Reinforcement.

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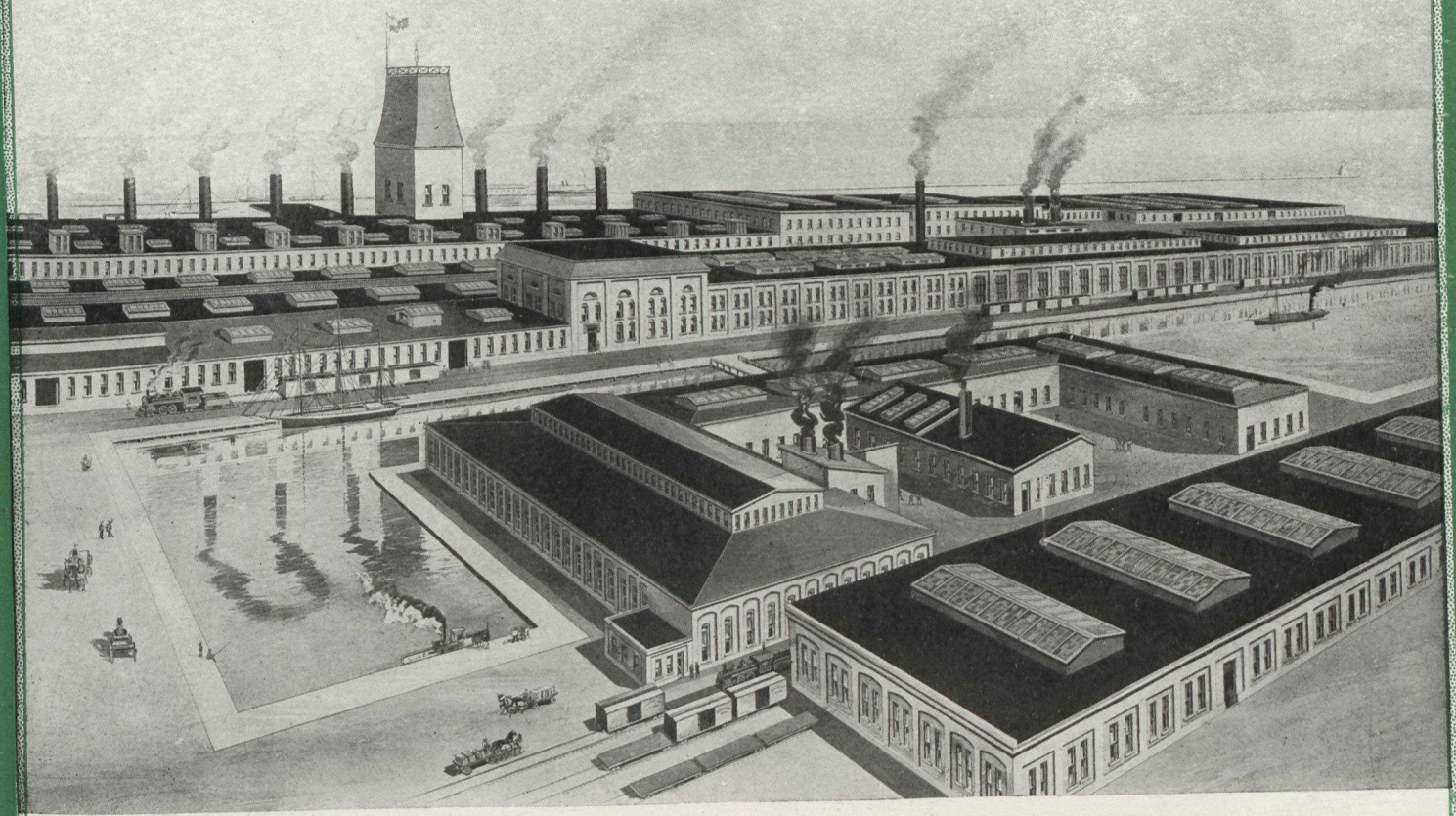

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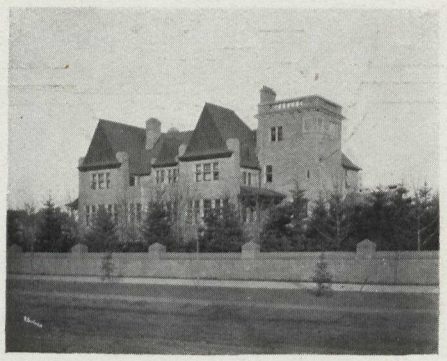
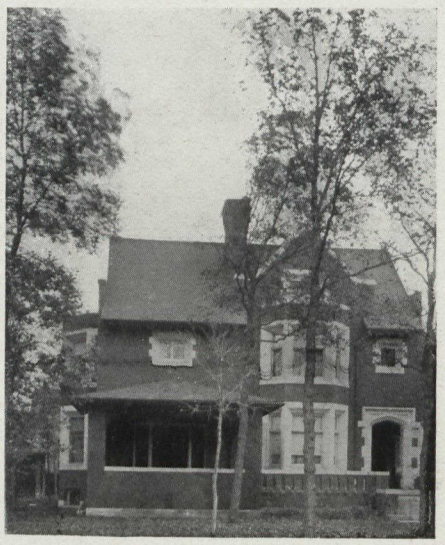
ALEXANDRA WARE

Home of A. J. Sayres, Calgary. Hodgson & Bates, Architects.



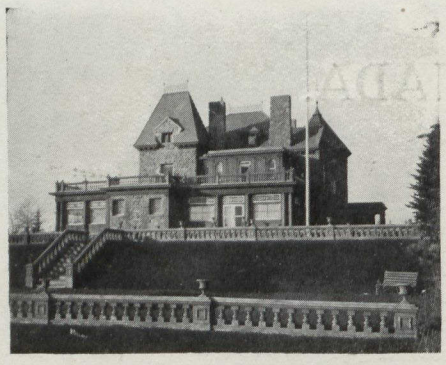
Residence of P. Burns, Calgary.

Residence of Mr. Nunn, Calgary. Hodgson & Bates, Architects.



Residence of D. R. Dingwall, Winnipeg. J. D. Atchison, Architect.

Regina General Hospital. Storey & Van Egmond, Architects.



Residence of Senator Lougheed, Calgary.

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These are a few representative structures, recently erected in the **Canadian West,** in which our plumbing ware has been installed. The extreme popularity of our products, in the matter of quality, design, and price, together with the excellent service we are prepared to render Architects and Plumbers, in every section of Canada, has built up a business that, for rapidity of growth and extent of goods manufactured, is unprecedented in Canada.

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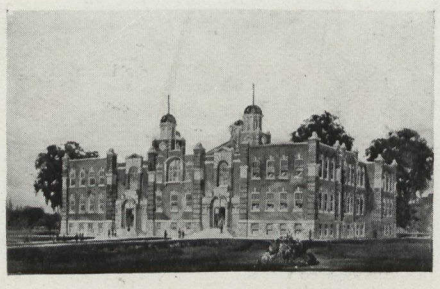
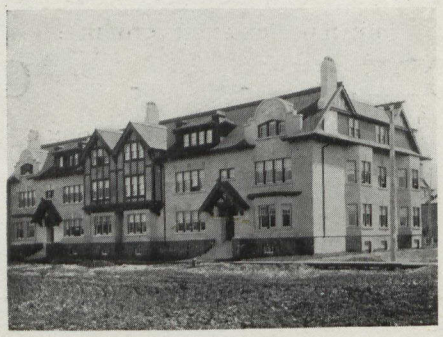


New High School, Calgary. Roland W. Lines, Architect.

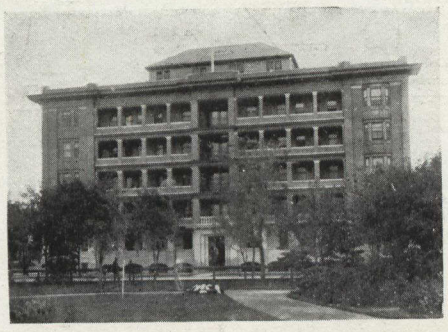
Samis Block, Calgary. Dowler & Michie, Arcl itects.



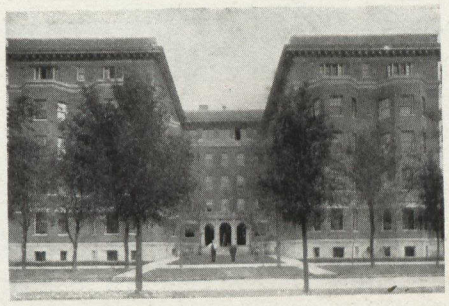
Albert Court Apartments, Regina. Storey & Van Egmond, Architects.

King's Hotel, Regina. Storey & Van Egmond, Architects.

Roslyn Court Apartments, Winnipeg. W. W. Blair, Winnipeg.



Warwick Apartments, Winnipeg. W. W. Blair, Architect.



Devon Court Apartments, Winnipeg. J. D. Atchison, Architect.

Post Office, Winnipeg. Darling & Pearson, Architects.

MORE THAN

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PER CENT.

of the **Enamelled Plumbing Ware** installed in **Western** buildings during the past two years, has been manufactured by the **Standard Ideal Company,** of Port Hope, Canada. It would take much more space than we have at our disposal here, to give even a fair, partial list of the more important buildings in which our goods have been used.

Artistic design, high quality, elegant finish, perfect construction, and quick and efficient service, are what have made our products the standard in the specifications for Plumbing Ware of Canadian Architects.

Bank of Nova Scotia, Winnipeg. Darling & Pearson, Architects.

Imperial Bank Building, Winnipeg. Darling & Pearson, Architects.

Casa-Loma Apartments, Winnipeg. J. H. G. Russell, Architect.

Enderton Building, Winnipeg. W. Fingland, Architect.

Stable of Wm. R. Allan, Winnipeg. J. H. G. Russell, Architect.

Lee Court Apartments, Winnipeg. J. D. Atchison, Architect.

Announcement

of the successful contestants in our recent

Draftsmen's Competition

for a Front Cover Design for a New "ALEXANDRA" Ware Catalogue will be made in the next number of CONSTRUCTION, in which the Prize Designs, together with those given honorable mention, will be shown.

The Cover is to be used in connection with a Catalogue illustrating the *"ALEXANDRA"* Ware made by *THE STANDARD IDEAL COMPANY, LIMITED.*

"ALEXANDRA" Ware consists of a full line of Enamel Iron Bath Room Fixtures of similar shapes to the so-called Solid Porcelain (porous Fireclay Products). *"ALEXANDRA"* Ware is enamelled *in and outside* and has the advantage of being *made in two parts,* thus providing a *space of pure air* between the interior and exterior faces of the Ware instead of a *mass of Porous Clay* which *becomes water-logged* when the glazing on the *Fire Clay becomes crazed.*

The Standard **Ideal** *Company Ltd.*

Port Hope, Ontario, Canada

Canada's West

ON ALL THE EARTH'S surface, there is no section of country that is experiencing such rapid growth, such substantial development, such quick changes, as that which lies north of the 49th parallel of liatitude, between the head of Lake Superior and the Rocky Mountains.

On the whole face of the globe, there is no richer country, no more more fertile land, no more productive soil than in the Canadian West.

Nowhere in the world is there a land that offers such ideal conditions under which people from the more congested, overcrowded centers of the old world, yes, and from the older sections of the new world, may undertake to build for themselves a home, a business, a fortune, as is to be found in Western Canada.

A country it is, so vast in area that the greatness of its future and its ultimate importance in the commercial and political destiny of Canada, cannot be measured—a country whose ever-increasing permanent wealth is being piled up with each harvest with a rapidity and regularity never before equalled. A country whose people are enthused with the realization of its possibilities, inspired by the development and growth everywhere evident, and made determined by the knowledge of their responsibilities to create ideal social, political and commercial conditions under which they live.

Much has been said about this wonderful country. Its wealth and possibilities have been the subject of admiration and amazement in every civilized section of the world. We have been told by surprising statistics of the vast crops that are yearly taken from the soil. But very few, except those who have been favored with a trip through this new Land of Caanan, have anything like a true conception of the manner in which the cities created by the great inflow of settlers and wealth, are being built up. It has often been said that the truest barometer of the prosperity of a community, the character and tastes of its citizens, the social, moral and political ideals of its people, is the architecture and construction of their buildings.

Realizing this, together with the importance the future of the great West bears upon the commercial growth and political destiny of Canada, the Editor of CONSTRUCTION made a recent trip through the West, with a view of making possible the publication of more of the work of Western architects, than had been the case heretofore. So much was he impressed with the truly marvellous growth of every section of the West, the highly permanent character of the buildings in the many cities, the excellent conduct of municipal affairs and the building activity everywhere evident, that it was decided to devote the largest and most profusely illustrated number we have yet attempted, solely to the work of architects of Western buildings. It is hoped, therefore, that this, our Western Number, will serve three purposes: first, to give our readers generally a fair conception of the character of buildings that are being erected in the great West; secondly, to impress Canadian manufacturers and dealers in building materials and equipment, as well as contractors, with the necessity of cultivating this field; and thirdly, to serve as a connecting link between Western architects and builders and Eastern manufacturers and contractors.

As will be seen from the pages of this number of CONSTRUCTION, the West is building of a very superior type of construction, and the many millions involved each year in the purchase of materials and equipment, renders this one of the most desirable markets in Canada. American manufacturers have realized the importance of this market, and are striving in a manner to gain a foothold that should cause Canadian manufacturers to seriously consider the importance of establishing themselves in this new field.

It is true that freight rates are to be considered, but this is a problem for the East to solve and not the West. It is also true that the building season is comparatively short, and that building operations must be carried out much more rapidly there than in the East, but this simply means that the Eastern manufacturer must prepare himself to meet such a condition and render it as convenient as possible for the Western architect and contractor to obtain his products.

The next few years will see a building boom in the West of proportions hertofore never dreamed of. Millions of dollars worth of building materials will be used, and it rests with the Canadian manufacturer and contractor to determine how much of this money will remain in Canada, and how much will go to the United States.

CONSTRUCTION will, in the course of the next twelve months, devote a very large amount of space to Western structures, with a view of giving proper recognition to the work of architects west of the Great Lakes.

More About Toronto Schools

MUCH DISCUSSION has been created over the charges contained in the open letter to Mr. C. H. Bishop, School Building Inspector of Toronto, published in November CONSTRUCTION. The Board of Control requested the Fire Chief to report upon the necessity of fire escapes on Toronto school buildings. The Board of Education saw fit to appoint a committee, consisting of Inspector Bishop, Mr. Rawlinson, chairman of the Board of Education, and Trustee Houston, chairman of the Property Committee, to report upon the present condition of Toronto's schools, with a view of making known to the Toronto public the improvements that have been made in the Queen City's schools, since the Collingwood disaster, for the purpose of reducing the danger of

loss of life in case of fire, and to thus quiet the disturbed nerves of Toronto parents.

It was most reluctantly that the Board of Education saw fit to give recognition to the charges contained in the letter in question, and it was only after a swarm of protests from both the press and public that it was finally decided that it was both expedient and necessary to make a pre-election attempt at a defence of their position, in the form of a report on the existing condition of the schools for which they are responsible.

The report (published herewith) is nothing more or less than an attempt to ease the minds of the public, and does in no manner or form indicate that it was the desire of the members of the committee to in any way render a reply to the explicit charges that were contained in the letter to Mr. Bishop. Every specific point referred to has been carefully avoided, and it says nothing that has not been said many times before.

The following is the report in full, as presented to the Board of Education:

Your Committee, on account of the anxiety of parents and others which naturally exists at all times in regard to the safety of school pupils and teachers from fire, and that this anxiety has probably been somewhat increased by references to this question which have recently appeared in some of the Toronto papers, submits the following information:

(*a*) *With one exception, our school buildings are all so situated that there is no chance of fire reaching them from adjoining property quickly enough to cause danger to occupants.*

(*b*) *For several years past there has been an increasing amount of work done in both old and new buildings to make stairs, halls, and doors adequate for greater freedom of exit.*

(*c*) *The question of school buildings being carried more than two stories high has been fully considered by the Board, which decided against adopting such a restriction.*

(*d*) *After the great disaster last year at Collinwood, Ohio, the question of further protection for Toronto schools was promptly taken up, and since that time the basements of all new buildings and in nearly all of the old buildings have been fireproofed as follows:*

(1) *By building brick walls in place of all wooden partitions, covering the basement ceiling with iron, building iron stairs, and providing iron storage cupboards for oils or cans, etc.*

(2) *In the last thirteen enlargements or new buildings the ground floors have been laid with cement, or fireproof, as required by the city building by-law for boiler rooms.*

(3) *In addition to the work in basements all outside doors have been fitted with check springs, so that they may be left entirely unlatched and unbolted during school hours.*

(*e*) *It is expected that by the end of the next midsummer vacation similar work will be carried out in the buildings in districts annexed since this special work was begun.*

(*f*) *Previous to this work the Board had adopted the principle of reconstructing basements and heating plants in the larger buildings, this work having been already carried out in four of the larger schools at a cost of* $1,000 *to* $1,500 *each.*

(*g*) *We believe that the greatest element of danger in every case of fire alarm in school buildings lies in the possibility of a panic, and also believe the best preventive is well-directed and frequent practice of fire drill, using the regular exits.*

(*h*) *The question of cost should not be considered as the one of greatest importance, nor should buildings be on that account made of the cheapest possible construction; but in view of the fact, that by reason of the advanced prices, the greater restrictions imposed by our recent city by-laws, and improvements introduced by the Board of Education, the cost of our school buildings has doubled in the last twelve or fifteen years, it is our opinion that we can do all that is necessary to provide safe conditions without a still further and very considerable advance in their cost through going to the extreme of what is known as thoroughly fireproof construction.*

It will be noted that the above is purely a recital of what has been done by the Board since the Collingwood disaster, in the matter of attempting to remedy the gross mistakes made in the plan and construction of Toronto's older schools. The letter in question gave the Board credit for everything they have claimed to have done in the report above reproduced.

It does not tell what has been done to make the Ogden, the King Edward, the Alexandra or the Kent schools safe. It does not state what has been done in these schools with regard to fireproofing basements or putting in fireproof corridors or fireproof stairways. These, the four largest schools in Toronto, stand as three great non-fireproof structures that house daily from one thousand to fourteen hundred children, with open wooden stairways and without the least provision having been made for the safe exit of the children in case the fire drill fails or the stairways or halls become impassable either from fire or smoke.

There is not one thing in the report that renders one statement contained in the letter to Mr. Bishop one whit less true. It is true that the Board of Education has spent to the best advantage every cent they have been given by the City Council, but they have not gone far enough. They are to be censured because they have not had sufficient backbone to demand an adequate sum of money with which to properly remodel, equip and construct the buildings in their charge, and as long as they are weak enough to undertake to follow the lines of least resistance, by assuring the people that they have provided Toronto with schools that are up to the standard, they will remain the barrier between the people, its legislators, and reasonably adequate school structures, from which position they must recede or be removed.

I repeat our contentions that Toronto's schools are not to be considered safe, as three-story non-fireproof structures without emergency means of exit; that it is ill-advised and contrary to the best judgment of students of school architecture to erect schools more than two stories in height that are not of fireproof construction; that the fire drill as practised in Toronto, is an admirable protection, but altogether insufficient in itself in three-story non-fireproof structures; that the standards used in design plan and construction of Toronto schools, have been faulty and antiquated for the past twenty years, and that what is needed is not a patching up of the standards now used in Toronto, but the adoption of entirely new standards and a new system to govern the construction and equipment of schools designed to meet modern conditions and requirements.

In support of these contentions, letters have been reproduced in these columns from authorities in cities of about equal size of Toronto, in both Canada and the United States, all of which declare that our every contention is borne out by the better judgment of the best critics upon such matters. We have, however, made our position clear to our readers on the matter, and from the report of the committee appointed by the Board of Education to investigate the affair, it is plain that it is not their intention at the present time to change their policy unless some further development takes place in the near future to force their hand.

The following letter from the Building Inspector of

Cleveland, commenting upon our letter to Mr. Bishop, is interesting in that there is no man on the continent who should be better qualified to know the lessons to be learned from the Collingwood disaster than he, for he was one of the several experts appointed to investigate the catastrophe. His views upon our contentions are clearly set forth in the following:

Dear Sir,—

I have read with much interest your article on Toronto schools in your magaine of November.

The points you have brought out in your article are very important, and have all been verified, beyond a doubt, in the Collinwood fire. I am frank to say that previous to the Collinwood fire I considered this type of building perfectly safe for two stories in height without fire escapes, and up to that time I never believed it was possible but that all scholars upon the first and second floors could pass from a building through the hallways and general exits with perfect safety before fire gained sufficient headway to prevent their escape. I feel that the only safe exits for buildings of this type of construction are exterior stairways which take the scholars immediately away from fire and smoke and not into it or through it.

Anyone who is at all familiar with the details of the Collinwood disaster would not hesitate to say that all non-fireproof school buildings should be provided with exits which would allow scholars to pass from the building with perfect safety regardless of the cost of the same.

Were I a resident of Toronto, I would join you in your effort to make all non-fireproof school buildings as safe as they could possibly be made.

Trusting you will keep on with this work until your purpose has been accomplished. I am, yours truly,

WM. S. LOUGEE,
Inspector of Buildings.

Cleveland, November 29th, 1909.

Mr. Mitchell, Commissioner of School Buildings of Winnipeg, has also some interesting comments to make relative to the position of Toronto authorities with regard to fire escapes on schools. Mr. Mitchell, together with the Superintendent of Schools of Winnipeg, visited fifteen cities in Canada and the United States for the purpose of learning the most generally accepted standards in school construction and equipment. Upon his return, all three-story schools in Winnipeg were provided with fire escapes, and all new schools erected since have been limited to two stories in height. Toronto authorities have declared against fireproof schools, against limiting schools to two stories in height, and against fire escapes; quite a contrast. Mr. Mitchell's letter is as follows:

Dear Sir,—

The November copy of "Construction" came duly to hand, and the editorial "Are Toronto's Schools Safe?" read with care. While the question appears to be a very pertinent one, the first thought was, why should the Inspector of School Buildings be addressed?

I have no desire to interfere in any way in a matter which primarily affects Toronto, but occupying a somewhat similar position as that of Mr. C. H. Bishop, it may be that I look at the situation from a different viewpoint than that from which you see it.

It is conceivable that Mr. Bishop, being an official of the Toronto School Board, is loyal to that body, and is endeavouring to show that all buildings planned by him are in accordance with the ideas which are held by the Board, or with the amount of money which the people of Toronto desire to spend upon the school buildings which they are having erected, or for repairs and improvements on those already occupied, in which case he is not the one to be blamed.

Every word in the able editorial would seem to vitally concern the parents of Toronto, and upon the people should the responsibility rest of knowing that whatever is required has been done to provide safe exits for the children under all or any conditions which may at any time exist.

It seems a truism to say that the people rule, and and whatever the citizens of Toronto want in respect to the schools, if they are in earnest, they can have, and not even the School Board, much less an official, can prevent their desire from coming into force. The power is in the hands of the people at each election to place men in positions who will be anxious to carry out their will as expressed, and after the clear and convincing manner in which you have stated the situation, the public should be prepared to accept the full responsibility for whatever may occur in the future, even if it should be to the loss of bright young lives, the joy and pride of the home from which they came.

The one point in your strong and positive editorial which alone concerns Winnipeg or myself is the statement said to have been made by Mr. J. L. Hughes, the superintendent, to one of the Toronto evening papers referring to the fire escapes erected on the schools of this city to the effect that the children would be crushed to death in them. If that statement were made by Mr. Hughes, it seems incredible that a gentleman of his ability and wide experience should venture to express himself upon a subject of which he is so evidently in ignorance, and to place his opinion in opposition to that of men such as the Chief of the Winnipeg Fire Brigade, City Building Inspector, and Provincial Fire Commissioner, who admittedly are well qualified to judge of the merits of the spiral escape in use in Winnipeg, down which already thousands of children have come without injury. From my experience, I am prepared to state that under no circumstance which may arise, would there ever be a possibility of any children being crushed or even seriously injured, no matter how they came down. Once they are in the escape, they are bound to keep coming at a regulated speed until they come out at the bottom, and then they are in safety. Let this defence of the escapes on the Winnipeg Schools be my excuse for writing in connection with your editorial on the Toronto Schools. Yours very truly,

J. B. MITCHELL.
Commissioner of School Buildings.

Winnipeg, 30th November, 1909.

In view of the importance of the question of school design and construction, not only in Toronto, nor only in Ontario, but in the whole of this new country of ours, the Toronto Chapter of the Ontario Association of Architects in their usual public spirited attitude upon such questions, has appointed a committee for the purpose of inspecting Toronto's schools and investigating the requirements in other cities, the charges made in CONSTRUCTION, and the contentions of the Toronto school authorities. They will make a report in the near future, which promises to be thorough, unbiased and exhaustive. It is our intention, therefore, to let the matter rest until such time as the architects' report is made public.

THE ONTARIO ASSOCIATION OF ARCHITECTS will hold their annual meeting in Toronto on Jan. 11 and 12, at the rooms of the Toronto Chapter of that association. Two of the most important subjects under discussion will be affiliation with the R. A. I. C. and Architectural Education.

COMMERCIAL AND INDUSTRIAL DEVELOPMENT OF WINNIPEG, AS TOLD BY THE CAMERA. 1—View along Portage avenue. 2—Main street, on a busy day. 3—A section of Donald street, showing how the residential cross streets are being crowded back by big mercantile and office buildings. 4—Winnipeg yards of the C.P.R.

THE GATEWAY TO THE GRANARY OF THE BRITISH EMPIRE.—A Brief Review of Winnipeg's Progress Together with a Few Notes on the Architecture of Its More Recent Buildings.—Influence of Western Optimism on Building Design. ∴ ∴ ∴

"The visions that your old men saw fifteen years ago, I saw translated to-day into stone and brick and concrete."—RUDYARD KIPLING AT WINNIPEG, OCTOBER 4TH, 1907.

THESE WERE THE WORDS of the Empire's greatest litterateur when he gazed with wonder and admiration upon the truthful evidences of the intrinsic growth of the gateway to the granary of the British Empire. Much has been written about the great metropolis of Canada's West, but never was its marvelous development so aptly, so honestly, and yet so briefly described as in these words of Kipling.

We read with amazement and wonder, the statistics of the growth in commerce, in population, in railway building, in social and educational progress, but there is no element in the development of this, Canada's newest and most progressive city, that bespeaks so truthfully and so plainly the stability of its institutions, the character of its people, and the solidity of its growth as that of the architecture and construction of its buildings. There is no city on the American continent that, during the past three decades, has experienced such a substantial, healthy growth, as has Winnipeg, and there is not a city in Canada that is erecting a better class of buildings from the standpoints of both design and construction, than is Winnipeg.

This is not only an evidence of the earnestness and good taste of its people, and an indisputable indication of the confidence of the east in the future of the city, but it demonstrates the excellent character of men the West has attracted from other portions of the world.

Culture, good taste and refinement are everywhere evident in buildings of all classes, from the small dwelling to the costly mansion, from the store building to the skyscraper, and from the public school to the larger public and semi-public structures. While eastern architects have contributed to some extent, to the architecture of Winnipeg, most of its buildings have been designed by its own resident architects, whose work compares most favorably with that of designers to be found anywhere. The construction of these buildings bears unmistakable evidence of the ability of Western contractors, and the skill of Western mechanics. When it is realized that mostly all of the higher class of building materials and equipment have to be brought from the East, and when the high cost of labor and the short building season is considered, it is plain that Western architects and builders are deserving of exceptional credit for the excellent class of structures they have been responsible for the erection of.

An impressive feature of Winnipeg's buildings, which is peculiar to that city, is the fact that they are decidedly modern in every particular, and the optimism which seems to pervade everything in the West, shows a very marked influence in the design of its buildings. Everything is new, bright, and seems to be in keeping with the free, clear, fresh, invigorating atmosphere of the open prairie, and the beautifully bright Western sun, that are so conducive to the optimistic, progressive "go-ahead" spirit of its citizens.

From a bare trading post in 1870, Winnipeg has grown to a city with an area of 13,990 acres, and a population of 128,000, and stands to-day a living evidence of the richness of the great prairie country of Canada's Golden West, a magnificent monument to the spirit of progress that seized upon its citizens and the wealth and success that has awarded their efforts and brought into realization their dreams.

Its wide, well kept business streets, with the many large stores, stately office buildings, monumental bank buildings, and dignified public structures, give evidence of the prosperity of its business institutions. The large, substantial warehouses, and manufacturing buildings in its wholesale district, demonstrate the importance of Winnipeg as a distributing centre.

The exceptionally well equipped, well constructed colleges, public schools, libraries, hospitals and public institutions, show the degree to which the citizens have undertaken to assume their responsibilities as builders of a great city.

The beautiful residential districts, with miles of boulevarded and smoothly paved streets and tastefully designed homes gives evidence of the prosperity and culture of its people.

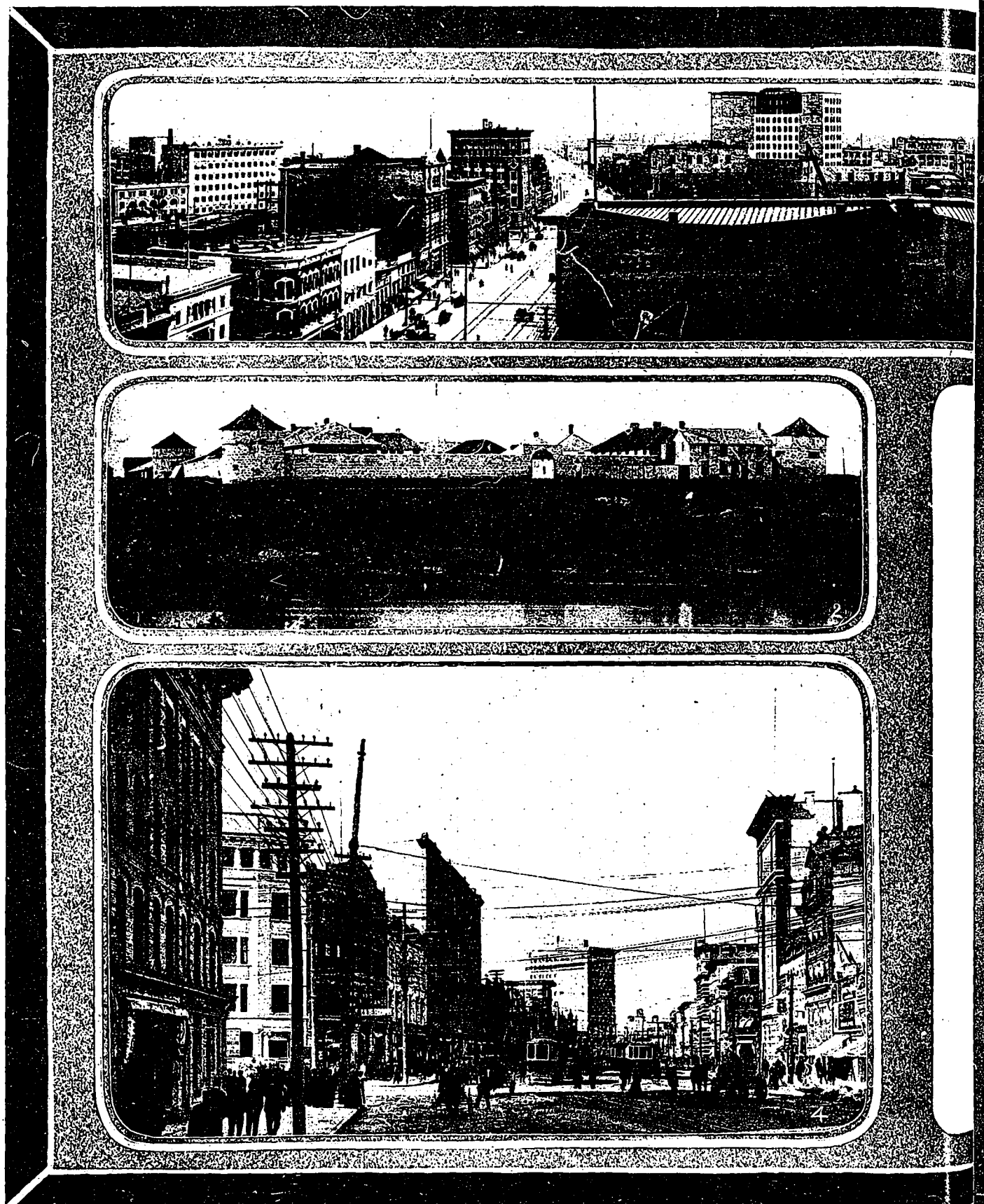
Some idea of the growth and importance of this highly prosperous city may be gained from the fact that during the past six years more than $50,000,000 has been spent in the erection of new buildings, and the expenditure in this direction for 1909 will exceed twelve million dollars, a record unparalleled by any city of its size on the North American continent.

The population has increased from 48,411 in 1902 to 128,000 in 1908. The total assessment of city property has increased from $28,615,810 in 1902 to $116,101,390 in 1908. It has eighteen chartered banks operating forty-one branches in the city, and Winnipeg bank clearings have increased from $188,370,003 in 1902 to $614,111,301 in 1908.

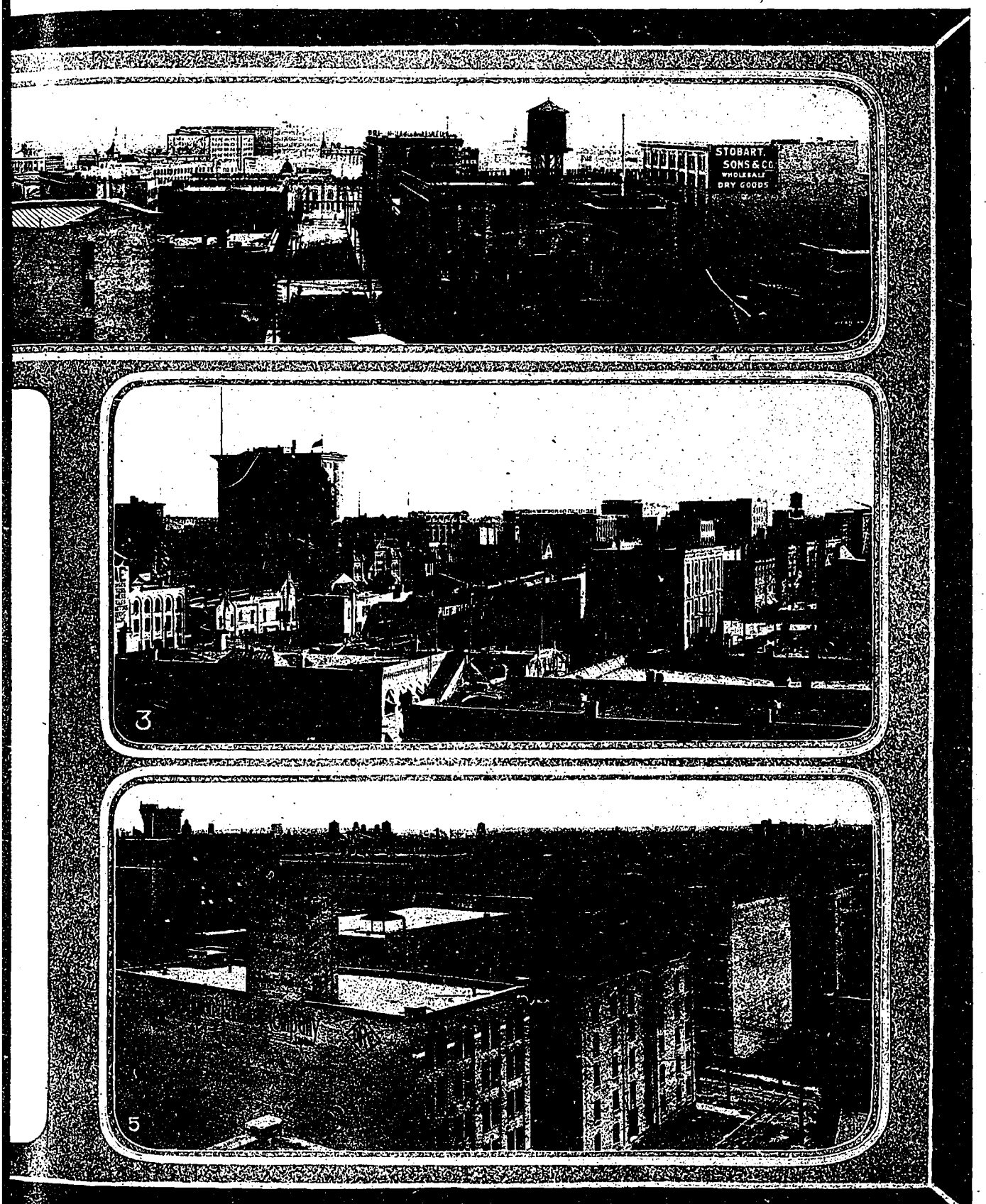
Vast sums have been expended during the past five years in municipal improvements, with a view to rendering it the most livable city in the country. It owns its own parks, its asphalt plant, stone quarries, waterworks and street lighting systems. It has under construction its own electric power plant, to have 60,000 h.p. capacity, and to cost $3,500,000. It has 185 miles of water mains, 166 miles of sewers, 377 miles of sidewalks, 300 miles of paved and graded streets. The city has 9 fire hall stations, with 36 fire fighting outfits, and 300 lb. high pressure water system.

As a railway centre, Winnipeg is one of the largest, if not the largest, in Canada. It is the eastern terminus of the western lines of the three great Transcontinental Roads. It has the largest individual railway yard in the world, and the Grand Trunk Pacific shops just being completed will be the largest in Canada, and with the completion of the Fort Garry station, it will have the largest joint terminal railway station in Canada. Thirty-six hundred railway employees reside in Winnipeg. Winnipeg's electric street railway has 104 miles of tracks, operates 140 cars, and during 1908 carried twenty-two million passengers with gross receipts of $2,206,094, as against three million passengers, with gross receipts of $28,132 during 1900.

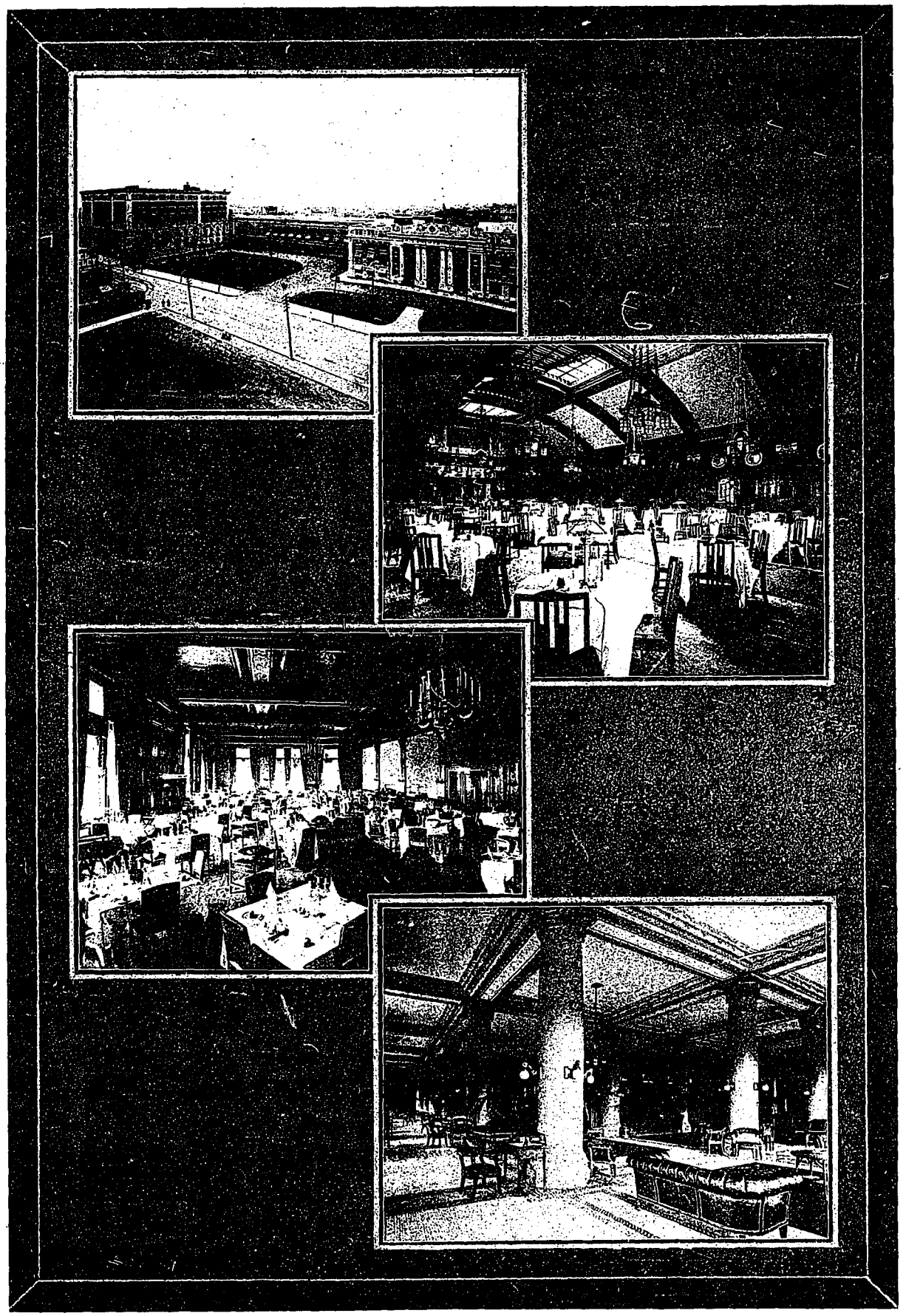
The importance of Winnipeg as a distributing centre for Western Canada is shown by the fact that the wholesale turnover exceeds $90,000 annually. Nineteen hundred commercial travellers have their residence there. Winnipeg is also rapidly developing her manufacturing industries, as is shown by the fact that thirty-three new industries were added during the past three years, and in 1905 the output of manufactured products amounted to $18,983,248, as compared with $8,606,248 in 1900. The indications are that the next decade will bring a very large number of manufacturing industries to Winnipeg, that will be promoted to supply the rapidly increasing demands of the great West. Despite the marvelous commercial development of their city, the citizens have not been too busy to remember their religious obligations and



Photographic glimpses of Winnipeg, a city which has in forty years grown from a trading post of the Hudson Bay Company, to a municipality wit position of importance in the commercial life of the Dominion, somewhat analagous to that held by the city of Chicago in the United States, and character of its many modern buildings. 2—Fort Garry, as the city was known forty years ago, and which has long since disappeared in the wake it will bear. 3—Business buildings in the down-town section, showing the Union Bank office building in the backgrour.d. 4—View along Main stree

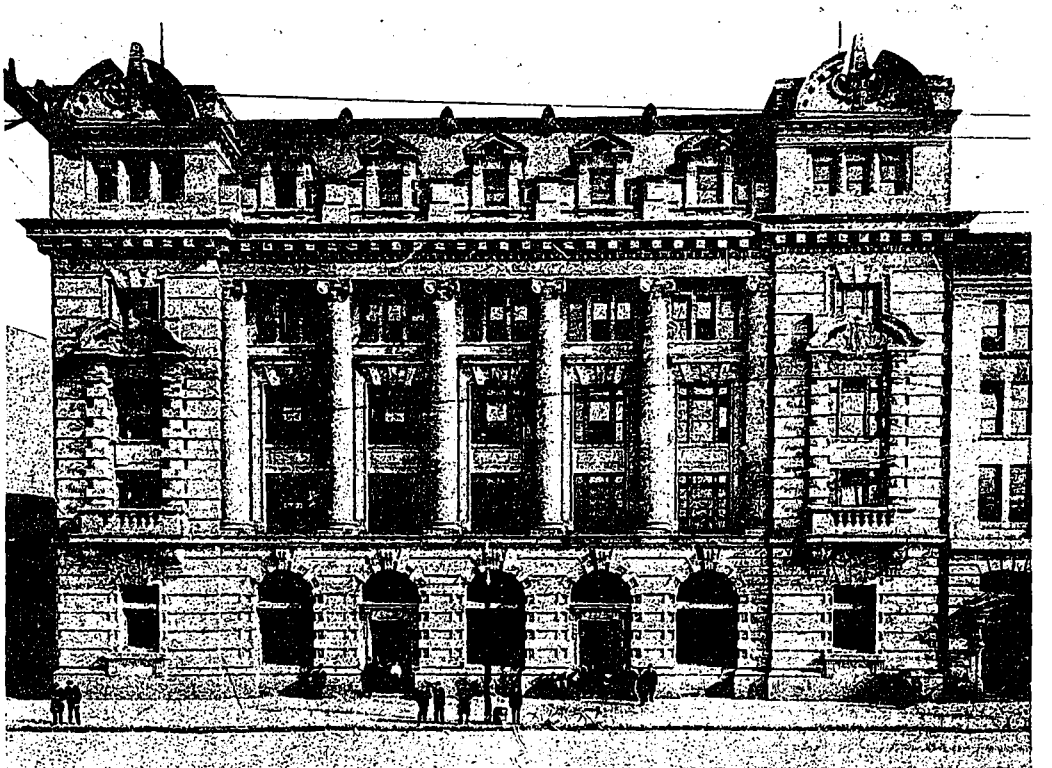


100,000 souls and an annual turn-over in trade amounting to over $100,000,000. Both in geographical location and in business activity, it occupies a well worthy of its title, the "metropolis of Western Canada." 1—Panoramic view of the business district, giving an excellent idea of the metropolitan Canadian progress; the ground on which the old Fort stood now forms the site of the new Union Station at present under construction, whose name which, owing to its group of financial houses, has come to be known as the "Wall Street" of the Canadian West. 5—A section of the wholesale district,



THE ALEXANDRA, WINNIPEG'S NEW MODERNLY APPOINTED FIREPROOF HOTEL. 1—Rotunda. 2—Main dining room. 3—Grill room. 4—A general view of Royal Alexandra Hotel (left), and C.P.R. Station (right), showing lay-out of grounds. E. & W. S. Maxwell, Architects.

The Grain Exchange, Winnipeg, which in breadth of architectural treatment typifies the importance of the Western metropolis as the gateway of the great Western wheat belt. Darling & Pearson, Architects.



The Post Office Building, Portage avenue, Winnipeg. An architectural acquisition of which the city and Federal Government may feel justly proud. Darling & Pearson, Architects.

Union Bank premises, Main street, Winnipeg, a lofty structure which eloquently attests to the city's commercial and architectural growth. Darling & Pearson, Architects.

Merchants Bank Building, Winnipeg. An imposing structure which dignifies the business section along Main street. S. F. Peters, Architect.

educational requirements, which will be seen from the fact that it has thirty-three schools, five colleges, and one hundred and fifteen churches. It has a public library that cost $135,000. Neither have they overlooked the necessity of recreation and amusement. Winnipeg has three hundred and sixteen acres of park play grounds, two river rowing courses, lake resorts north, east and south, with steamboat and railway facilities, as well as six theatres, an amusement park, and holds annually Western Canada's Industrial Exhibition.

It has been the exigency of keeping up with the demands of such an extraordinary growth that has occasioned such a building boom in Winnipeg, and the architects and builders upon whom the responsibility falls to provide these structures have designed and built well. While wood had to be resorted to as one of the chief materials in building construction in the early days, it is not so now. Brick yards have been established that manufacture a fairly good quality of common brick, which is sold for a price that is comparatively reasonable, and brick is rapidly replacing wood in the erection of even the smaller dwellings. The city has been blessed by the existence of large stone quarries in its immediate vicinity, from which a very excellent quality of stone is procured, known as Tyndall stone. Gypsum is manufactured in the city, and steel fabricators have erected large plants there. Concrete and terra cotta are being used to a very marked extent, in all classes of business and public buildings. A very large amount of material, such as pressed brick, terra cotta, cement, etc., must be imported or brought from the East, but very large supply yards have been established where stocks of almost every material an architect or contractor should desire may be obtained upon short notice. It is thus that all the factors and the elements that make possible the erection of well designed, constructed and equipped buildings, have worked together with the western architect to give Winnipeg a class of buildings that would do credit to cities of a very much larger size in the East.

Winnipeg has simply crossed the threshold of an expansion and growth that during the next decade will outclass that of any other city in the new world, and it rests with the manufacturers of Eastern Canada to aid that growth and secure this great Western country commercially to Canada, by studying their requirements and making it as convenient as possible for the West to buy their products.

It is impossible to convey in words even a faint idea of the substantial nature of Winnipeg's growth to those who have never visited the city, but the accompanying illustrations of its streets and its buildings truthfully reflect the beauty and stability of its more recent structures.

The Grain Exchange is Winnipeg's newest and best equipped fireproof office building. It was completed almost a year ago, and, in design and construction, is modern in every particular. It was designed by Messrs. Darling & Pearson.

The exterior walls are constructed of yellow pressed brick, with white stone trimmings and is constructed of steel and concrete throughout; has reinforced concrete floors and terra cotta partitions, and has hardwood finish interior throughout the entire structure.

It is fitted with four hydraulic elevators, and has its own lighting plant, which consists mainly of two 80 kilo. alternating generators, directly connected with high speed engines. The exhaust steam is used for heating purposes. Switches controlling the building's private power, and also controlling the emergency power from the city's plant, are located on one board, and the turn of a lever transfers from one to the other.

Steam is supplied by three 150 H.P. boilers, fitted with automatic stokers. The ventilating system consists of an immense blower, which draws the air from above the roof of the building, and sucks it into the basement. Here it passes through a coil of pipes, where it is heated. From these pipes, it is shot through a film of pure water, which humidifies it and cleanses it of all dust and impurities, after which it passes through the main pipe to the top of the building, and from there it is distributed, at whatever temperature is required for the various offices, whose occupants regulate it by thermostats. Another blower is located at the top of the building, which sucks the foul air from the offices and rooms, into innumerable ventilators in the walls, and discharges it from the roof. This structure houses the offices of some of Winnipeg's most important institutions and as the Grain Exchange it is duly considered one of the city's most important business buildings.

One of Winnipeg's most imposing structures is the new Federal building, completed a little more than a year ago. It is located on Portage Avenue, and was designed by Messrs. Darling & Pearson. Although the facade is good and has been so designed as to suit the location, it is most unfortunate that a sufficiently large site could not have been provided to have permitted of some ground space around the building, that would not only have given the architects a better opportunity to do justice to an expenditure of $750,000 in the way of architectural treatment, but would have allowed for future extensions.

The design might be called English Renaissance. The base of the front is constructed of Tyndall stone up to a height of four feet, while Ohio sandstone is used above the basement walls. The building has a steel frame fireproofed with concrete, concrete floors reinforced with expanded metal, brick clothing walls and terra cotta partitions. The rotunda is wainscotted with Italian marble, while Missisquoi marble is used for the base of the counterfittings. The interior woodwork and furniture is of light finished quarter cut oak and the color scheme carried out in the rotunda is not only very pleasing but everything is light in color, thus utilizing to the best advantage all the light that pours in through the large front windows.

The heating plant of this structure is especially worthy of note. It is a combination gravity and fan system. The general gravity system for the entire building consists of a brick flume surrounding the smoke stack. This heated flume connects with all floors, and creates a constant current of air that ventilates the structure most successfully. The Fan System has been installed for the ventilation of the lavatories.

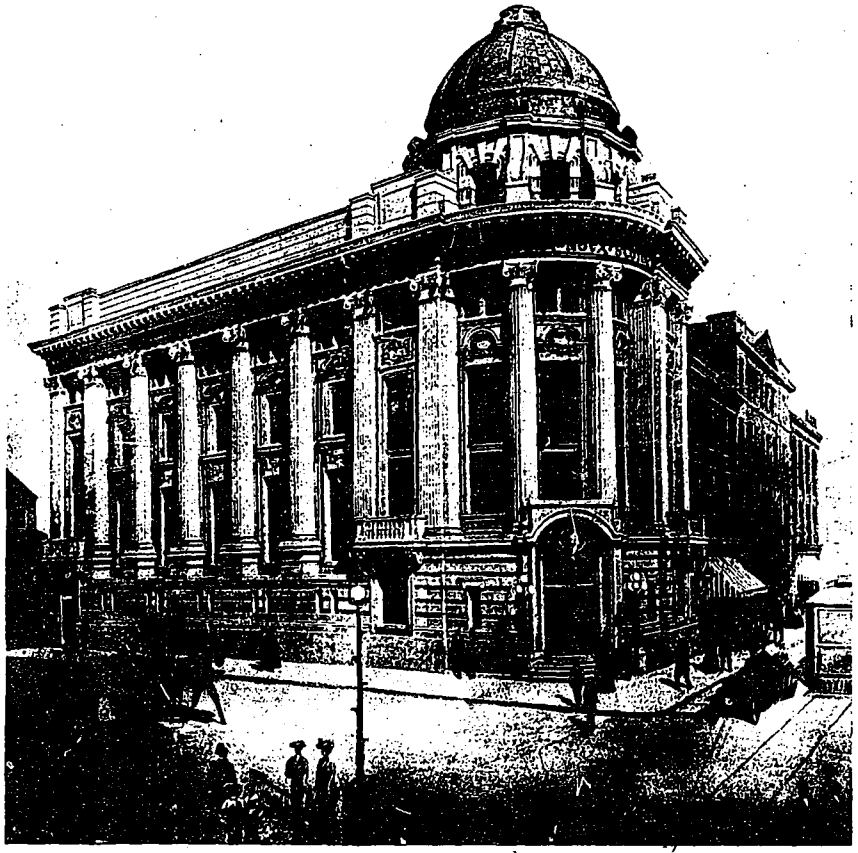
The interior arrangement is said to be admirable, providing excellent accommodation for all the various departments.

The Union Bank building is Winnipeg's tallest skyscraper. It is twelve stories high, and was designed about three years ago by Messrs. Darling & Pearson. It is of frame steel construction, fireproofed with terra cotta. The exterior walls are of yellow pressed brick, trimmed with ornamental terra cotta. It has oak interior finish, and has three elevators. The banking-room is decorated with Verd antique marble, has Scagliola columns, and mosaic floors. It was constructed by an American contracting firm, and cost $350,000.

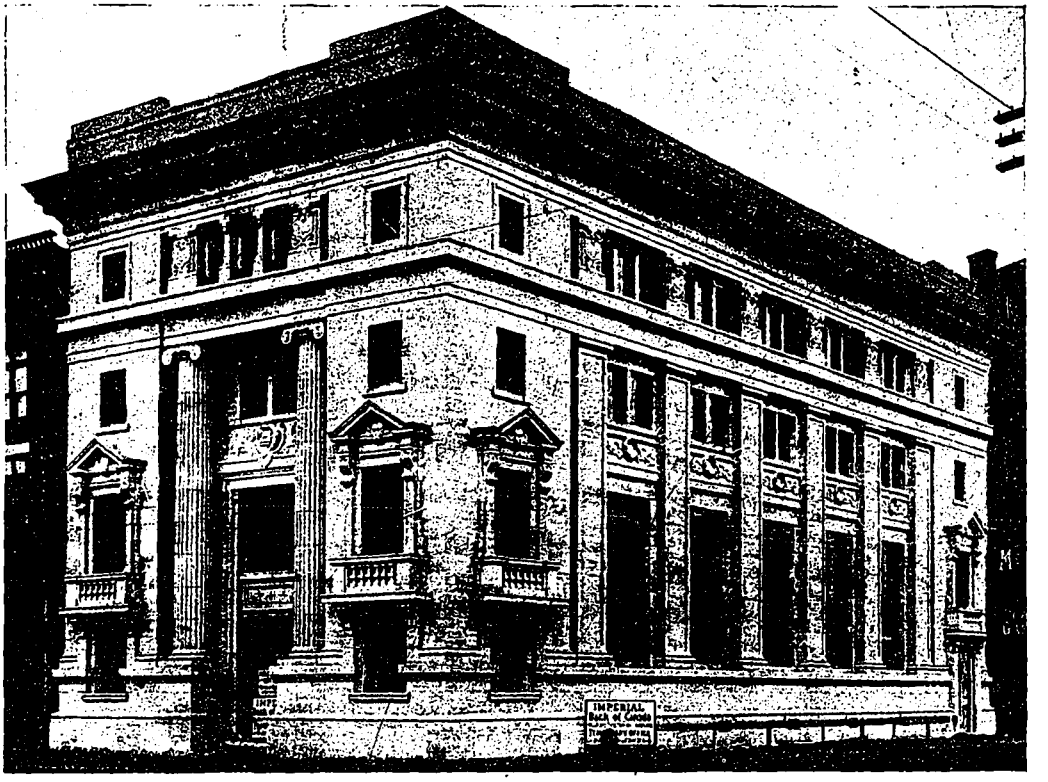
One of the best monumental designs in bank building construction on Main st., is the Canadian Bank of Commerce building, erected about two years ago. It was designed by Messrs. Darling & Pearson. Its facade is Grecian classic and was constructed of Bedford stone. This structure is fireproof throughout, and is one of the finest bank structures in Winnipeg.

One of the newest and most notable of recent bank buildings constructed in Winnipeg, is the Bank of Nova Scotia, which will be completed in the course of a few months, at the cost of $250,000. It has a granite base, and the front walls are built of English glazed Terra cotta of a very light buff or heavy cream tone, that presents a very pleasing effect. The structure is skeleton steel, fireproofed with concrete; the columns are protected with brick and concrete. Terra cotta has been used for the partitions. The banking room has been decorated with Missisquoi marble for wainscott and Caen stone has been used above the wainscotting. The wood-

Canadian Bank of Commerce, Winnipeg. Another noteworthy example of the city's modern banking premises. Darling & Pearson, Architects.

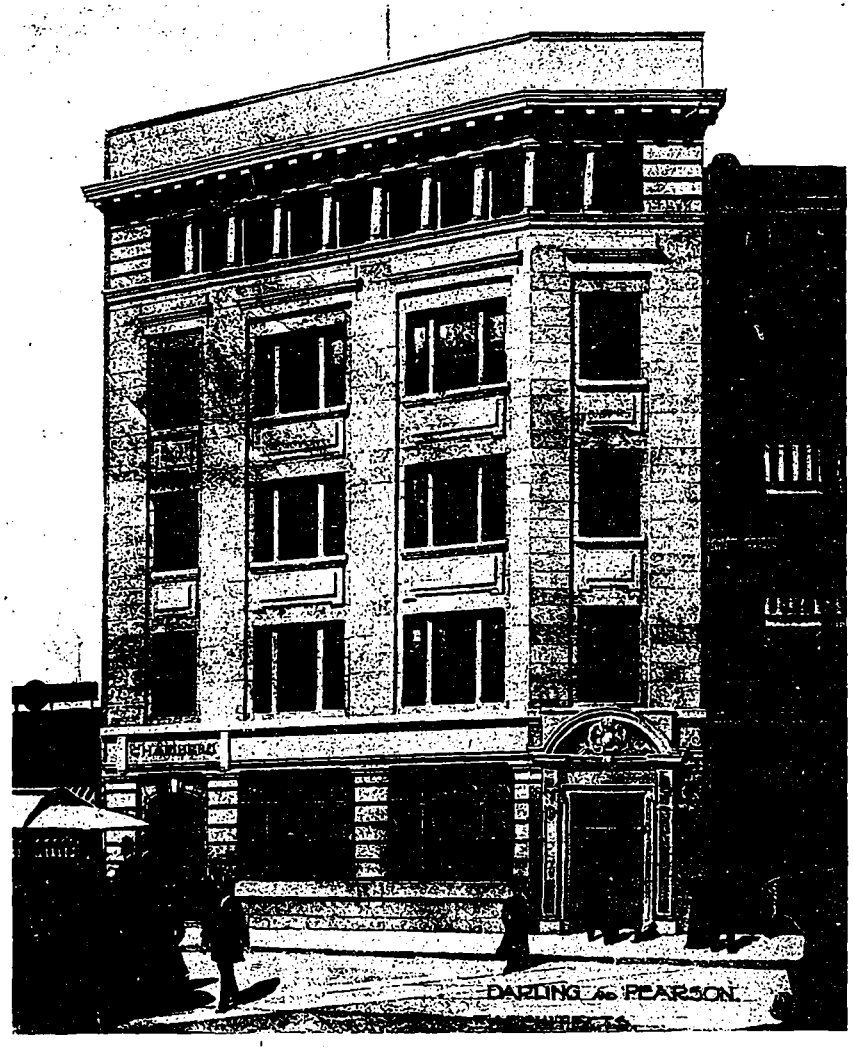


Home of the Bank of Nova Scotia on Portage avenue, Winnipeg. Another of the city's splendid banking institutions. Darling & Pearson, Architects.

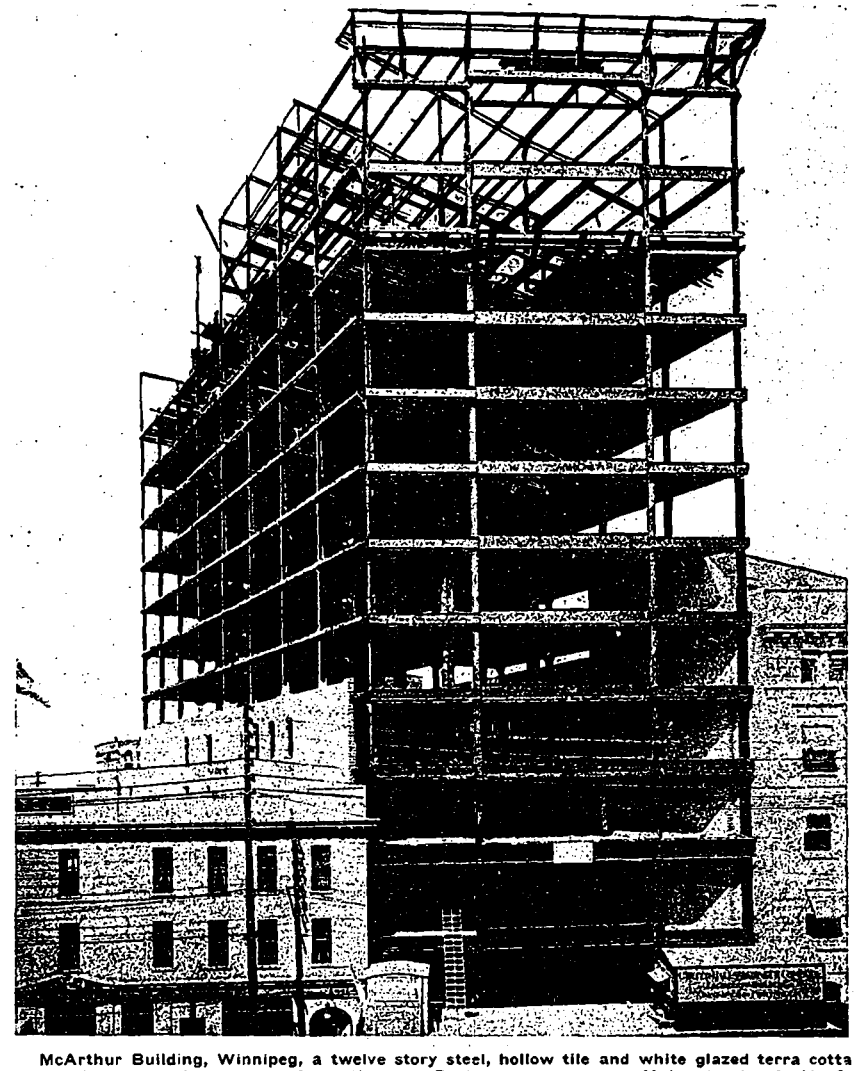


New premises of the Imperial Bank of Canada, Winnipeg. A striking reflex of Western progress in building design and construction. Darling & Pearson, Architects.

Interior of Imperial Bank, Winnipeg, showing the rich marble counters and wall and ceiling schemes. Darling & Pearson, Architects.



Nanton Chambers, corner Portage avenue and Main street. One of Winnipeg's new additions in the way of a commercial building. Darling & Pearson, Architects.



McArthur Building, Winnipeg, a twelve story steel, hollow tile and white glazed terra cotta building now in process of erection, on Portage avenue, near Main street. J. H. G. Russell, Architect.

work on the ground floor is mahogany, while the upper floors have oak interior trim. The building has fireproof windows on all exposed sides. A feature of this structure worthy of note is the fact that the terra cotta used in its construction was brought from England, while the ornamental iron stairways were constructed in Glasgow.

Another bank building, designed by Messrs. Darling & Pearson, is that of the Imperial Bank of Canada, which cost in the neighborhood of $200,000. It is of skeleton steel frame construction, fireproofed with concrete. It has floors of reinforced concrete, and its partitions are of terra cotta. The upper floors have oak trim, and the banking room is finished in mahogany. The ventilating apparatus is of the low pressure gravity system. The exterior design of this structure is such as to particularly adapt it to the corner upon which it is located, and it stands as another evidence of the confidence of Eastern banking interests in the future of the West.

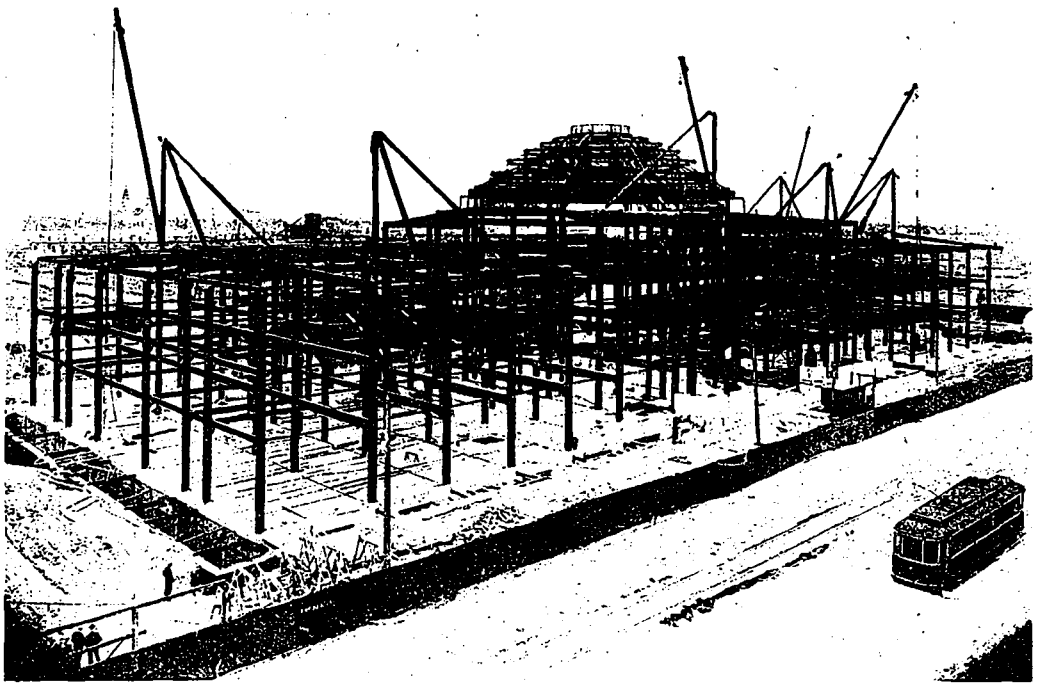
Another of the recent buildings designed by Architects Darling & Pearson, is the new Nanton block, at the corner of Main st. and Portage ave., which was erected at a cost of $150,000. It has a concrete foundation, with Bedford stone front, and the structural work is of steel with reinforced concrete floors. The partition walls are constructed of galvanized iron studs and expanded metal lath, upon which cement plaster has been applied. It has fireproof windows and the interior woodwork is of oak throughout. The Nanton block occupies one of the most important and busiest sites in Winnipeg, and, from the standpoint of interior office arrangement, is one of the best in the city.

The rapid growth of Winnipeg from a commercial standpoint, as is seen in the many substantial business buildings erected within the past few years, is further evinced in the new twelve-story McArthur Building now under construction on Portage Avenue, close to the corner of Main St., the principal thoroughfare in the business district. This building, which when completed will be the highest structure in the city, is of the modern steel frame type with tile arched floors, fireproof partitions, and a facade of white glazed terra cotta. It will provide store accommodations on the ground floor, with offices above, the suites being so arranged as to insure the maximum degree of light to all interiors, thus making ideal office quarters. The central portion of the building will rise to a height of thirteen stories, to provide for the overhead apparatus of the high speed elevators, together with janitor's apartments, and store room facilities. At the present time, the structure is being enclosed, and the contractors are making excellent progress in the execution of their work. All the steel work is to be fully protected at every part, making the building absolutely fireproof, and the interior throughout will be modern in the character of its appointments, the sanitary appliances and general fittings being of the most approved pattern and type. A feature of the building will be its splendid power and machinery equipment, as not only will it be provided with its own plant for power, lighting, ventilation and heating, but it will also contain its own water supply system as well. The designing and supervising architect of the building is J. H. G. Russell, and the consulting engineer of mechanical equipment, Mr. Chas. T. Pillsbury; the work of erecting the building being executed by the Carter-Halls-Aldinger Company, contractors and engineers.

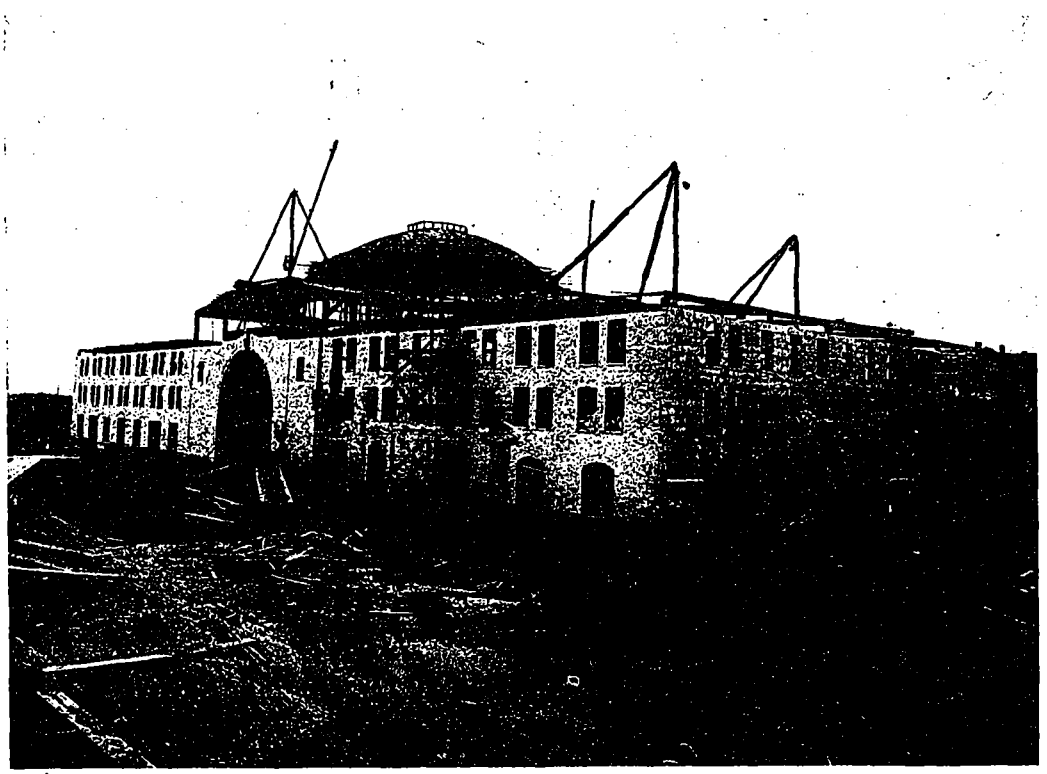
Another structure which forms a link in the chain of Winnipeg's financial houses is the Trade Bank Building on Main Street, a short distance south of the old Post Office. It is a three story building—originally having stores on the ground floor—that has been remodelled for banking and office purposes and made interesting both architecturally and in interior arrangement. The front is built of Tyndall stone, which is quarried a few miles south of the city. It is a peculiarly beautiful stone of whitish grey color with a brown veining, similar to a maple leaf, which works about like Portland or Indiana stone, but which, owing to pockets or voids, is not reliable to work with a rubbed surface—better results being obtained by tooling, crandling or cross tooth chiseling. The lower story of the facade consists of five arched doors and windows, divided off by Ionic columns, the upper portion of the building being simple and direct in its treatment, with the panels above the third story windows having effectively carved wreaths standing out from the stone in bas relief. Access to the banking room and to the hallway leading to the offices above is obtained through cast iron entrances having copper doors fitted with bronze kick and push plates. The public space in the banking room is so arranged as to provide the maximum counter space. The floor is of marble mosaic, while the counters are of Vermont marble, with Verdantique trimmings and polished bronze grilles. Ample provision is made for a ladies banking room, in a space to the right of entrance. The vault equipment is of the most approved character; and tables in the windows of the main banking room affords sufficient bulk head to adequately light the offices with basement. The structure was remodelled according to designs of Architect F. S. Baker, of Toronto, and the Bank contemplates the use of the building as their principal Winnipeg branch, until some time in the future when they propose to erect a permanent banking building along model lines.

While there is an abundance of evidence on all sides in the way of substantial business building to clearly indicate Winnipeg's great commercial growth, and its increasing importance as a distributing point, there is nothing, perhaps, which serves to more fully impress this fact than the Fort Garry station, which is being erected on Main St., opposite Broadway, for the joint use of the Canadian Northern and Grand Trunk Pacific Railways. This splendid building covers a ground area of approximately 50,000 sq. ft., the frontage on Main St. being 352 ft. and the depth 140 ft. It forms a part of a comprehensive scheme, involving an extensive system of trackage, train sheds, freight houses, etc., which will give the city one of the largest and best equipped terminals in the world. As regards construction, the station will be of steel, concrete, and stone throughout, and already the work has been carried to the point where the structure is practically enclosed. The height of the larger portion of the building is three storey and basement, with an elaborate central portion surmounted by a dome rising 100 ft. above the street level. The main entrance will be through a vestibule leading directly to the ticket lobby. This lobby, which will occupy a clear circular space 90 ft. in diameter entirely unobstructed by columns, seats or booth of any kind, is directly beneath the dome and will be exceptionally well lighted on all four sides by large arched windows. The waiting room will lie north of the ticket lobby, while adjoining it on the west side will be a lunch room and a restaurant, both having separate entrance off Main Street. The interior of the waiting room and the ticket lobby will have the effect of stone construction throughout, the wainscoting being of marble 6 ft. high and the floors of terrazzo. All stairways will be of iron with marble treads. In the south wing of the building will be located the baggage and express rooms, while the entire north wing of the basement is to be devoted to immigrants, and will provide a large waiting room, a laundry, and toilet and bath facilities for both sexes.

The second and third floors will be occupied by the offices of the two railways and by the National Transcontinental Railway, each floor providing an available office space of 25,000 sq. ft., exclusive of corridors, stairways, elevators and toilets. Provision has been made in the design of foundations and the steel structure of the building for the future addition of six office floors so that the building will then be capable of providing 200,000 sq. ft. of office room. The building is so designed that there will be no necessity of artificial lighting in any portion of the day. The heating will be done by steam, indirect system, with mechanical ventilation. The columns



View showing the steel work of Fort Garry Station, Winnipeg's new union depot which is being erected conjointly by the Canadian Northern and Grand Trunk Railways. Warren & Wetmore, Architects and Engineers.



Fort Garry Station, showing the work well under way. When completed, Winnipeg will have the most modernly equipped terminal on the American Continent, if not in the entire world. Warren & Wetmore, Architects and Engineers.

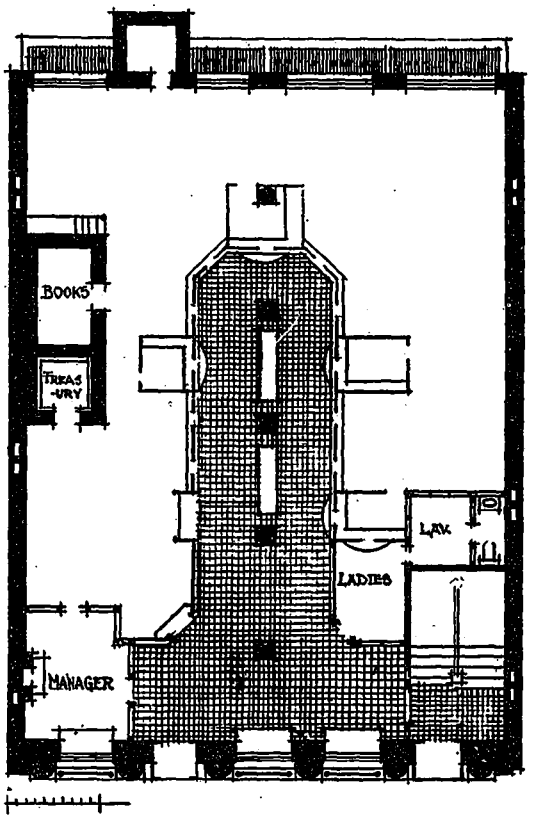
are supported at the foundations by concrete piles, this being necessary on account of the heavy column loads and the character of the blue clay underlying the city.

At the south-west corner of Portage Ave. and Hargrave St., there is at the present time under construction the Enderton Building, which will in the near future form a handsome addition to the retail section. This building, which is to be a three story structure, is designed along modern lines, with a large portion of the frontage on both streets taken up by huge plate glass windows, thus making it one of the best lighted buildings in the city. On the ground floor are to be six spacious stores, four facing Portage Ave., and two fronting on Hargrave St., while the two upper floors will contain twenty-six modern offices. Above the first floor, which will practically be enclosed on the street sides by large show windows, the walls are to be of dull glazed terra cotta of a light cream color, the large plate glass windows being uniformly marked off by Ionic pilasters and horizontal panelling between the second and third stories. The entrance to the elevator and stairway giving access to the upper

Main branch of the Traders Bank of Canada, Winnipeg, built of Tyndall stone, a peculiarly beautiful whitish grey, brown veined, stone quarried a few miles south of the city. F. S. Baker, Architect.

floors will be in the centre of Portage Ave. front, through a spacious vestibule and hall lined with marble and paved with a mosaic tile. The offices will be grouped around a large hallway or arcade extending from the second floor to the glass covered roof and running nearly the entire length of the building. This will insure every room having a maximum degree of light. Partitions separating the offices from the passages surrounding the arcade will be of plate glass, with a low marble base, and divided longitudinally into sections by columns and pilasters rising to an enriched plaster cornice. In appointments and furnishings, the building will be modern throughout. The heating will be by steam, and special attention has been given to the ventilation and sanitary requirements. Besides the space in the upper floor, additional accommodation for business purposes has been provided in the basement, which is excavated under the entire sidewalk area on both streets, and lighted by one thousand square feet of prismatic glass. The architect for the building is Mr. Wm. Fingland, and the work is being carried out by Mr. John A. Girvin, who has the general contract.

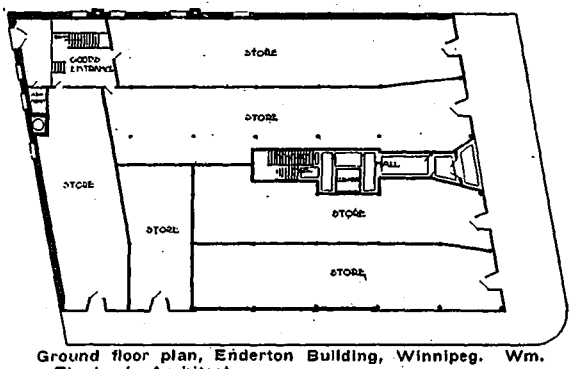
The building of the Winnipeg Horse Show Association, erected from designs by Architects Pratt & Ross,



BANKING FLOOR

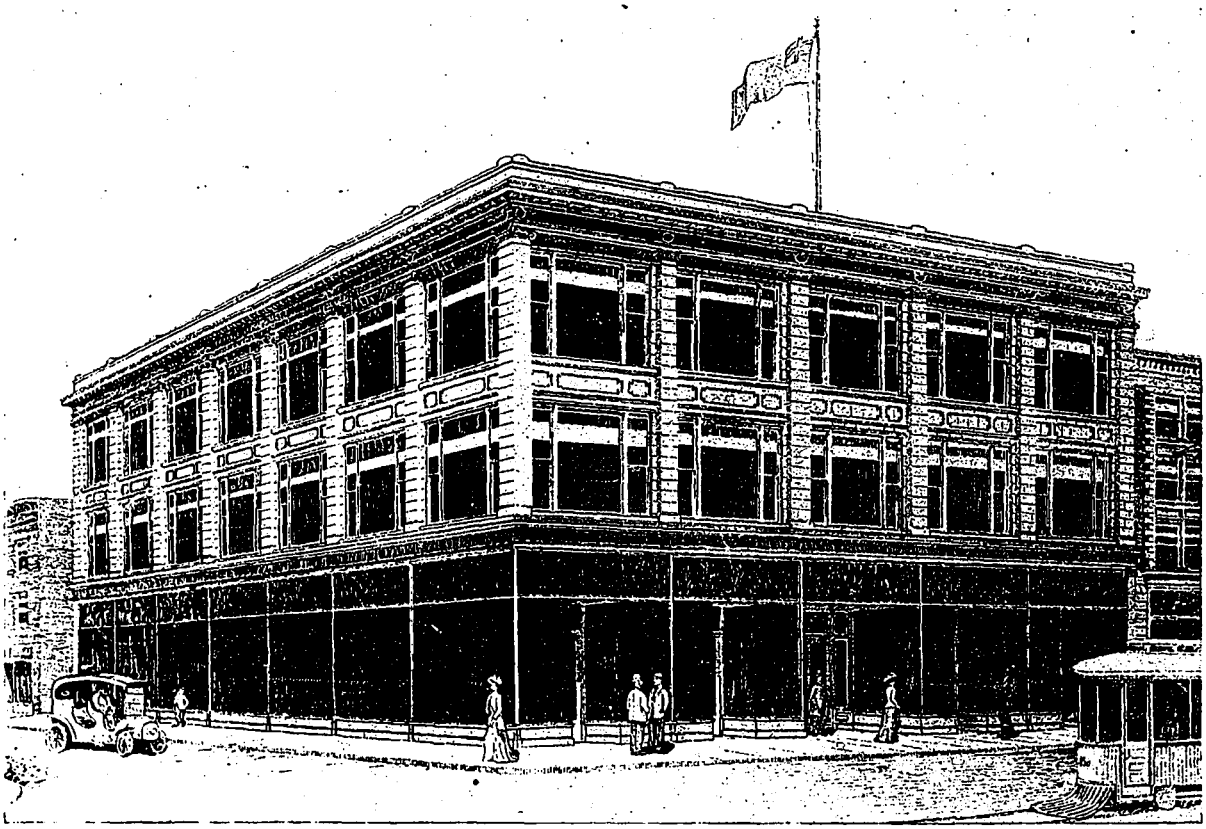
Floor plan of main branch of the Traders Bank, Winnipeg. F. S. Baker, Architect.

at the corner of Osborne Place andColony St., is another structure which speaks volumes for the progress and enterprise of the citizens of Winnipeg. It provides an amphitheatre 133 by 320 ft., with a riding academy 62 ft. wide and 132 ft. deep, adjoining it on the east side. Entrance to the main portion of the building is through massive carved oak double doors, which open into a spacious foyer. Connecting with this are, waiting rooms, for both sexes, toilet facilities, coat-rooms and offices. The amphitheatre proper, contains an arena of 220 ft.



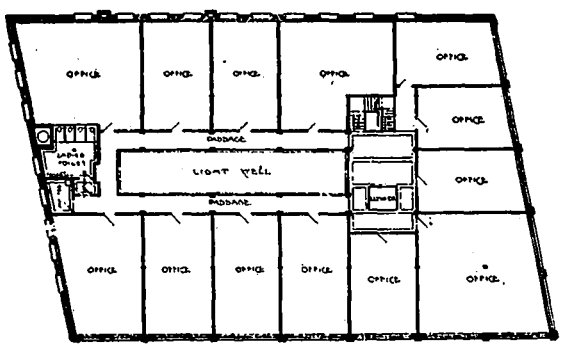
Ground floor plan, Enderton Building, Winnipeg. Wm. Fingland, Architect.

long and 86 ft. wide, which is admirably lighted by a glass covered space occupying the entire central portion of the roof, and well placed windows in the side walls. Surrounding the arena is a series of seventy-eight boxes,

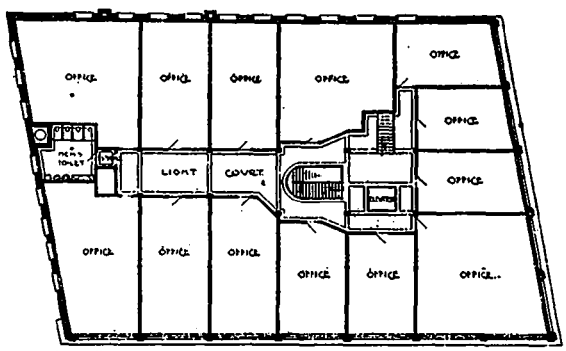


Enderton Building, corner Portage avenue and Hargrave street, a recent addition to Winnipeg's business district, which contains modern store and office accommodations. Wm. Fingland, Architect.

each providing accommodation for from six to ten persons. An excellent feature in the arrangement of the boxes is that they are elevated in such a manner that a perfect view of every part of the arena is obtainable, even though the promenade in front is crowded with spectators. On the second floor are a large and small reception room both suitable for dinner or other forms of entertainment, a committee room, ladies and gentlemen's dressing room, lavatories and shower bath, and a modernly equipped kitchen. The third floor provides quarters for the janitor, and contains a sitting room, dining room, kitchen, two bed rooms and bathrooms. The ring of the riding academy is 130 feet long by 50 feet wide, with slightly sloping sides to prevent a horse from crushing a rider's leg. A promenade gallery, 13 feet wide extends the entire length of the building, and a door, and there is an entrance from the school leading into the main arena. The building is heated by steam and lighted by both gas and electricity.



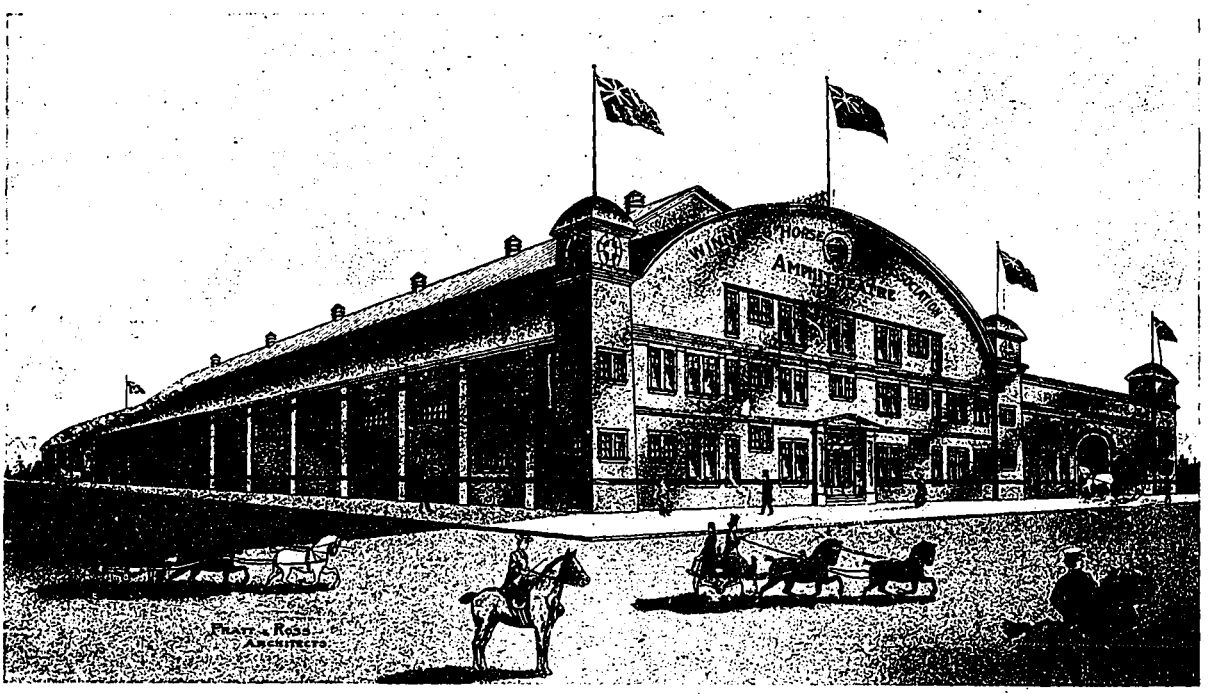
Second floor plan, Enderton Building, Winnipeg. Wm. Fingland, Architect.



Third floor plan, Enderton Building, Winnipeg. Wm. Fingland, Architect.

In the way of public and semi-public structures, the class of buildings erected in Winnipeg will stand comparison with those of any other city of similar size on the continent. Considerable work of this character has been done by the architectural firm of Hooper & Hooper, whose senior partner, Mr. Samuel Hooper, lately deceased, was for several years back Provincial Architect of Manitoba, and Vice-President of the Royal Architectural Institute of Canada, at the time of his death. Several important buildings designed by this firm are grouped on one of the page illustrations. While the Tache School is a St. Boniface structure, it, nevertheless, is representative of the splendid character of buildings which are being erected in and about Winnipeg. The other subjects in the group include Winnipeg's Central Police Station, the Carnegie Library, the Empress Hotel at Winnipeg Beach, and the home of Hon. Robt. Rogers. All of these buildings are attractive in design and substantial in construction, and they show in a limited way, the versatility and ability of this firm as designers and some of the many important structures which have been executed under their supervision.

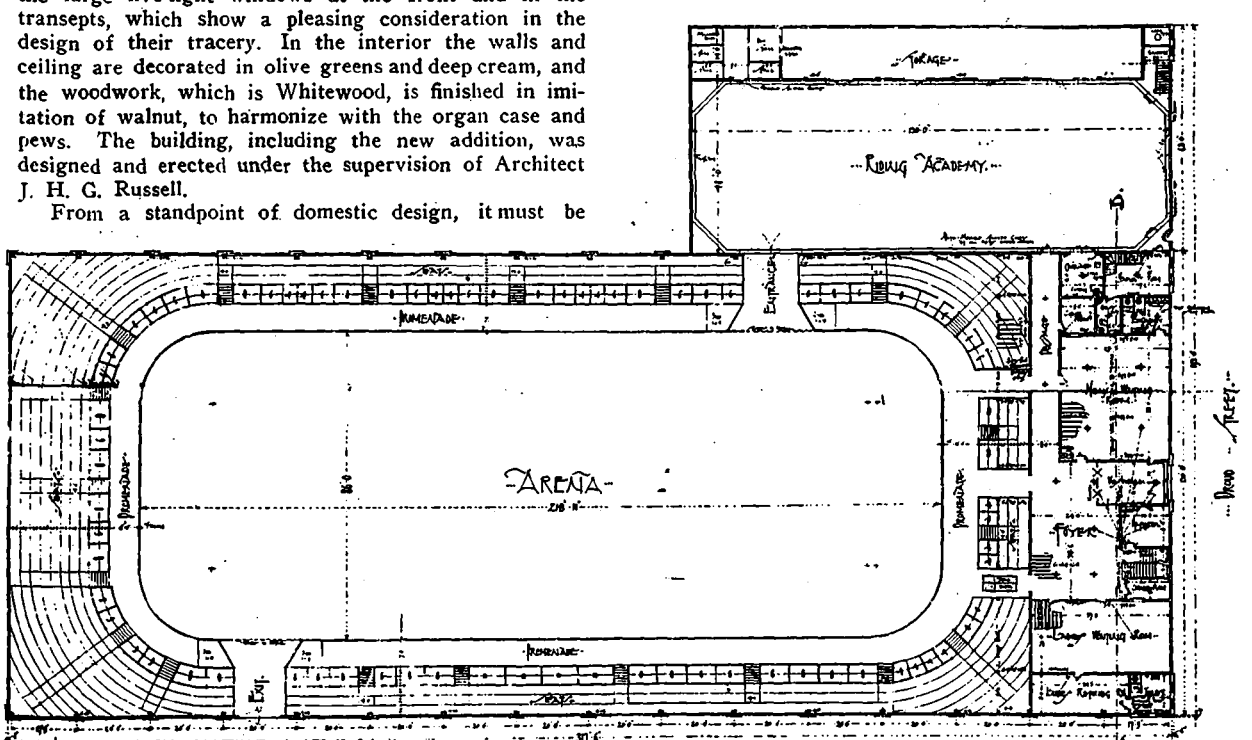
As regards church work, the city can point to a large



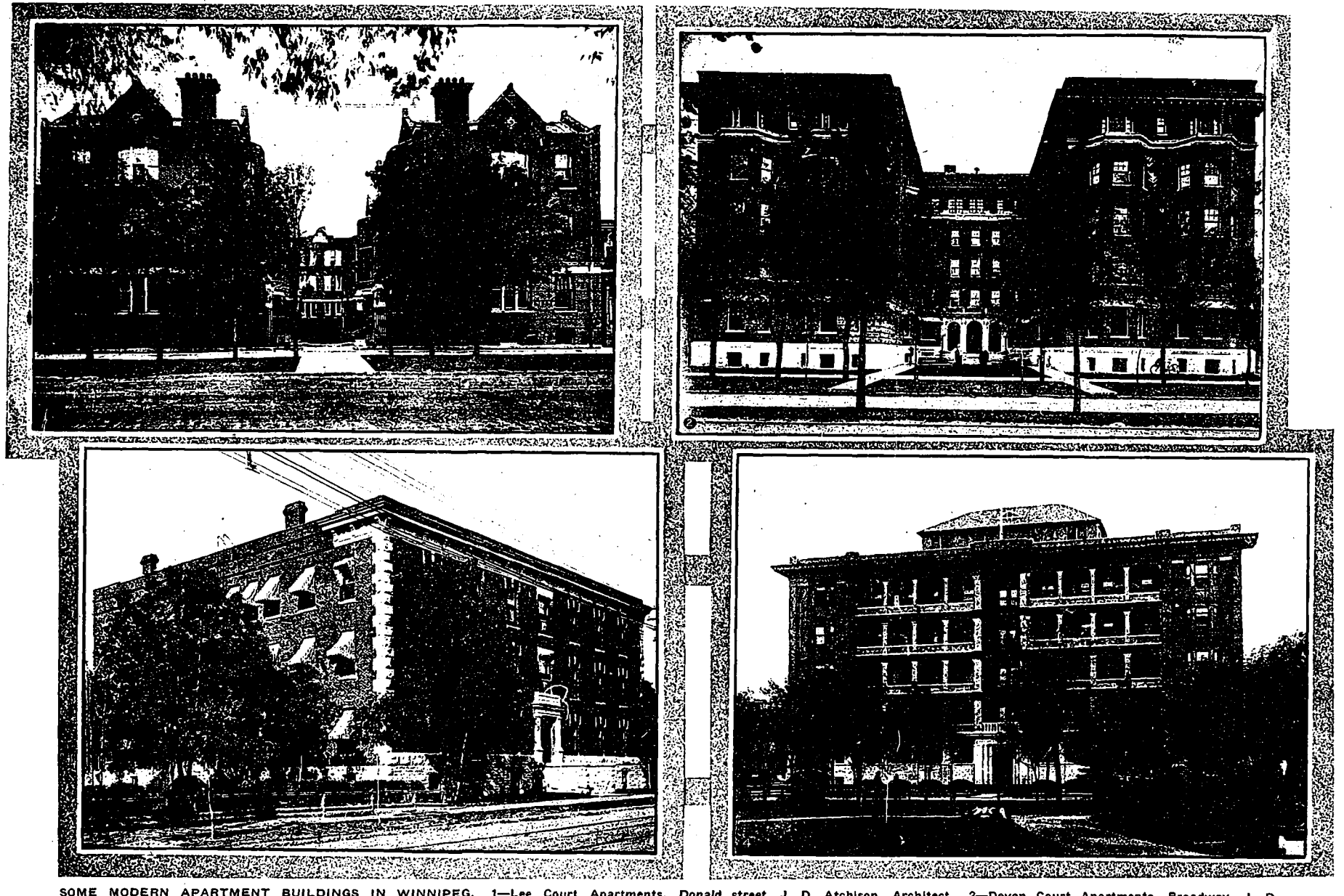
Amphitheatre and Riding Academy of the Winnipeg Horse Show Association. Another evidence of Western progress and enterprise. Pratt & Ross, Architects.

number of splendid ecclesiastical edifices to show that this important department of architecture is not being overlooked. One of the more recent examples in this respect is the Augustine Presbyterian church, which is located on River avenue, Fort Rouge, one of Winnipeg's finest residential districts. It is a large church of gothic design, to which a $25,000 extension for Sunday school and social work has just been added. The exterior walls and buttresses are built of Tyndall blue stone, and the main tower to the left of facade rises considerable above the balance of the structure. A noteworthy feature is the large five-light windows at the front and in the transepts, which show a pleasing consideration in the design of their tracery. In the interior the walls and ceiling are decorated in olive greens and deep cream, and the woodwork, which is Whitewood, is finished in imitation of walnut, to harmonize with the organ case and pews. The building, including the new addition, was designed and erected under the supervision of Architect J. H. G. Russell.

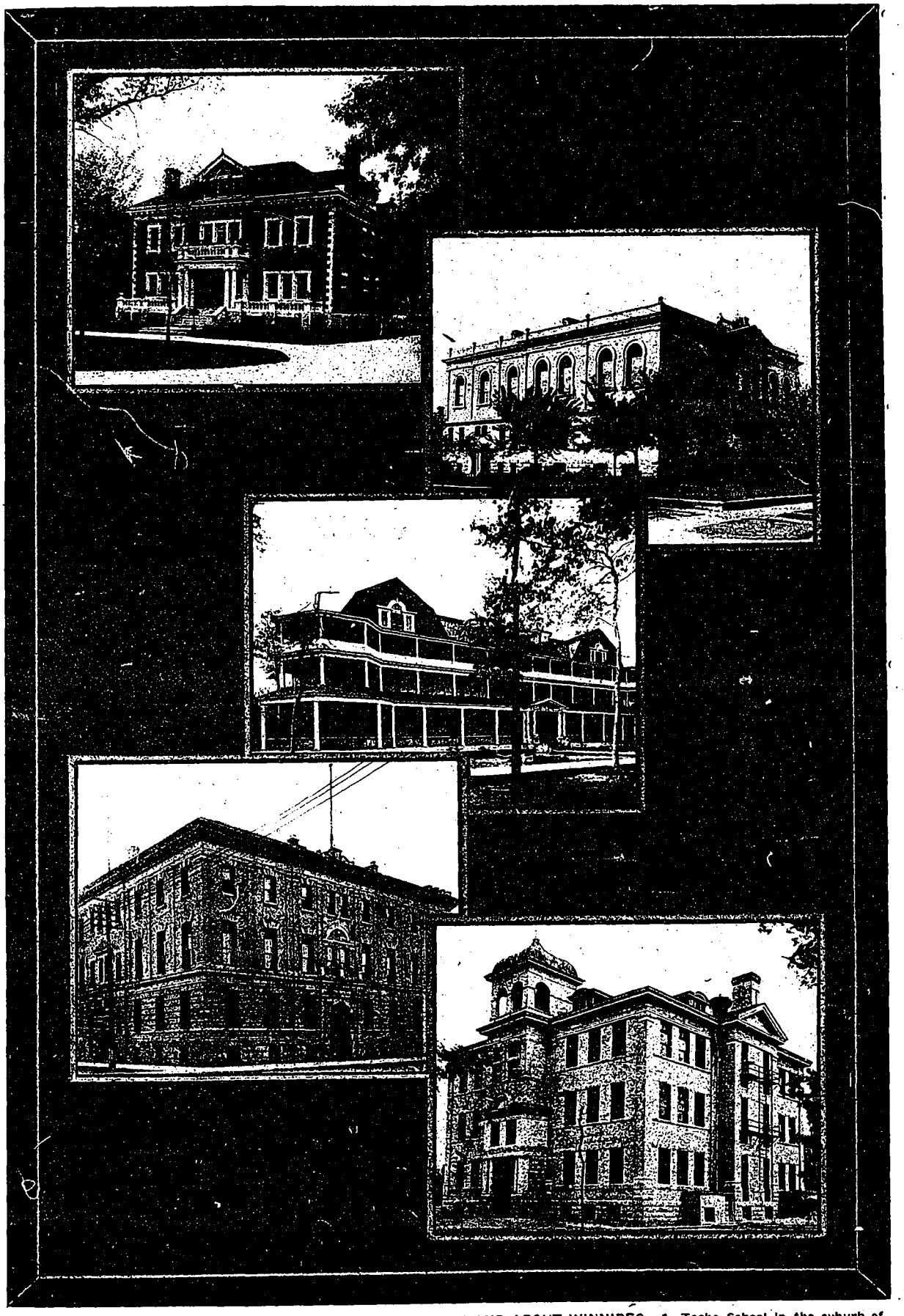
From a standpoint of domestic design, it must be said that the progress of the city has been signalized by a marked advance in this respect. One cannot be otherwise than impressed with the many fine homes and apartment houses which have come with the great period of expansion through which Winnipeg is passing. Many of these structures show a most pleasing consideration both in design and plan, and the average dwelling and apartment house will compare most favorably with similar structures of any other city on the continent. The houses illustrated on these pages show some of the more recent work in both large and small residences and apartment



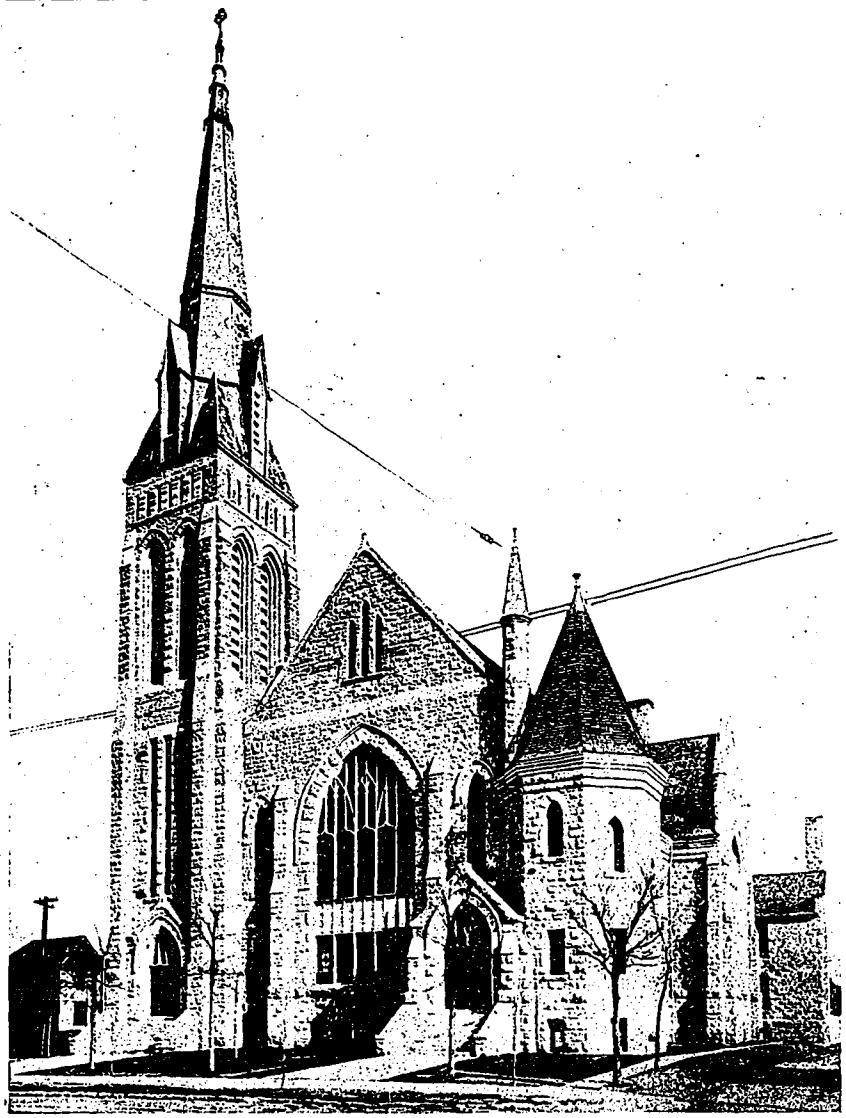
Plan of Amphitheatre and Riding Academy of the Winnipeg Horse Show Association. Pratt & Ross, Architect



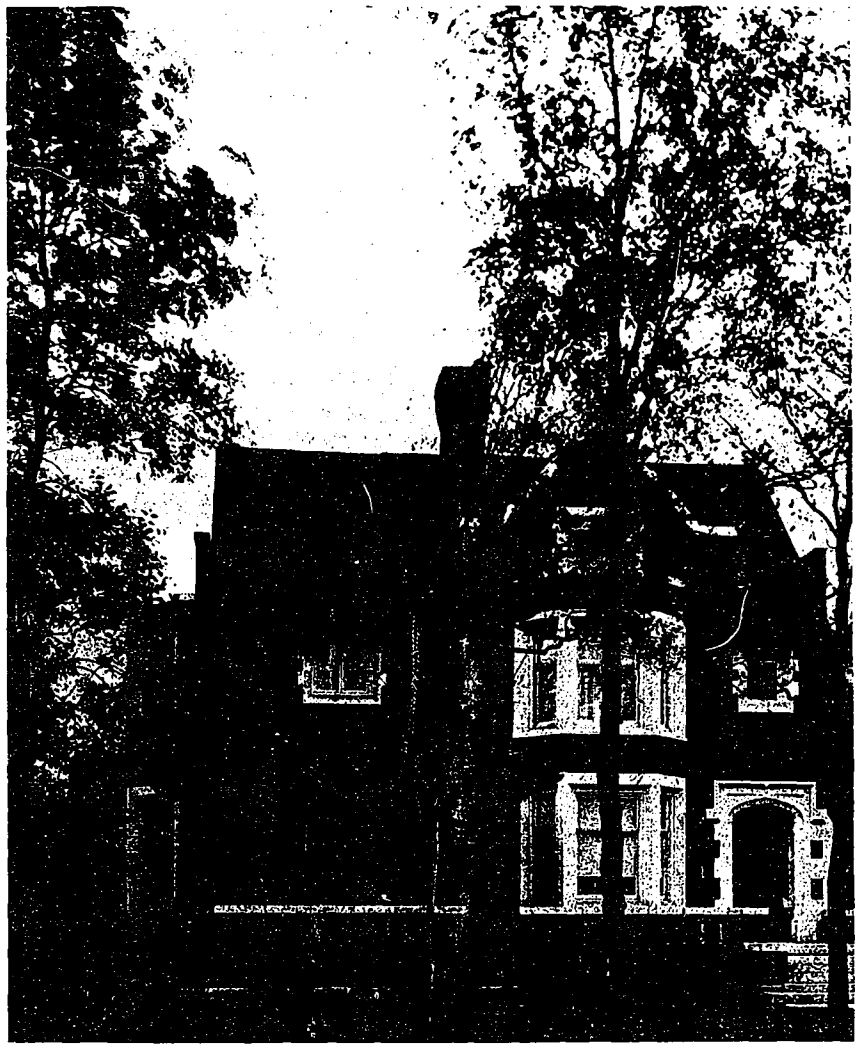
SOME MODERN APARTMENT BUILDINGS IN WINNIPEG. 1—Lee Court Apartments, Donald street, J. D. Atchison, Architect. 2—Devon Court Apartments, Broadway, J. D. Atchison, Architect. 3—Rosemount Apartments, Pratt & Ross, Architects. 4—Warwick Apartments, Central Park, W. W. Blair, Architect.



EXAMPLES OF WORK BY ARCHITECTS HOOPER & HOOPER, IN AND ABOUT WINNIPEG. 1—Tache School in the suburb of St. Boniface. 2—Central Police Station. 3—Empress Hotel, Winnipeg Beach. 4—Carnegie Public Library. 5—Residence of Hon. Robert Rogers.



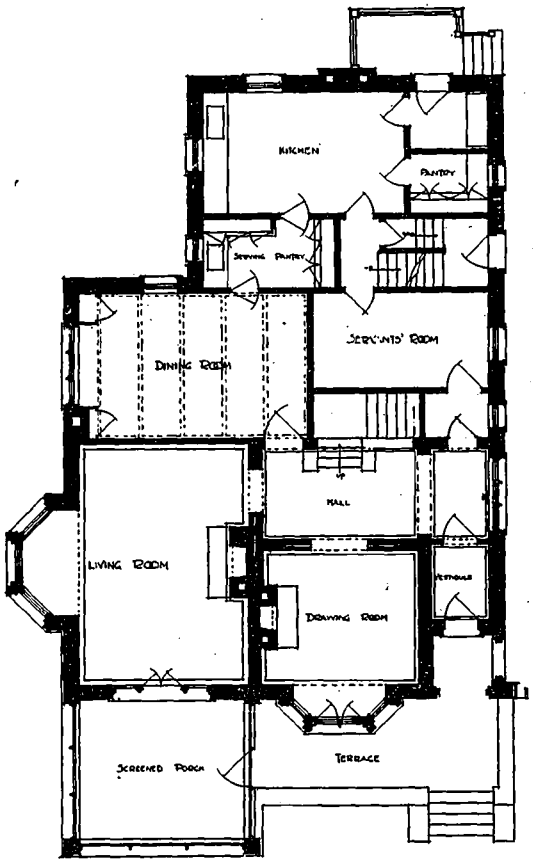
Augustine Presbyterian Church, built of Tyndall blue stone. One of Winnipeg's new ecclesiastical edifices. J. H. G. Russell, Architect.



Home of D. R. Dingwall, Roslyn road, Winnipeg. A residence of simple and pleasing lines which in general detail exhibits a modern English feeling. J. D. Atchison, Architect.

buildings, and they serve, in a limited way, to give some idea of the work which Western designers are doing along domestic lines.

The house of D. R. Dingwall, on Roslyn Road, is a residence of simple and interesting lines, which, in

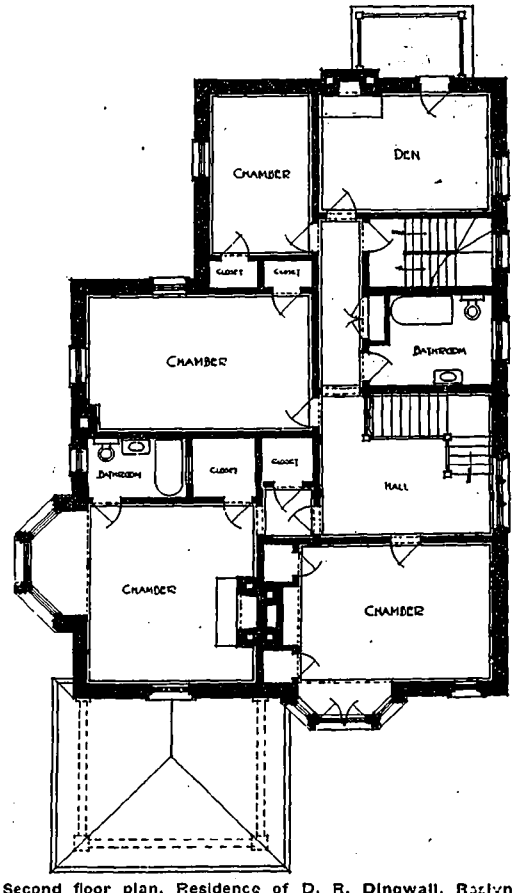


First floor plan, Residence of D. R. Dingwall, Roslyn road, Winnipeg. J. D. Atchison, Architect.

general design, exhibits a modern English feeling. It is the work of Architect J. D. Atchinson, and the walls are of red paving brick laid up in mortar of the same shade, and trimmed with first quality Tyndall stone. The first floor, in addition to the conventional number of rooms, has a servant's room so situated between the entrance and kitchen as to be quite removed from the main rooms, and yet permit the maid to either readily attend to the kitchen or front portion of the house. The hallway, and all main rooms, with the exception of the drawing room, are finished in quarter cut oak. In both the living room and dining room, the ceilings are beamed, while in the latter, the walls are finished with a high panelled wainscotting, plate rail and wood cornice. Directly opposite the bay window of the living room, is a large brick fireplace, and a pleasing feature is a spacious screened porch which opens off this room at the front of the house. This porch, and also the terrace and loggia are paved with red English quarries, laid in wide joints and pointed with black cement. The drawing room has a tile fireplace, ornamental plaster ceiling and cornice, and is finished in white enamel. Fireplaces have also been provided in two of the chambers, and den on the upper floor, which, besides the den, contains four good-sized bedrooms, having built-in clothes closets, and excellent bathroom accommodations. Walls of the rooms are of tile and keen cement, and the floors are of interlocking rubber tile laid on concrete beds.

An interesting example of the mansard roof type of residence, in which Tyndall stone and stained shingles effectively combine, is the residence of Dr. K. C. Campbell, on Ruskin avenue. The stone extends up to the second story level, above which point the walls and roof are encased with shingles, stained a dark brown, which produces a rich contrast with the lower portion and gives the house a very attractive appearance. This house has a pleasing lay-out and a spacious living room, with a beamed ceiling and a large fireplace, set in a nook with a built-in seat on either side. Casement windows open at the end of the room onto a summer porch, paved with square red tiles, which sets in under the upper story and makes a very pleasant spot on warm days. The living room, dining room and hall are finished in quarter cut oak. The hall and dining room are panelled; and all three have wood cornices. The other rooms on this floor, which consist of kitchen, pantry and closet space, are trimmed in birch, finished natural. Upstairs the entire woodwork is enamelled white. There are three bed chambers, a sleeping porch, sewing room, servant's room and three bath rooms. The bath rooms have tile floors and Keen's cement dado marked off in imitation tile. On the ground floor the flooring throughout is hardwood. The kitchen has a sanitary cement dado up to the height of five feet, and the pantry is equipped with china cupboards, pantry cases with drawers, etc. This residence is also the work of Mr. Atchison.

The house of Mr. F. Christie, on Betourney street, by the same designer, is a cement stucco house with a red brick base laid up in white mortar, which gives a warm effect to the expanse of the roughcast walls. In this house, as in many Winnipeg houses, the plaster is ap-



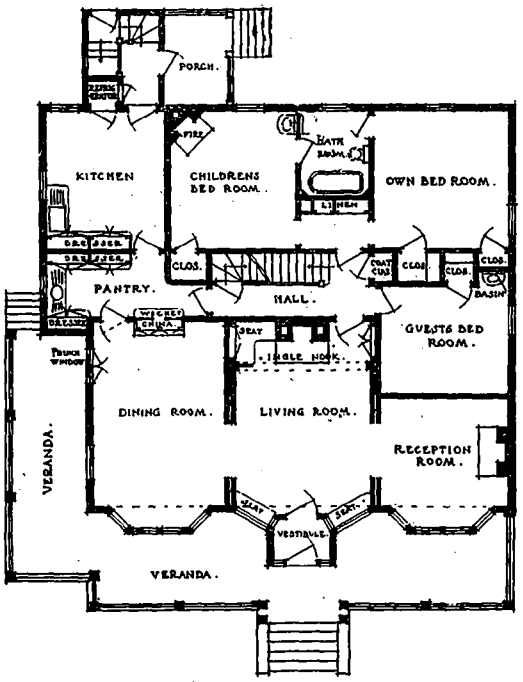
Second floor plan, Residence of D. R. Dingwall, Roslyn road, Winnipeg J. D. Atchison, Architect.

plied directly to metal lath, thus making it a durable and permanent type of construction. The entrance has an arched hood. The brick walls on either side of the stone step, as well as all chimneys, are capped with stone, and the piazza and vestibule are paved with red English

Bungalow of F. W. Pace, Wellington crescent, Winnipeg. The graceful lines, half timbered gables, and soft brown tone of woodwork, serves to give this little abode a pleasing individuality and homelike appearance. J. H. G. Russell, Architect.

Roslyn Court, Roslyn Road, Winnipeg. One of the recently completed apartment buildings, a noteworthy feature of which is the scheme of outside balconies, with doorways opening from each suite. Wm. Wallace Blair, Architect.

quarries. The vestibule, inner hall and servants' sitting room, which are on a line with the entrance, effect a separation of the large living rooms with the spacious rear verandah, and the dining room and kitchen, which takes up the left portion of the house. All rooms on this floor, with the exception of the kitchen and pantries, are finished in first quality quarter-cut oak. The living room has a beamed ceiling, large brick fireplace with oak mantels, and built-in window seat. In the dining room the walls are panelled to the plate rail. This room is connected to the kitchen, directly at the rear, by the servery and is provided with a built-in china closet. The



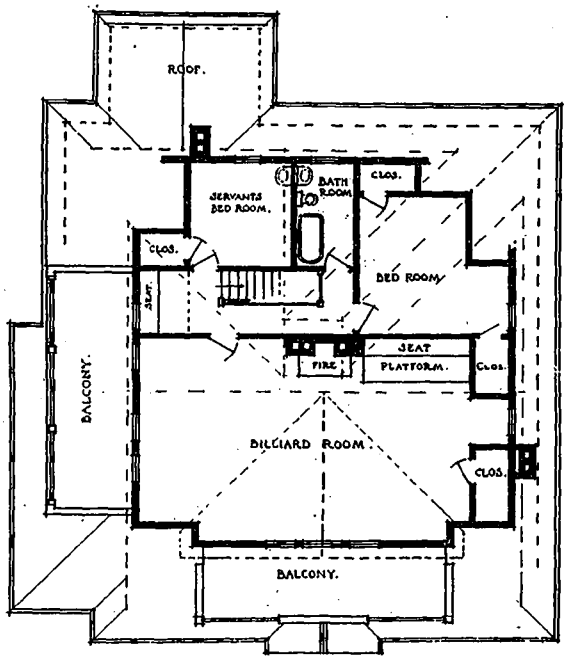
First floor plan, Bungalow of F. W. Pace, Winnipeg. J. H. G. Russell, Architect.

kitchen and pantries are trimmed in birch, and have built-in pantry cases, working counters, etc. The upper floor, which is finished in white enamel, contains a large hallway, three bedrooms, servant's room, large linen and clothes closets, and two modernly equipped bath rooms.

Architect Atchison's own residence on Nassau street, is also a roughcast house with base of red brick, having heavy spread joints of white mortar. It is not a very large house, but it is one with an interesting design, a well planned layout and rather roomy interior. The exterior is characterized by simple, straight lines and direct surfacing, and rendered particularly attractive and homelike in appearance by broad overhanging eaves and a most interestingly designed entrance. The reception room, and a good sized living room with a beamed ceiling and a large fireplace, to which it connects, both open on to a porch paved with red tile, at the side of the house. At the left of the entrance is the dining room with servery and kitchen directly at its back. All the main rooms are finished in oak, and the floors throughout are of hardwood. The vestibule, hallway and dining room have wood cornices and the latter interior has walls panelled to the plate rail. Upstairs are three bed-rooms, one of which has a fireplace, a sitting room, bath-room and a good sized hall. The exterior woodwork is stained a dark brown, and the roof shingles are stained red. The kitchen and bath-room have sanitary cement dados, and the latter is paved with a tile floor.

Another domestic structure designed by Mr. Atchison, is the home of W. C. Russell, on Ethel Ave. It is an interesting small house, built of stone, and shingles, and with a large rustic chimney rising from its base to a point slightly above the roof. The upper portion of the house is of the mansard type, with three front dormers, while the lower portion at the front is recessed and serves to form an enclosed verandah. In layout, the house follows the through central hall plan of the Colonial style. To the right is a large living room with beamed ceiling and fireplace, while to the left is located the dining room with the kitchen at the rear. These rooms, with the hallway, take up this entire floor, and all are furnished in fir stained to imitate oak. On the second floor are four chambers, a hallway and bathroom, all bedrooms and the hall are finished in white enamel, and liberal closet space is provided throughout.

Winnipeg has not been slow to recognize the advantages of the modern apartment building in solving the housing problems in her growing residential sections, and it might be said in this respect that in number, size and architectural treatment, the city's advance has been most marked. There are two reasons for the popularity of this character of building in the West. One is, that it affords accommodations in desirable localities for many new arrivals who have not fully taken up the matter of, or established, a permanent resident; and the other is, because many persons who have migrated from the East and the South, would sooner pay a little higher rental and be relieved of the certain duties which a western winter sometimes impose. In the construction of these buildings special attention has been given to the heating, ventilating and sanitary requirements. With few exceptions, the entrances are executed in marble and mosaics; the corridors, partitions and floors fireproofed; and the apartments so arranged as to obtain for each room the benefit of outside light. As a rule these structures have either spacious central courts, or are provided with a scheme of balconies, with doors opening from



Second floor plan, Bungalow of F. W. Pace, Winnipeg. J. H. G. Russell, Architect.

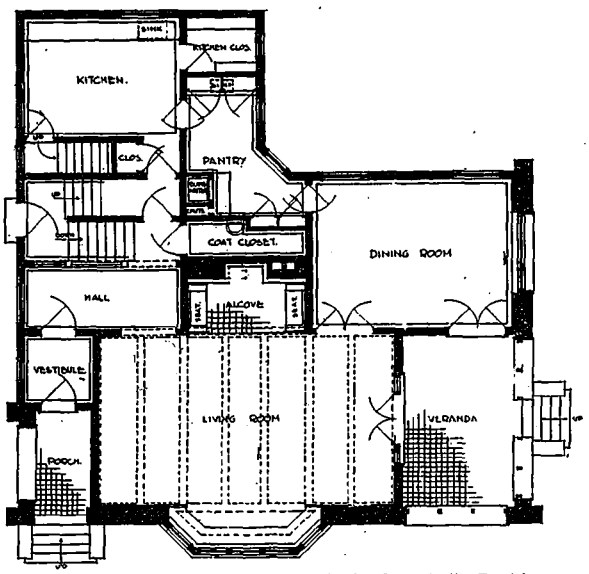
each suite. Two structures of the latter type are the Roslyn Court Apartments (just completed) and the Warwick Apartment, both of which were designed by Architect W. W. Blair. Of the former type, two splendid examples are found in the Lee Court and Deven Court Apartments, built from designs by Architect J. D. Achison. Another building of this character included in the accompanying illustrations, is the Rosemount Apartments. It is an interesting structure of the square type, with a pleasing exterior of direct lines. The architects of this

Home of Dr. K. C. Campbell, Ruskin Row, Winnipeg, an interesting example of a mansard-roof residence in which Tyndall stone and stained shingles are attractively combined. J. D. Atchison, Architect.

Residence of Mr. F. Christie, Betourney street. One of Winnipeg's many cement stucco houses, in which the plaster is applied directly to metal lath, thus making it a durable and permanent type of construction. J. D. Atchison, Architect.

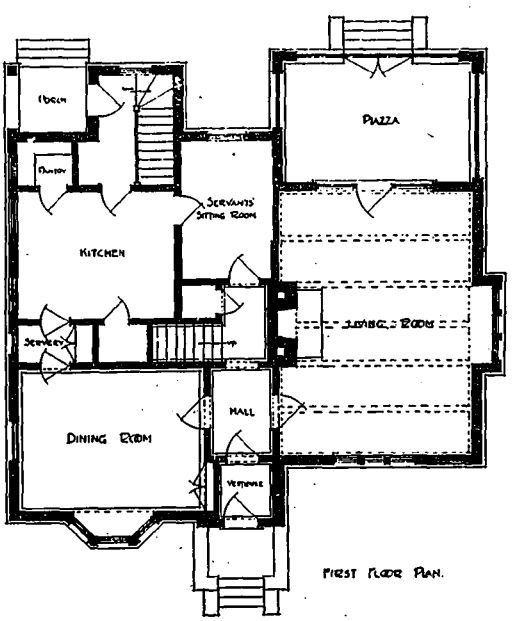
building are Messrs. Pratt and Ross, who are doing a large amount of acceptable work both in Winnipeg and throughout the Province.

A house of the square type, which has a number of noteworthy features, is the residence of Architect John



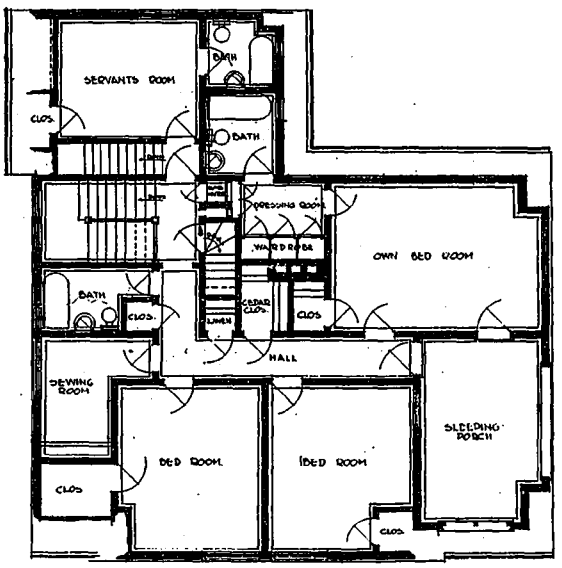
First floor plan, Home of Dr. K. C. Campbell, Ruskin Row, Winnipeg. Note the large living room and the connection between dining-room and kitchen. J. D. Atchison, Architect.

Woodman, on River Avenue. It is a two story red brick structure, with a hip roof and dormers forming an attic floor. The roof is of slate and the foundations, porch, and trimming are of lime-stone. The side entrance and main porch show an interesting treatment, as does also the large verandah which runs the entire length of the house, on the side removed from the street. The special feature in the interior arrangement is the sun room or conservatory at the end of the dining room, with



First floor plan, Residence of Mr. F. Christie, Winnipeg. J. D. Atchison, Architect.

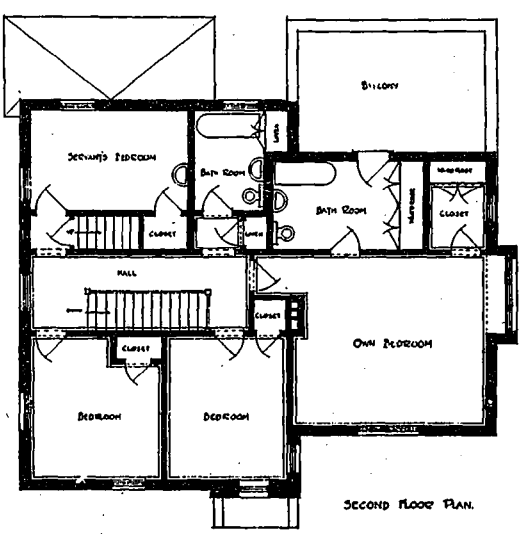
recess in clear glass set in metal sash. This secures to the dining room the effect of the natural foliage of the plants in the sun room, and renders it a most delightful interior. In addition to the dining room, the first floor contains a drawing room and library—both of which are placed on either side of the vestibule—a large central hall, pantry and kitchen. All the main rooms are finished in hardwood; The library has a fireplace, and both the entrance porch and sun room floors are paved with tile.



Second floor plan, Home of Dr. K. C. Campbell, Winnipeg. J. D. Atchison, Architect.

Upstairs there are four bedrooms with built-in wardrobes, a large hall, and two bath-rooms. Two of the bedrooms have fire-places, and the bath-rooms have tile floors and sanitary dadoes.

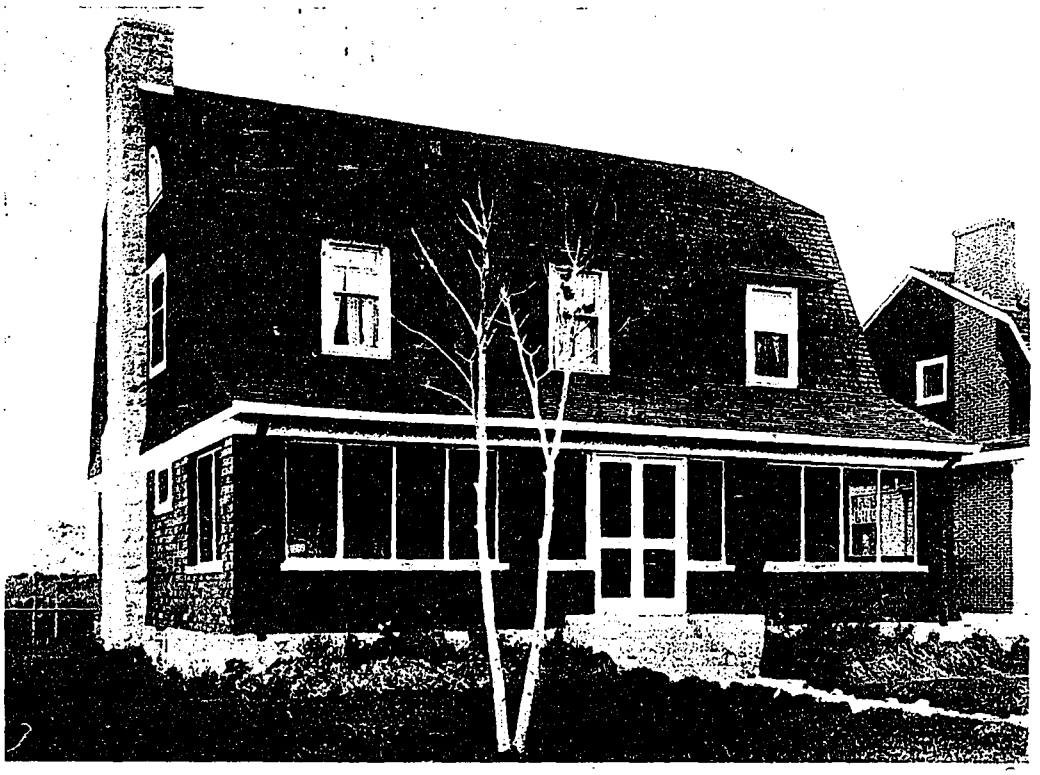
The residence of F. W. Pace, on Wellington Crescent, is an attractive little house of the bungalow type, designed by Architect J. H. G. Russell. It has a low spreading roof with half timbered gables, and a verandah extending across the entire front and down a portion of the sides. The foundation is of red brick, the lower portion of the house clapboarded, and the woodwork and shingled roof are painted and stained a dark brown. The plan of the interior is noteworthy in that, while the house



Second floor plan, Residence of Mr. F. Christie, Winnipeg. J. D. Atchison, Architect.

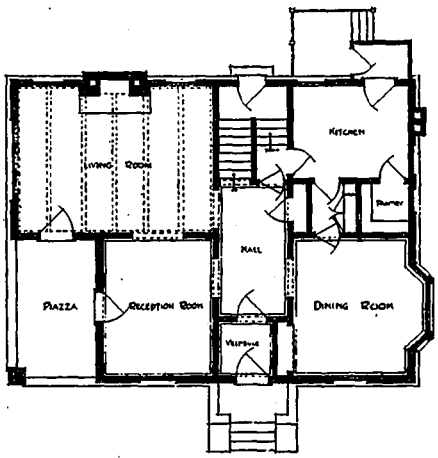
is only a one-story and attic structure, it, nevertheless, provides for nine fair sized rooms and a billiard chamber. The living room, with the reception room and dining room on either side, occupies the front portion of the

Residence of Architect J. D. Atchison, Nassau street, Winnipeg. A study in straight lines and direct surfacing. Note the broad eaves, the hooded entrance and extreme simplicity of the general design.



Home of W. C. Russell, Ethel avenue, Winnipeg, an attractive small house with a stained shingle exterior. J. D. Atchison, Architect.

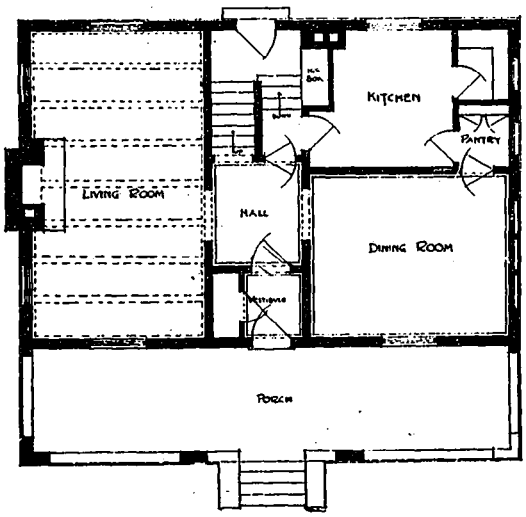
lower floor. At the back of these is a transverse hall and stairway with a large pantry at one end and a guest chamber which is situated in the space at back of reception room. Immediately beyond this is the kitchen opening on to a rear porch and a children's room and bedroom with a bath-room situated between the two. The living room has a large ingle-nook, and fire-places are found in both the reception and children's chambers. Built-in features such as china closets, kitchen cup-



First floor plan, Residence of Architect J. D. Atchison, Winnipeg.

boards and clothes closets, form a feature of the general layout. Besides the billiard room, which has a large fireplace and takes up the front portion of the attic floor, there is an additional bedroom, a servant's room, bathroom and extra closet space. Another feature is a large balcony at the side of the house over the verandah, which can be reached either from the billiard room or hallway, which has a built-in seat at the end.

Other work of a domestic character, as designed by Mr. Russell, is seen in the four larger houses grouped on page 80. These serve to give a good idea of the substantial character of Winnipeg's residential buildings.

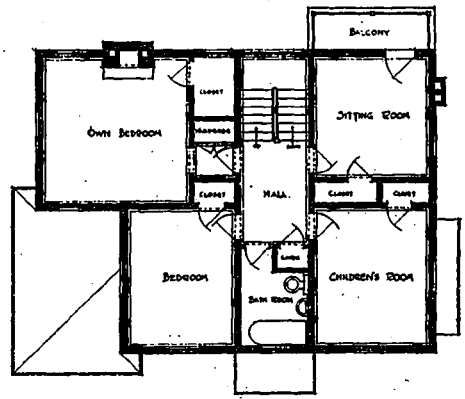


First floor plan, Home of W. C. Russell, Winnipeg, showing the compact interior arrangement. J. D. Atchison, Architect.

Three of these structures express their lines in brick and stone, while the fourth shows an interesting treatment in brick and half-timber work. They are residences of Wm. Harvey and C. H. Beckett on Armstrong Point, the home of F. J. Sharpe on Roslyn Road; and the residence of W. H. Cross on Wellington Crescent.

FERROMAC ROADWAYS—New System of Road Surfacing Now on Trial in England.

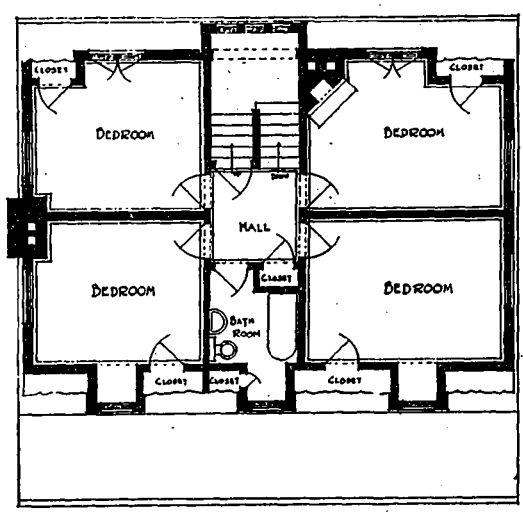
IN VIEW OF THE GENERAL AWAKENING throughout the country, to the necessity of good roads, and the vast sums which will probably be expended in this direction within the next few years, it might be well for municipalities and public boards concerned with the carrying out of such improvements, to familiarize themselves with the experiments which are now being made on the highway between Wakefield and



Second floor plan, Residence of Architect J. D. Atchison, Winnipeg.

Dewsbury, England, under what is known as the "Ferromac system." These experiments are being keenly watched by a large number of civil engineers, surveyors, and others who are interested in the work of constructing and repairing roads, and although possible, the same system could not be as advantageously employed in Canada, it may nevertheless, suggest a similar method which would permit of the construction of highways of a permanent character on a rather economic basis.

"Ferromac," itself, is a powder, the exact composition of which has not been made public. It is of a cementitious character, binding stones, cinders, and other ma-



Second floor plan, Home of W. C. Russell, Winnipeg. J. D. Atchison, Architect.

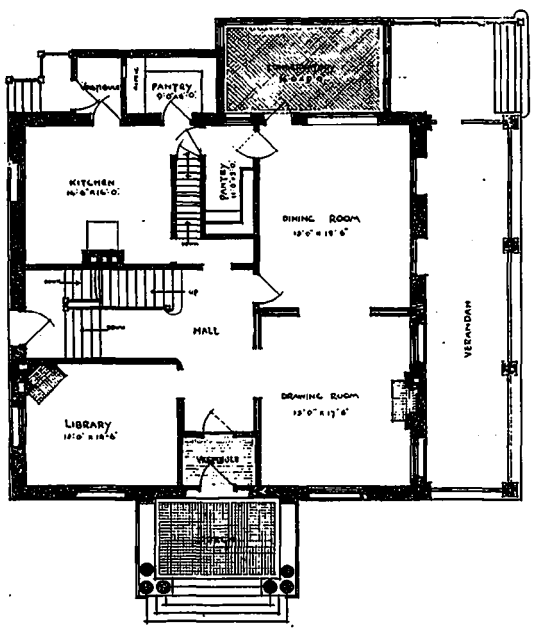
terials into a solid mass, so as to prevent internal attrition and to reduce the dust nuisance to a minimum. It contains no oil or tar and no chemicals injurious to either animal or vegetable life. The particular slag recommended for use with it as an aggregate is that procured in the Siemens-Martin acid process of steel making, but the system is adapted to other materials with equally

RESIDENTIAL WORK IN WINNIPEG, FROM DESIGNS BY ARCHITECT J. H. G. RUSSELL. 1—Residence of Wm. Harvey, Armstrong Point. 2—F. J. Sharpe's residence, Roslyn avenue. 3—Home of W. H. Cross, Wellington Crescent. 4—Residence of C. H. Beckett, Armstrong Point.

Residence of Architect John Woodman, River avenue, Winnipeg. A recent example of the square type of house which has a number of noteworthy features to commend it.

Dining-room, looking toward the drawing-room, Residence of Architect John Woodman, Winnipeg.

good results. This slag is said to contain a large percentage of iron oxide, very little lime, and consequently is hard and tough. The following chemical analysis of Siemens-Martin steel slag is given: Silica, 55; manganese oxide, 10; iron oxide, 30; lime and alumina, 5; total, 100. The cost of construction under this system is said to be not much more than good-class macadam. The cost of the work as completed near Wakefield was 42 cents per square yard, and, when the lengthened life of the



First floor plan, Residence of Architect John Woodman, Winnipeg.

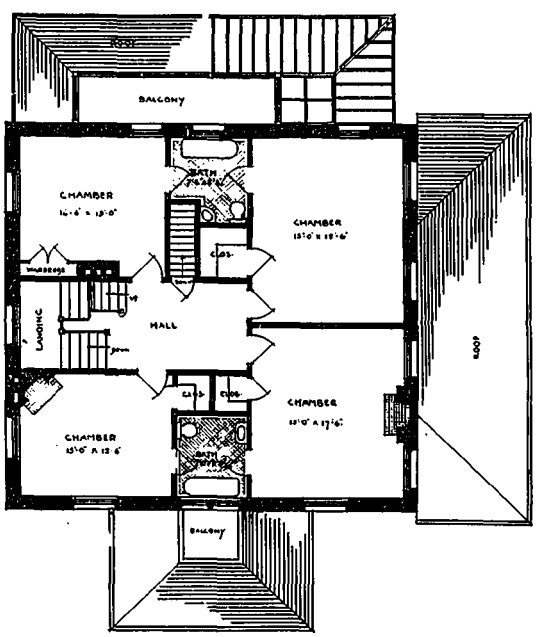
road is considered and the amount saved in repairs, it is believed to be exceedingly economical.

The system is said to be especially valuable in the reconstruction of old macadamized roads and in converting them into highways suitable for modern vehicles and heavy traffic. This process is described as follows: After scarifying the old surface, a layer of chippings and ferromac powder is put down. Over this the metal is spread about 4 inches deep. The whole is then rolled dry with a steam roller and afterwards drenched with a mixture of cementing chemicals and water and again rolled to work up the binding materials to the surface. Another layer of chippings and ferromac is then rolled in wet, converting the whole into a solid mass. In short, the familiar macadam process is followed throughout, the only difference being that instead of using mud and chippings to bind the metal together, ferromac powder and chemicals are used. But that difference means the total abolition of the deadly internal attrition, the grinding of the metal into dust, and yet more dust, which is the fatal weakness of ordinary macadam.

In addition to those already mentioned there are large number of advantages claimed for it, viz: It forms a waterproof crust which is solid throughout, adapted to wheels of all kinds, and to all gradients. It does not require any special plant, and roads can be constructed or repaired in any kind of weather except frost. It prevents mud and dust, renders scraping unnecessary, and makes a surface which is free from danger to animals and vehicles of slipping.

The work upon the Dewsbury-Wakefield road examined by West Riding road officials had been subjected to the test of two journeys daily for a period of two weeks by a large traction engine drawing three wagons, heavily loaded, the whole estimated to weigh between 50 and 60 tons. It is reported that the road suffered no "appreciable damage."

A NEW TYPE OF ENGINE suitable for either marine or stationery purposes, and designed for to use heavy crude oils, such as cost, in England, from 6 to 7 cents a gallon, has lately been turned out by an engineering firm at Duffield, Derbyshire. The engine, says a contemporary, which is produced either in a 25 h. p. size with two cylinders, or of 50 h. p. size with four cylinders runs on the Otto cycle. The vaporizer is a feature of special interest. It is heated by the exhaust gases, and in it the oil, after having been preheated by passing through a jacket around the exhaust pipe, and having been atomized by compressed air, undergoes a process or fractional distillation. The portion of the oil that is of a lower flash point than about 220 degrees F. is vaporized, and, meeting a current of air, which has also been preheated, is drawn into the cylinders; a certain amount of water is also injected, this having been found to improve the smoothness of running as well as to increase the power. The constituents of the oil that have a flash point above 220 degrees F. and form the "hard base," are thrown against a collecting surface, whence they run down into a receiver as a thick, black tarry liquid. This arrangement prevents the trouble which attends the use of heavy crude oils through the "hard base" entering and scoring the cylinders and clogging the valves. The governor regulates the supply of air and oil and the resulting vapor in such a way as to se-



Second floor plan. Residence of Architect John Woodman, Winnipeg.

cure that the mixture admitted to the cylinders is correctly proportioned to the load on the engine: and by means of a hand lever, which can be locked in any position, it can be almost instantly set to give a speed variation of over 50 per cent. For starting a spray of oil from the atomizer, worked from a reserve of oil and compressed air normally left in the tanks provided for the purpose, is lighted and directed upon the vaporizer, which in consequence is quickly heated, a few turns of the fly wheel then sufficing to set the engine in motion.

WINNIPEG BUILDERS' EXCHANGE.—Model Home of Organization with Which are Identified the Leading Supply Firms and Contractors of the City. —Present Membership Over 300.

A REVIEW OF THE PROGRESS of the "Western Metropolis," as told in the more recent architecture of its business and residential districts, would be incomplete without a word of reference to the Winnipeg Builders' Exchange.

It would possibly not be stretching the point to say that as regards organizations and accommodations, it is the largest and most representative institution of its kind in Canada. Since its inception in 1901, it has steadily grown until, to-day, it has a membership of over three hundred, which includes the largest and most prominent material supply firms and contractors in the city. Last spring the Exchange took up its abode in its present splendid quarters at the corner of Portage Ave. and Hargrave Street in the down-town district—a most central and convenient location, nearly opposite the big department store of the T. Eaton Company.

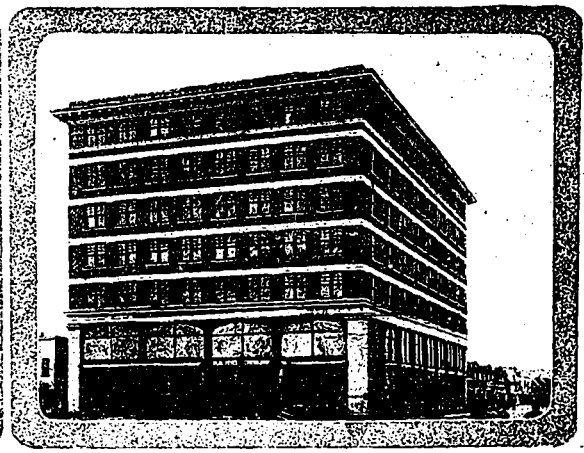
The building, which bears the name of the Builders' Exchange Building, and denotes in outline and construction the importance of the institution which exists within—is a seven story structure, containing a floor area of over seventy thousand feet. With the exception of the first three floors, the entire space is mainly taken up by the building interests. The Exchange, which is reached by two high-speed elevators, occupies the entire fifth floor, and the appointments throughout are model in character.

In addition to the general offices, and secretary's room and directors' parlor, are a large assembly hall, three estimating rooms, a storage compartment, and twenty-one individual offices for members, all of which are arranged and equipped to provide every convenience and to readily facilitate the dispatch of business. While the fourth and two upper floors do not form a part of the Exchange proper, they are essentially an element in its composition, in that these floors are entirely occupied by supply firms and interests, which are allied with this institution.

It would be impossible to go fully into the duties, functions and accomplishments of the Exchange, in the limited space that is available. These, we believe, are pretty generally known to the building public. Suffice it to say that its mission is as much altruistic as commercial, and that the Exchange, under an able directorate, is gradually obtaining its object, that of promoting the best interests of the building fraternity, and bringing about a broader understanding in general, and a fair and equitable state concerning the architect, contractor, material firm, and mechanic.

Much credit is due both the past and present officials for the service they have rendered in making this institution a success, and especially to the present president, Mr. W. H. Carter, and the secretary, Mr. J. H. Buxton, who are untiring and enthusiastic in their efforts to make the Exchange the largest, most thoroughly organized, most serviceable and efficient institution of its kind in Canada.

W. H. Carter, President.



Builders' Exchange, Winnipeg.

J. H. Buxton, Secretary.

AN AUSTRALIAN INVENTION for planing street car and other rails, without disturbing the permanent way, has just been accepted by certain street railroad companies in that country as well as by the railroad authorities in at least one of the States. The new invention, which is known as the Woods-Gilbert rail planer, is a self-contained machine which travels on the rails so that it can be worked at night without interfering with the traffic. The claim of the inventors is that by restoring a rail to its original level and evenness of surface, the cost of putting down a new rail is postponed for many years, and the inconvenience that follows the tearing up of the track is obviated. The estimated cost of relaying a mile of street car track in Australia is about $7,500, and, as only a small proportion of that cost is involved in the remodeling, it is clear that by restoring the rail to its original shape and efficiency a great saving of capital outlay will be insured. In the case of the street-car rails, the inventors are under contract to deepen the cut in the rail in which the flange runs; also to reduce the narrow outside lip to the level of the rest of the rail. This work will be done by a high-speed steel cutter, driven from the machine, in one operation, as it moves forward on the line. The great difficulty that had to be overcome was to insure accuracy of cut with a moving machine on an uneven track. This has been secured by the adoption of self-adjusting machinery.

OPENS WINNIPEG BRANCH.

EADIE-DOUGLAS, LIMITED, of Montreal, Toronto and Ottawa, who represent some of the best known houses in the building supply line, among them the Leeds Fireclay Co., England; Terrano Flooring Co., Montreal; Insulyte Company Limited, Montreal; Custodis Chimney Construction Co., New York, etc., are opening this month a Western office in Winnipeg in charge of Mr. V. C. North, who has been with them for some time in Montreal. In addition to their regular lines they will handle a special line of building supplies for Winnipeg and the Western market.

CONSTRUCTION

A Journal for the Architectural, Engineering and Contracting Interests of Canada.

H. GAGNIER, LIMITED, PUBLISHERS

Saturday Night Building
TORONTO - - - - CANADA

Ivan S. Macdonald, Editor and Manager.

Address all correspondence to "CONSTRUCTION," Saturday Night Building, Toronto, Canada.

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ADVERTISEMENTS.—Changes of, or new advertisements must reach the Head Office not later than the first of each month to ensure insertion. Advertising rates on application.

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

Vol. 3 Toronto, December, 1909 No. 2

Current Topics

THE ANNUAL MEETING of the Canadian Society of Civil Engineers will be held at Ottawa, January 25, 26, 27, 1910. By a happy circumstance, the annual banquet will take place on Wednesday evening, January 26th, the day Parliament closes, and many of the Dominion legislators will be in attendance.

* * *

THE WORK OF BORING THROUGH THE ANDES on the line of the Trans-Andine Railway which is to extend from Arica, Chile to La Paz, Bolivia, has just been completed. The tunnel is five miles long and the highest in the world. The length of the line, when completed will be 300 miles, and the complete cost of its construction will be in the neighborhood of $15,000,000.

* * *

OTTAWA IS JUST COMING TO THE CLOSE of a most successful building year. So far the aggregate total for permits issued amount to approximately $5,000,000, or about double the figures for 1908. Although the building of the Chateau Laurier and the new Central station, has materially contributed to the gain, yet the natural growth of the city, and the many new apartment buildings undertaken, is to a great extent the cause of this marked progress.

* * *

AT THE ANNUAL MEETING of the Manitoba Association of Architects, recently held at the Grange Hotel, Winnipeg, the following officers were elected for the ensuing year: President, J. H. G. Russell; 1st vice-president, Wm. Fingland; 2nd vice-president, J. D. Atcheson; treasurer, G. W. Northwood; secretary, W. Percy Over. Following the business session the members sat down to their yearly dinner which was presided over by Past President Greenfield, and attended by prominent laymen and public officials.

THE DIAMOND SHAPED QUARRY in leaded lights, according to the IRISH BUILDER AND ENGINEER, while perhaps more preferable from an artistic viewpoint, owes its popularity primarily to the fact that the diagonal spacing throws off the water quickly, whereas the horozontal lead cam retain the water, and thus increases the danger of leakage. It adds, that the manufacturers of leaded glass advise the substitution of the diamond for the rectangular quarries.

* * *

STEPS ARE NOW BEING TAKEN by the United States Government towards the erection of a wireless telegraph station on the federal reservation near Washington, D.C. Its most striking structural feature will be a gigantic concrete tower, having a diameter of 50 feet at the base and 8 feet at the top, which will thrust itself six hundred feet above the ground. It is expected to have the station in operation within a year, and the tower, it is said, will be one of the most unique structures in the world.

* * *

AN AMUSING STORY of how the Blackfriars bridge has always been painted sea green ever since it was built in 1865, is told by the IRISH TIMES. When it was nearing completion the works manager asked the contractor what color it should be painted. "See Green," replied the gentleman, referring to the principal engineer. The works manager mistook the direction for sea green, and ordered at once sufficient paint to cover the structure. Having bought the paint it was thought best to use it, and "sea green" has ever since been the color of the bridge.

* * *

A FUND IS BEING RAISED IN ENGLAND for the purpose of erecting a national theatre in London, to the memory of Shakespeare. It is proposed by the committee in charge of the project to bring the amount up to £500,000, of which sum £150,000 will be used in the construction and equipment of the building alone. According to present plans the playhouse will be opened on April 23, 1916, the tercentenary of Shakespeare's death, and it is intended that the building will be in every way a fitting tribute to his great genius and a monument worthy of his enduring fame.

* * *

CANADIAN AND BRITISH INTERESTS, says a London press despatch, have completed arrangements for the establishing of a large modern drydock plant at Levis. Those who are identified with the project are: The Can-Wolff, the Belfast shipbuilders; Sir Charles McLaren, representing the John Browne & Company, Clydebank; Mr. Davie, of Levis, who conducted the present salvage and drydock business there, and the McArthur-Perks Company. The same interests have also a proposition before the Dominion Government, for the construction of the drydocks at St. John.

* * *

THE OLDEST TEMPLE IN THE WORLD, so far discovered, has been unearthed by excavations at Bisya, in central Babylonia. The walls of the tower were first uncovered and the summit cleared. The first inscription on the surface was on a brick stamped with the name Dungi, which goes back to 2750 B. C. A little lower appeared a crumpled piece of gold with the name Param Sim, who lived in 3750 B. C. Just below were large square brick peculiar to the reign of Sargon, 3800 B. C., and who was probably the first Semitic king of Babylonia. A large platform was discovered 2½ yds. below the surface, which was constructed of peculiar convex brick such as were used in building 4500 B. C.

AT TROYES, IN FRANCE, there has just been completed, a church which was started in the third century, and has, therefore, been sixteen hundred years under construction. It is the Church of St. Urban, and was built by order of Pope Urban, on the site of the house in which he was born. Only the foundations were laid during Pope Urban's lifetime, and though the building has long been consecrated, the last remaining stones were laid this year. The church, says a contemporary, is a gem of Gothic architecture.

* * *

A NEW TYPE OF ELECTRIC LOCOMOTIVE which, it is said, will result in a revolution of the present methods of railway transportation, is now under construction in the works of the North British Locomotive Company, of Glasgow, Scotland. The engine will generate its own power as it runs, and dispense, entirely, with cables, etc. This method of operation has been made possible by adapting the steam turbine, on what is known as the Reid-Ramsay system, to generate electricity which will actuate four series of tractor motors.

* * *

THE MOST LUXURIOUS PRISON in the world, according to a recent news item, is in Japan, about fifteen miles from Tokio. "In the midst of gardens flourishing with medlars and cherry trees, where are seen ornamental ponds with water lilies, arises the palatial prison. The cells are spacious and airy. The lighting throughout is by electricity, and the apartments are furnished luxuriously. Bath-rooms with marble baths, hot and cold water being laid on, dressing-rooms and reading-rooms—nothing seems wanting to make the sojourn in this prison pleasant. In fact, it seems an ideal country residence, scarcely calculated to reduce crime."

* * *

ONE OF THE MOST REMOTE CHURCHES, says a contemporary, in Great Britain, was re-opened after restoration recently by the Archdeacon of Brecon. It stands (Partrishow by name) on the southern slopes of the Black Mountains, in Breconshire. The font dates from 1060, and a rood screen of singular beauty from about the year 1500. There are three stone altars within the old church and a little western chapel built against it, while in the churchyard stands a preaching cross, and the remains of a stone ledge or bench run along the south wall of the church, on which the congregation could seat themselves. Tradition says the church was originally built by a foreigner who was cured of leprosy by the waters of an adjacent well and who left a "hatful of gold" to build a church as a thankoffering.

* * *

AN AQUEDUCT SCHEME, which, if carried out, will be one of the most remarkable pieces of engineering ever undertaken, is now being considered by the Board of Estimates of New York city. The plans involve the expenditure of nearly $50,000,000 for the building of a great subterranean tunnel 300 hundred feet below the streets of the city for the purpose of distributing the water supply, which, in a few years, will be available from the Catskill reservoir. The aqueduct, as proposed will be fourteen feet in diameter for part of its twenty-mile stretch, will be bored through solid rock, running from the city's northern limits southward under central Park and beneath the great business districts of Lower Manhattan, thence, under East River, to Brooklyn, Williamsburg, Queen's and Staten Island. The present local system of water mains would be connected with the new aqueduct.

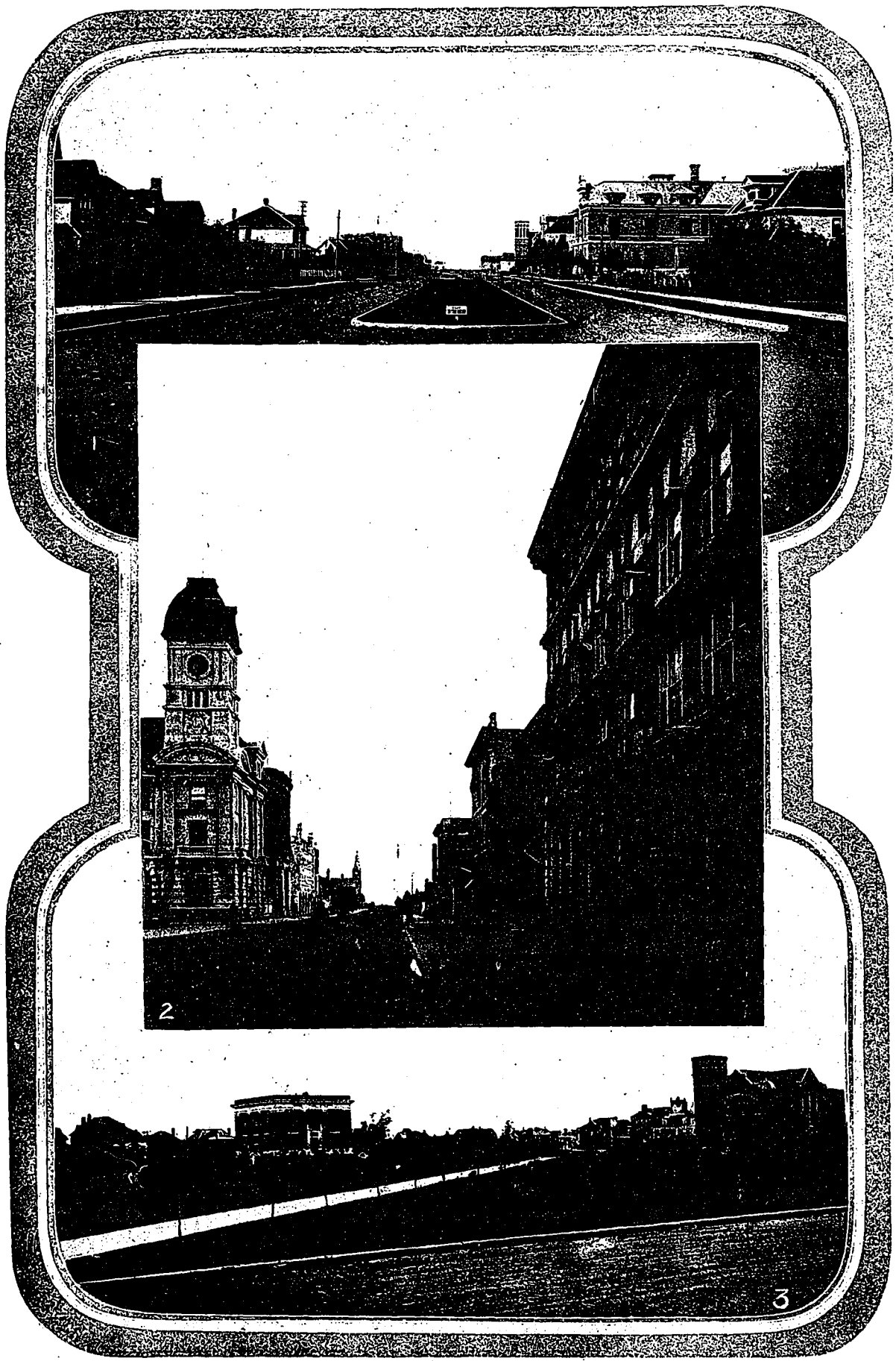
THE DEEPENING OF THE WELLAND CANAL was urged upon the Government by a large deputation of the Great Lakes and St. Lawrence Improvement Association, which recently called at Ottawa. It was pointed out that upon this improvement depends Canada's interests in the freight traffic between the west and the east, as the trade would follow the cheapest route, and would be lost before the Georgian Bay canal could be built. While a greater depth for the canal was immediately desired, the scheme as outlined involves the improvement of the entire system. All that is needed is a link of 58 miles to make Canada's inland waterway complete in every respect. The benefits which would accrue to the country at large, according to the deputation more than justifies the work being carried out. Freight rates for grain alone would be reduced from seven to 4½ cents per bushel, and millions would be saved to the people of the West, while Montreal and eastern shipping points would be able to successfully compete with American ports in the matter of exports. The scheme as laid down it is said, would entail an expenditure of $20,000,000.

* * *

EXPERIMENTS WITH CALCUIM OF CHLORIDE as a dust preventive on public highways, are now being conducted in various parts of Europe with such successful results, that it is predicted that tar and other preparations used for this purpose will be entirely done away with. Autoists and horse owners, who have had occasion to use roads sprinkled with calcium chloride, are universally in favor of this method of treatment owing to the fact that calcium of chloride is harmless to the touch, neither burns nor stains, and it does not attack footwear, rubber, the feet of horses, nor the varnish of motors or carriages. It has the faculty of absorbing water from the atmosphere, and when sprinkled upon a road attracts and concentrates the surrounding moisture, thus forming upon the roadway a thin damp layer which prevents the formation of dust. While calcium of chloride is generally regarded as a new method of laying dust, a Frenchman—Jobart—in 1828 followed by another—Coust?—in 1854 proposed the use of this salt, while as far back as 1876 the streets of Rouen were sprinkled with chloride of calcium, with excellent results.

* * *

DETAILS OF A PLAN to exploit the water power of the St. Lawrence river were recently outlined in a petition to the Dominion Government from the Cornwall Board of Trade, asking that the St. Lawrence Power Company be granted a franchise to utilize the channels of the river for a hydro-electric plant. This concern, it is said, with an associated American company, has already spent $1,000,000 in purchasing sites, etc. The first dam is to be built at a cost of $4,000,000 at the foot of South Sault Channel, where 65,000 to 70,000 horsepower can be developed. Later another dam is to be constructed at the foot of Sheeks Island, on the Canadian side, and finally, when needed, a dam at the foot of Bernharts Island, across the main channel of the St. Lawrence. At dam No. 1 a lock is to be erected by which the vessels can overcome the whole 40-foot fall of the rapids in one lift, whereas now six are required in the Cornwall Canal—which, however, would not be interfered with. A saving of 5 hours would be effected. The company proposes to erect power transmission lines from Cornwall to Brockville and to supply all demands for power in this section. As yet there is not sufficient demand to warrant large expenditures of money, and the projectors are urging the communities along the line of the proposed development to induce manufacturing plants to locate here.



A BRIEF SURVEY OF BUSINESS AND RESIDENTIAL SECTIONS IN REGINA. 1—View along Scarth street, the city's main business thoroughfare. 2—Victoria avenue, in the residential district. 3—Victoria Park.

Panoramic view of Regina, showing the great flat country in which it is located.

REGINA, THE "MODEL CITY OF THE WEST."—The Story of Its Development as the Capital City of the Province of Saskatchewan.—Its Municipal Improvements and Some of Its Most Noteworthy Recent Buildings.

REGINA has often been termed the "Model city of the West." Located as it is, about two hundred miles west of Winnipeg, it is immediately in the centre of the flatest and most fertile prairie land in the "Last great West." Its population has increased from 3,000in 1900, when it was the capital of the N. W. Territories, to 12,500 in 1908, and it is now the capital city of that new vast fertile province, Saskatchewan. Regina, like most western cities, is built directly along the railroad, although it extends farther back than most of them. The moment one steps off the train at the station, the first thing with which the visitor is impressed is the excellent character of its buildings in both construction and design, the general lay-out of the city and the admirable condition in which the streets are kept. There are no tumbled down "shacks," no tenderloin, no slums, everything is new and clean, even the small frame structures on the outskirts of the city.

Its business buildings are of the best permanent type of construction. Its churches and schools are models of good taste and ideal construction, and its residential districts bear every evidence of culture and prosperity. Scarth Street, which runs north from the C.P.R. tracks, has within a few blocks, more new first class business buildings, than are to be found in a like area in the best districts in eastern cities of many times the size of Regina.

Victoria Avenue ,one of the most beautiful residential streets in the West, is boulevarded the full length and is lined on either side with handsomely designed residences of the more well-to-do. Victoria Park, located almost in the heart of the city, is a landscape decoration that any city could be justly proud of. Regina has several architects who have been kept extremely busy during the past two years, designing the many public, financial, business and private buildings that have been required to keep apace with the marvelous growth of the city and the general high character of design speaks well for their ability and training. The growth of Saskatchewan, of which Regina is not only the capital, but the commercial center, has been little short of marvelous.

It was on September 1, 1905, that the districts of Assiniboia, Saskatchewan, Alberta and Athabasca were constituted the provinces of Alberta and Saskatchewan and were given self government similar to that enjoyed by the other Canadian provinces.

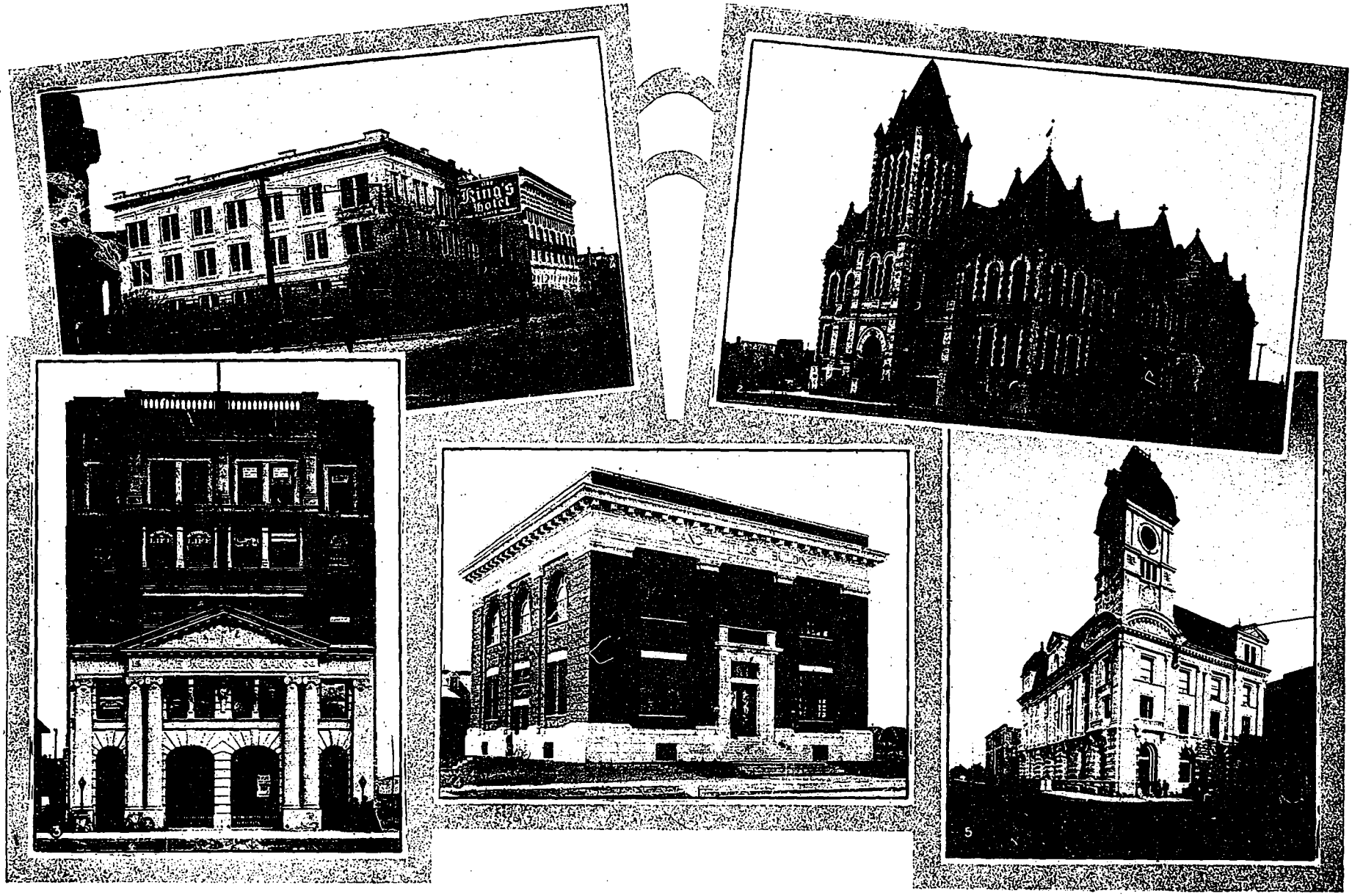
All western Canada, between the great lakes and the Rockey Mountains, was formerly known to the easterner either as "Manitoba' or by the vague term the "Northwest." Now, however, the name Saskatchewan is becoming as well known as Manitoba.

Saskatchewan lies between the 49th and 60th parallels of north latitude, and between the meridians of 102 and 110 degrees west from Greenwich, or more familiarly, its southern border is the international boundary, the dividing line between Canada and the United States. South of Saskatchewan are the states of North Dakota and Montana; east of it is the province of Manitoba; west of it is the province of Alberta, and on the north and north-east it is bounded by the unorganized North West territories.

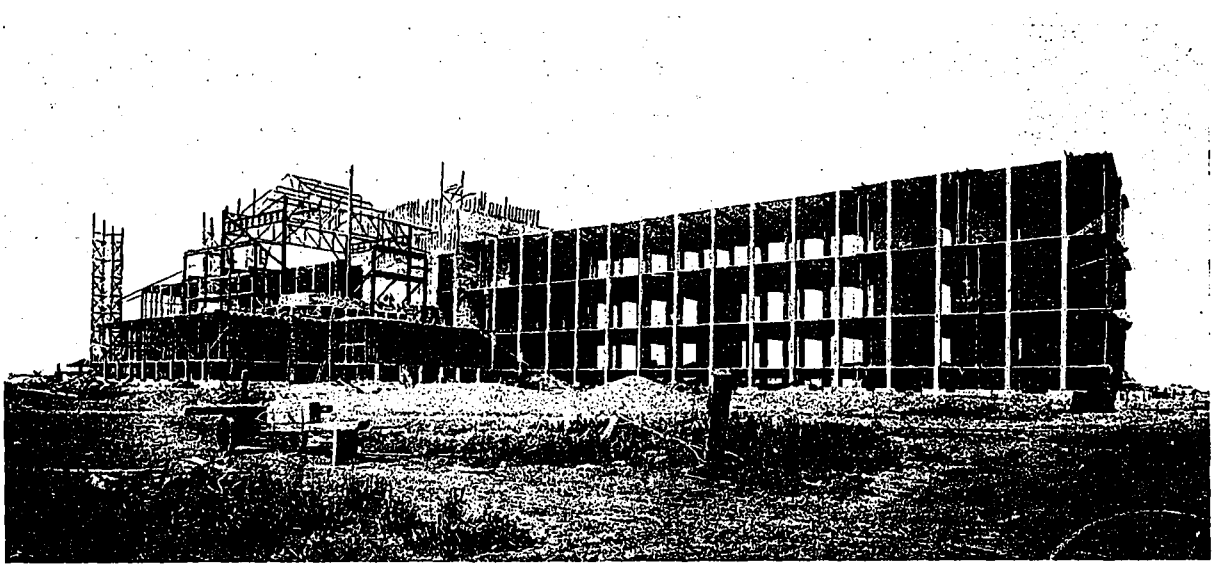
In addition to possessing a soil, that for its fertility, is not excelled in the whole west, the province has several other natural resources, a good supply of timber, and clay suitable for the manufacture of bricks is readily available. Nor is this confined to one part of the province only. From Roches Percee and Estevan in the south, to Prince Albert in the north, and at Broadview Moose Jaw, Rosthern and other places, there is a good brick clay found, and considerable business in manufacturing bricks carried on. In the northern part of the province, extending in a northwesterly direction from the Swan River district in Manitoba are found large areas of valuable spruce forests. Saw mills are established at Prince Albert and along the line of the C.N.R., east of that city. The amount of lumber manufactured in the province annually amounts to between sixty and seventy-five million feet.

Coal, too, is abundant, at Souris river coal fields in the Estevan district cover an area of about 120 square miles and are supposed to contain about 1,000,000,000 tons of coal. Traces of coal are also found at Wood Mountain, in the Cypress hills, and at a number of points throughout the province; but none of the latter deposits have been developed, except for local use by farmers and ranchers adjacent to them.

The citizens of Regina, the capital of this rapidly progressing productive country, realize the future possibilities of their city. They are proud of its growth and alive and wide-awake in the conduct of their municipal affairs. It owns its own electric lighting plant, its waterworks system, and with its miles of paved streets, its splendid civic buildings, five schools, a surplus of over a million dollars and its low tax rate, Regina citizens can look complacently upon their accomplishments. Every visitor to the West is amazed at the wonderful substantial growth of Regina. Its hotels, its churches, its schools, its fine business blocks and its excellent



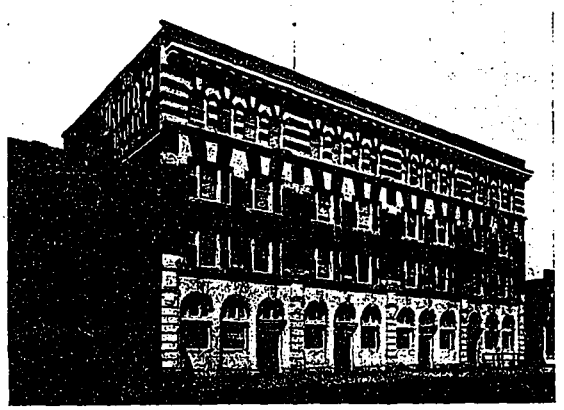
MODERN BUSINESS AND PUBLIC PREMISES IN REGINA. 1—Canada Permanent and McKenzie & Brown building, R. J. Edwards & Saunders, Architects. 2—Regina City Hall, W. M. Dodd, Architect. 3—Premises of the Northern Bank. 4—Land Titles Building, Darling & Pearson, Architects. 5—Post Office building, D. Ewart, Architect.



Process view of the Saskatchewan Parliament Buildings now under way at Regina, showing the reinforced concrete floor system and frame work in position. E. & W. S. Maxwell, Architects.

municipal improvements, make it the model Canadian city of the West.

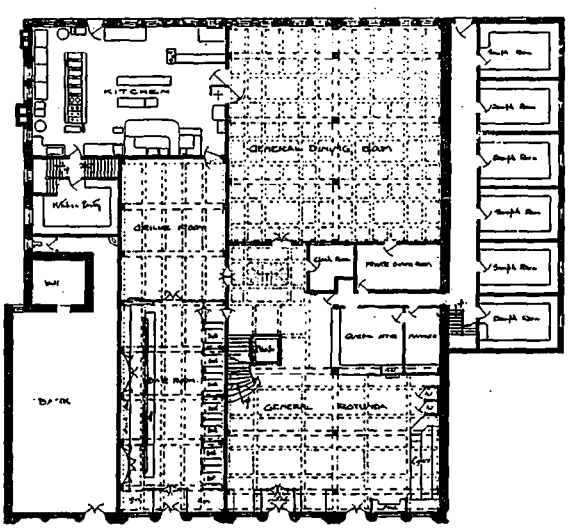
One of the most important pieces of construction work now in progress in Regina, is the New Saskatchewan Parliament buildings, of which Messrs. E. & W. S. Maxwell, of Montreal, are the architects ,and the corner stone of which was laid under auspicious circumstances,



King's Hotel, Regina's $200,000 hostelry, which is the most modernly appointed building between Winnipeg and the Coast. Storey & Van Egmond, Architects.

by Earl Grey, Governor General of Canada, on the 4th of last October. The structure, which will be one of the most imposing and the best constructed provincial parliament buildings in Canada, has been fully described in a previous issue of CONSTRUCTION. In design it is a free adaptation of English renaissance work, with dignity, simplicity and purity of style. In construction. it is fireproof throughout, its framework being of reinforced concrete with exterior walls of Tyndall stone. Since the first sod was turned, preparatory to starting the work on July 29, last year, the contractors have made rapid progress, and out of the $1,400,000 awarded for the construction of the building, now less a sum than $750,000 has already been paid out. Within twelve months all the reinforced concrete work was completed, and the west wing shut in so that work may proceed during the winter. The power house at the rear of the building, with its smoke stack 125 feet high, has been completed. Four boilers aggregating 500 horse power have been installed, and the electric gearing will be completed before spring. The steam and hot water piping in the main building is finished. The work of installing the electric wires, plumbing, etc., is now going on and will be completed together. Preparations are complete for the 59 vaults, and three car loads of vault doors have been delivered. One hundred and seventy-five men are at present at work on the building, and more than 100 more could easily obtain employment, if the contractors could procure them.

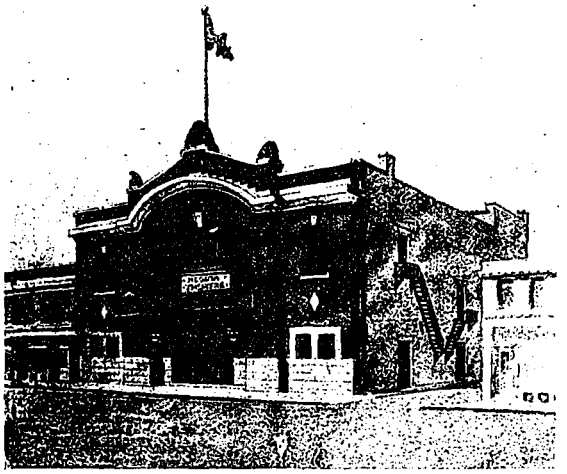
Regina's new post office which was completed last September at a cost of $250,000, occupies a central position on Scarth Street and forms a crowning feature to the architecture of the business district. The building is absolutely of steel construction with reinforced concrete floors and absolutely fireproof throughout. It consists of three storeys and a Mansard roof, having a frontage on Eleventh Avenue of 125 feet and on Scarth



Ground floor plan, King's Hotel, Regina. Storey & Van Egmond, Architects.

Street of 75 feet. The facades are of Tyndall stone, and Portage brick is used in the other walls. On the ground floor terrazo has been substituted for hardwood finish first specified. The height of the roof from the street is 70 feet, while the top of the flagstaff on the massive copper covered clock tower on Scarth Street

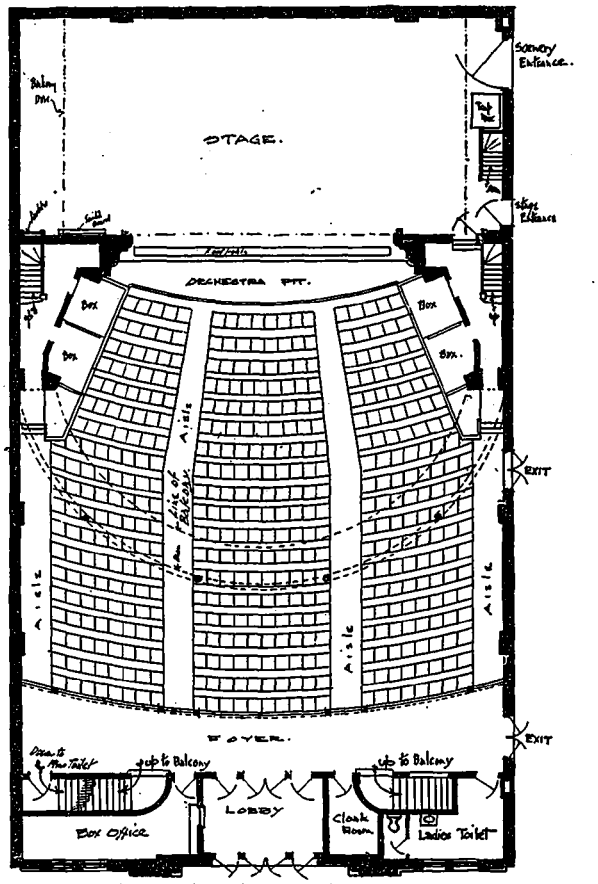
and Eleventh Avenue corner of the building is 142 feet. The arched windows of the ground floors and the twenty-two massive stone pilasters running from the second storey to the top of the third, combine to give the edifice a dignified and staple appearance. The entire ground floor is to be utilized for post office purposes, the entrance from both Scarth Street and Eleventh Avenue giving access to a public lobby running the entire length of the building. The customs house is located in the rear with an entrance from Scarth Street and access for vehicles from the lane on the east side of the building. The second floor is devoted to customs, inland revenue



New Theatre, Regina, which will be opened Christmas week. It has a seating capacity of 850, and cost complete, $25,000. Storey & Van Egmond, Architects.

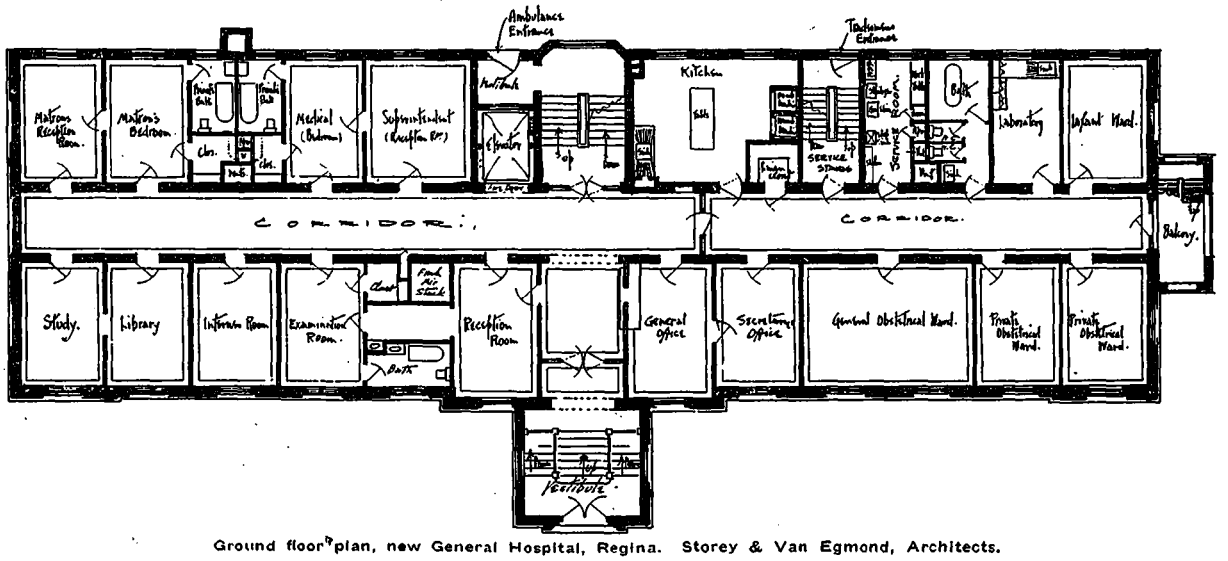
and other government offices, while the third is occupied by caretaker's quarters and store rooms. The building is equipped with electric elevators and handsomely finished throughout.

The Canada Permanent Building, to which a substantial addition is being erected at the present time, is one of Regina's more noteworthy recent buildings of the fireproof type. It is virtually a double building with a party wall between the portion owned by the Canada Permanent Mortgage Corporation, and that occupied by Messrs. McKenzie and Brown, Solicitors. In construction the building is of reinforced concrete skeleton type, with walls and partitions lined with hollow tile, and an exterior facing of Roman stone. The beams supporting the floor slabs are carried on the party and outside walls without any columnar support. They have a depth for a space of twenty-seven feet of 27 inches, including the thickness of the floor slabs. The reinforcing consists of plain and square bars, and the frame work is supported

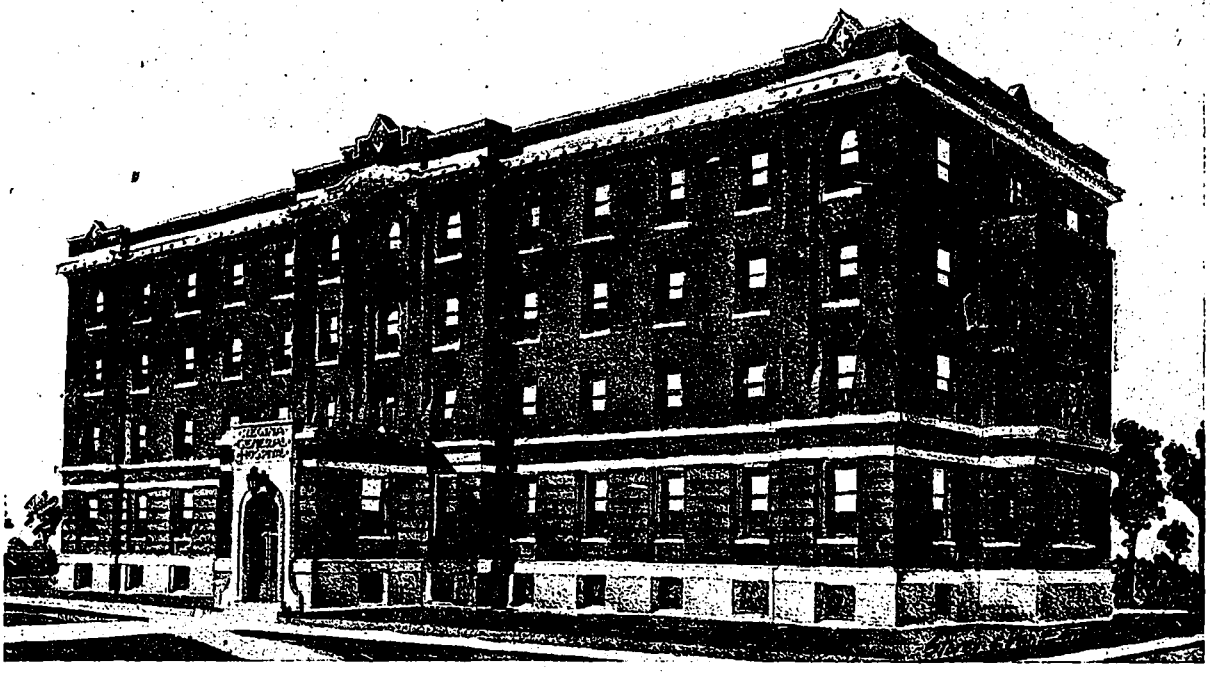


Floor plan, Regina Theatre. Storey & Van Egmond, Architects.

by reinforced concrete spread footing, as is also the beams which carry the curtain walls. The exterior facing and hollow tile back lining are firmly secured together by steel ties, and the space between the two filled with concrete, which was put in as the work of laying up the facing progressed. As regards plastering, the mortar has been applied directly to the hollow tile and on the bottom side of floor slabs and exposed sides of



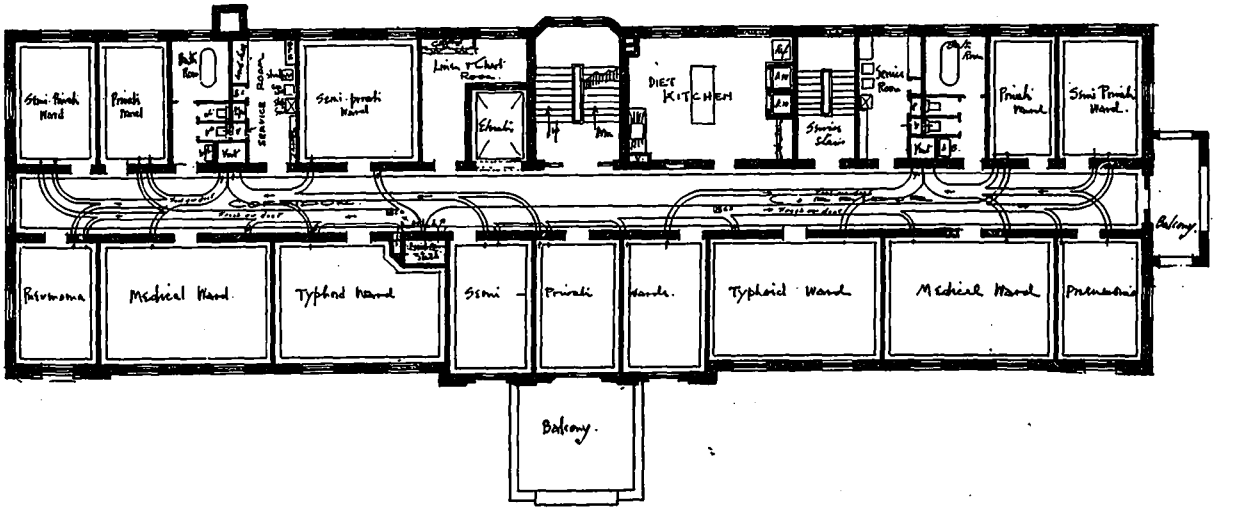
Ground floor plan, new General Hospital, Regina. Storey & Van Egmond, Architects.



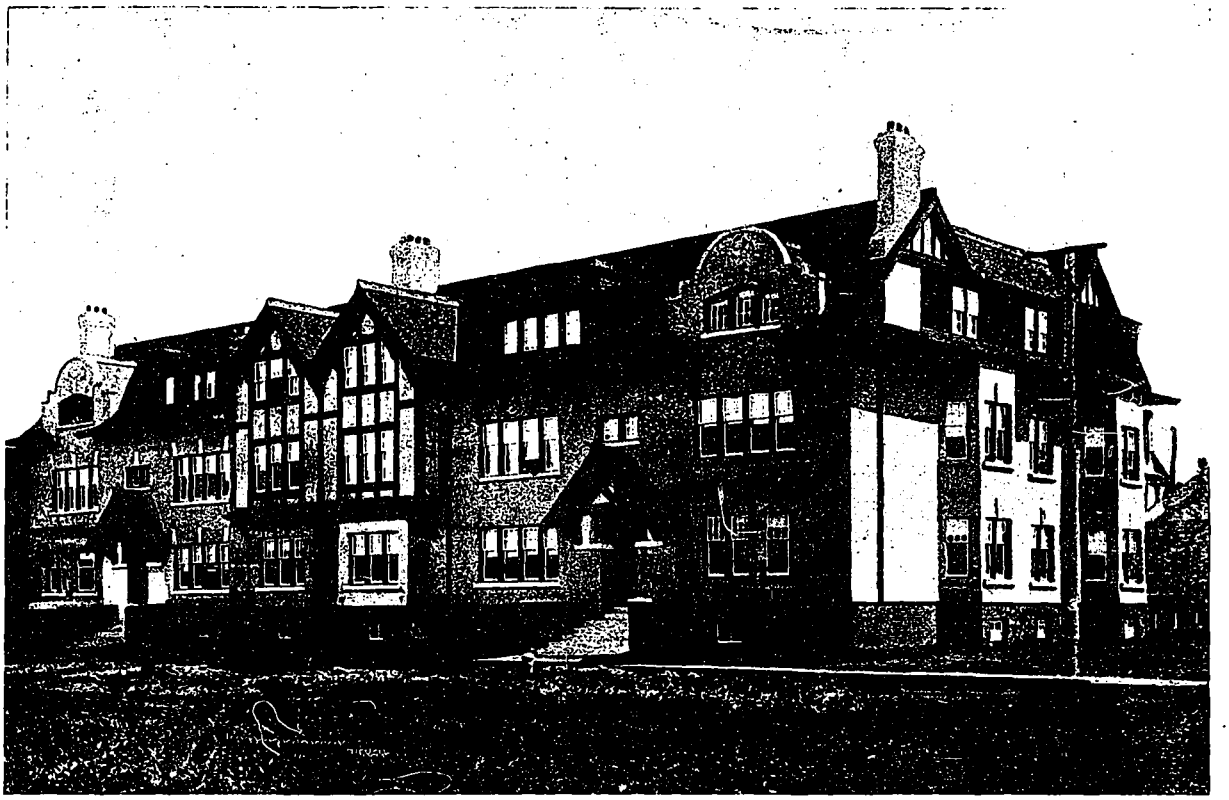
Regina's New General Hospital, now being built at a cost of $105,000. Although the building is to be entirely fireproof in its construction, an additional precautionary measure is provided in an enclosed outside iron stairway, placed at end of the structure. Storey & Van Egmond, Architects.

beams. The super-floors are of hard maple nailed to bevelled wood strips secured in the concrete; and the stair system is of reinforced concrete throughout. While the construction of the building precludes any danger from fire to the structure itself, extra precautions have been taken by the installation of stand pipes with hose attachment on each floor, to quickly handle any outbreak which might occur in the furniture or equipment of any of the offices. It might be mentioned in this connection that all the vault fittings are of metal, and the vaults themselves, which are the J. & J. Taylor "burglar and fireproof type," are set in walls of concrete with hollow tile lining. The building was designed by Architect R. J. Edwards, of the firm of Edwards and Saunders, Toronto, who are now carrying out the extensions. Its cost, including furniture and fittings, was $70,000, and both from a standpoint of construction and design, it is a most acceptable commercial building.

It would be an oversight, in touching upon the building progress of Regina, to fail to say at least a brief word about the King's Hotel, the city's $200,000 hotel, which has a well deserved reputation among tourists and travellers throughout the West as being the finest and most modernly appointed hotel building between Winnipeg and the Coast. It is a four-story structure, built with fireproof partitions and floors, and designed to contribute to the safety and comfort of its guests. The front is of Tyndall stone and clinker brick; the stone being used for the entire first story which has rustic piers and arched doors and windows, for the window trimming, and for the belt course at the fourth floor where the windows are also arched. The main features



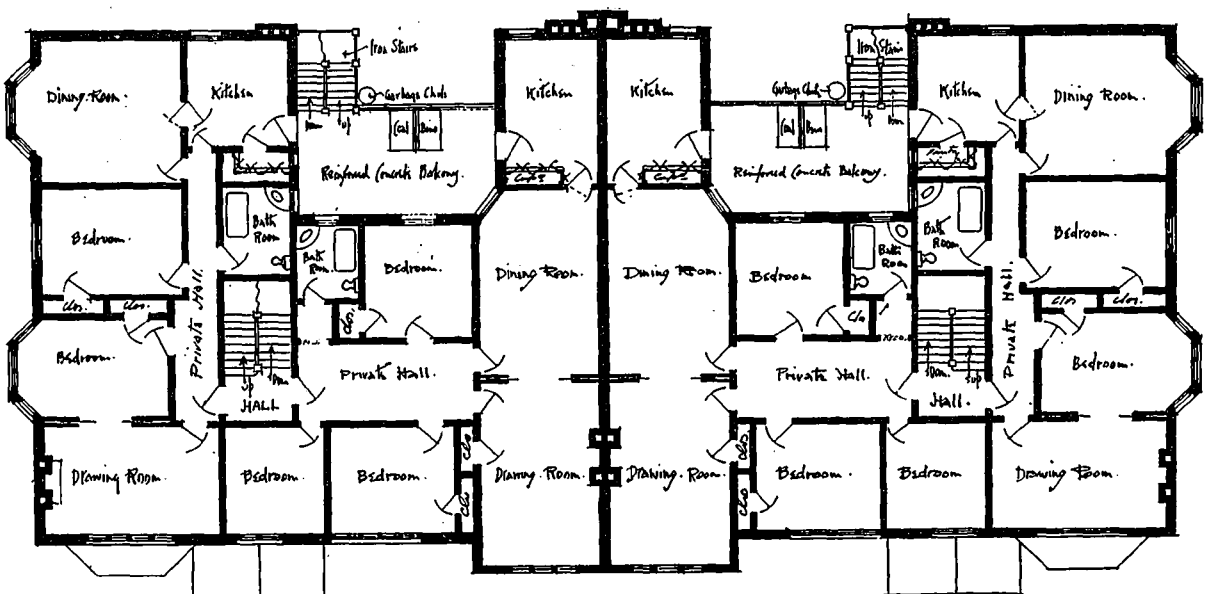
Second floor plan, new General Hospital, Regina. Storey & Van Egmond, Architects.



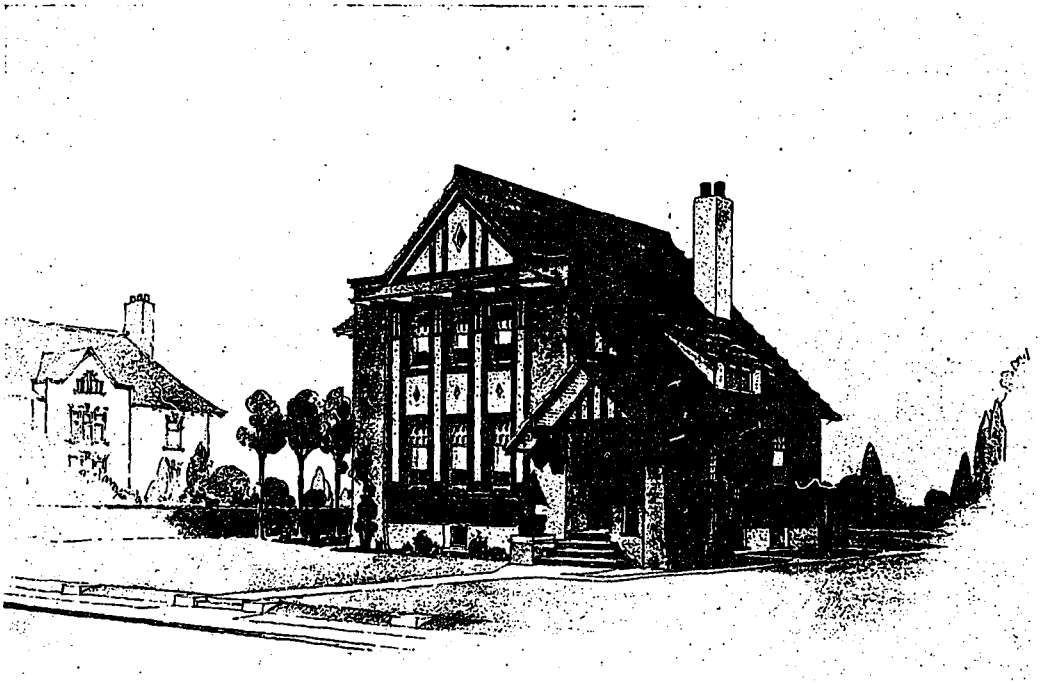
Albert Court Apartments, Regina. In exterior construction and architectural treatment this strucure stands out in marked distinction to the usual type of apartment buildings. There is a strong domestic feeling in general lines, and a pleasing color contrast in the buff tones of the stucco walls, brown woodwork and red shingle roof. Storey & Van Egmond, Architects.

of the ground floor are the exceptionally large rotunda with adjoining dining room and grill room, and also the sanitary and convenient kitchen arrangement. In addition to these rooms, is an annex, connecting with the rotunda and containing six large sample rooms, having facilities to enable commercial travellers to advantageously show their goods. The upper floors provide for one hundred guest rooms. All are equipped with hot and cold water, and fully two-thirds of the rooms have private baths adjoining. The architects for the building were Storey and VanEgmond of Regina, and it is the intention of the management to erect a large fireproof addition in the near future.

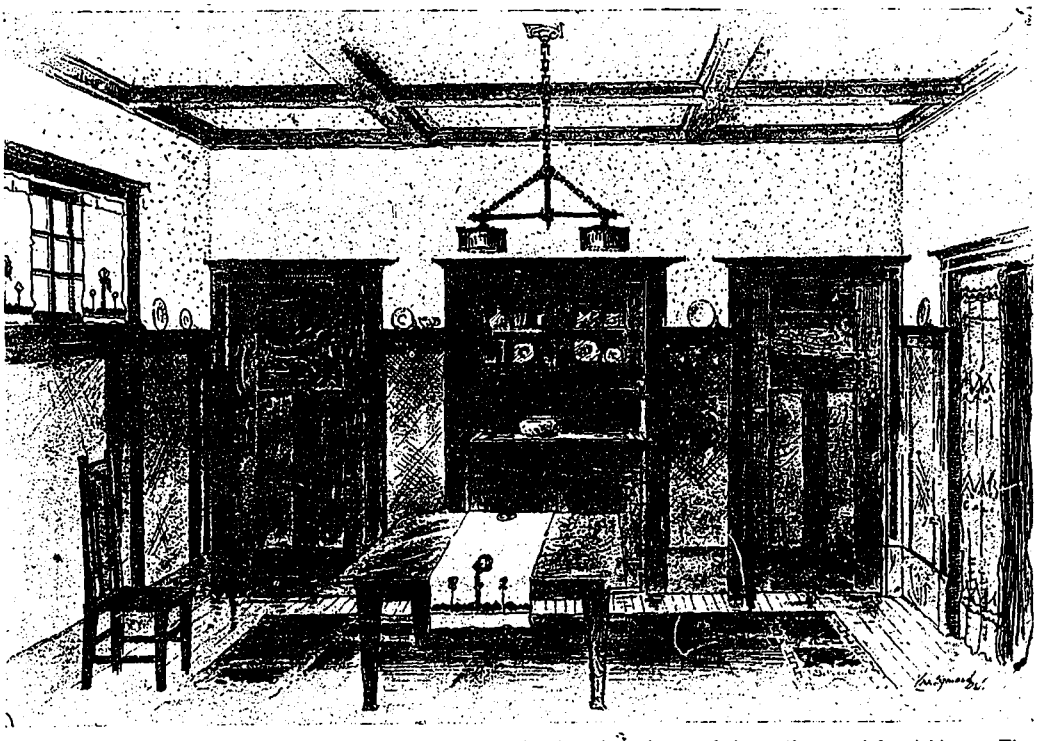
The new theatre building now under construction at Regina, at a cost of $25,000, was also designed by Messrs. Storey and VanEgmond. This building gives a fairly good idea of the capabilities of Westerners in rapid construction work. Although work on the structure was only started on Oct. 15th, this year, it is expected to have the playhouse open Christmas week. The building is enclosed with solid brick walls, with a Roman pressed brick front trimmed with Tyndall stone; and the plastering throughout is applied directly to metal lath. Four doors at the main entrance give access to the ticket lobby, while four fire exits have been placed along the lane at the side of the building, thus assuring ample



Second floor plan, Albert Court Apartments, Regina. Storey & Van Egmond, Architects.

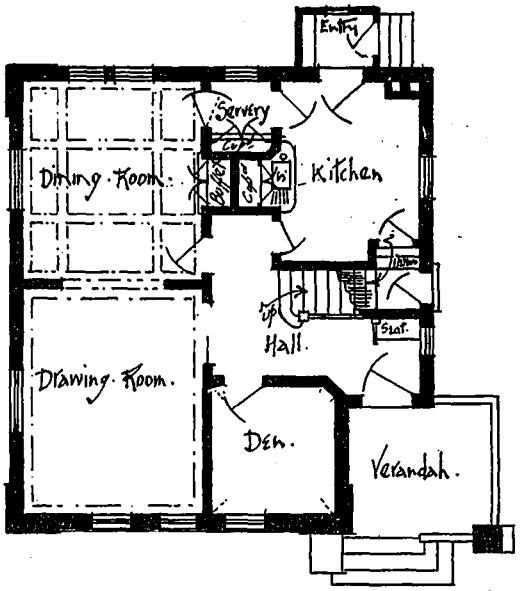


Residence of W. B. Van Egmond, of the architectural firm of Storey & Van Egmond, Regina. An interesting half-timbered house with decidedly unique and graceful lines, giving it a pleasing cottage effect. The exterior is of rough thrown plaster work of a light buff tone, the roof shingles and timber work of a dark brown, and window sashes painted white.



Dining-room, Residence of W. B. Van Egmond, Regina, showing the scheme of decorations and furnishings. The woodwork is stained a dark greenish brown, the walls are panelled with a yellow b rown burlap, while above the plate-rail the room is finished in stucco plaster of a lig ht buff color. Storey & Van Egmond, Architects.

means for quick egress in event of an emergency. Adjoining the lobby are retiring rooms and lavatories for both sexes, and also a large cloak room. The auditorium which is 55 by 60 ft., provides seating accommodations for 850 people. There are ten boxes in all, the four upper ones forming a continuation of the balcony floor. Underneath the stage, 28 by 55 ft., are the dressing rooms, players' lavatories, property room and furnace



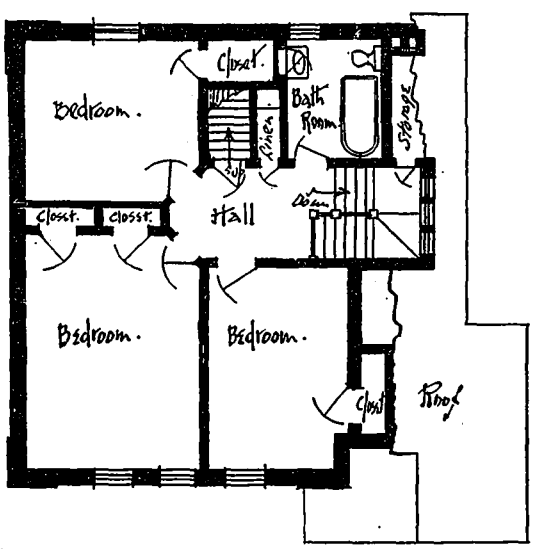
Ground floor plan, Residence of W. B. Van Egmond, Regina. Storey & Van Egmond, Architects.

compartment. The procenium arch, which has an opening of 30 by 20 ft. and the boxes and balcony rail, etc., are finished in decorative plaster work with stencil ornament and tinting. The owners of the building are Whitmore Brothers, and the contract for the work is being executed by the firm of Murphy and Martin, Regina, contractors.

Another structure of note designed by the same architects, that is now in process of erection at Regina, is the new General Hospital, which will cost complete, $105,000. This building will be entirely of fireproof construction, and it is representative of the broad spirit and thoroughness of the West in providing structures of this character. The floor system and roof will be of reinforced concrete, and the various rooms and corridors will be divided off with metal stud and lath partitions, so constructed and plastered as to be practically sound proof. Externally the building, which is a four story and basement structure, will be carried out in red pressed brick with Tyndall stone entrance, and base and belt courses. In the interior the arrangement will be direct on all floors, consisting of central corridors running the full length of the building with the various wards, operating rooms and offices aligned on either side. The stairway adjoins the ambulance entrance and elevator, opposite the main vestibule, and is carried up at this point to the upper floor. A complete fan system of ventilation is to be installed, as designed by the Architects; and, although the building is practically non-combustible in its construction, extra precaution is being taken in the way of an enclosed system of outside fire escapes, which, will open off corridors at the end of the building. The hospital will provide accommodation for one hundred patients; the hall and various rooms will have sanitary floors and wainscotting; and the fixtures and equipment throughout will be modern in character.

As regards residential buildings, Regina has made much consistent headway in this character of work. The Albert Court Apartments, which form one of the subjects in the accompanying illustrations, is a most interesting structure both in design and plan. There is a strong domestic feeling in the general lines, and a pleasing color contrast in the buff tones of the stucco plastered brick walls, the brown woodwork and red shingle roof—which render it quite distinct in architectural treatment from the conventional types of apartment buildings. At the centre of the building is a twin-gabled bay projection, half timbered in the upper portion, while at a uniform distance on either side are the entrances with gabled hood, pleasingly designed windows and interesting dormer, giving a perfect balance and symmetry to the whole. In the interior, the most impressive feature is the homelike manner in which the rooms are grouped. There are twelve suites, each containing a kitchen, dining room, bath room and from two to three bedrooms. All apartments are equipped with speaking tubes, hot and cold water, porcelain and nickel bath fixtures, etc.; while at the rear are reinforced concrete balconies with coal bins and garbage chutes, and iron stairway connecting with the grade. The building was designed by Messrs. Storey and VanEgmond, and it was erected by the Saskatchewan Building Construction Company, at a cost of $40,000.

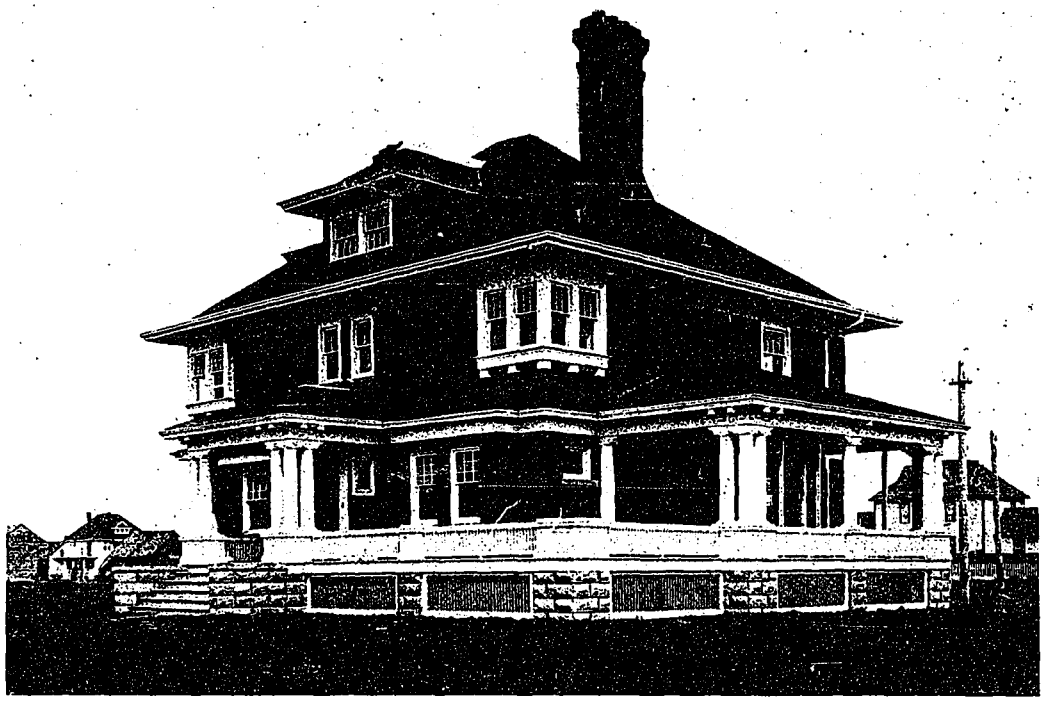
Mr. (W. B.) VanEgmond's own residence is an unusually attractive half-timbered house with decidedly unique and graceful lines. The exterior is of rough thrown plaster work, the shingles and timber work stained a dark brown, and the window sashes painted white. The long pitch of the roof which continues down over the porch projection at the side, and the modest dormer which peeps interestingly from beneath it, overcomes the vertical panelling at the front and gives the house a decidedly pleasing cottage effect. In the construction of this house, every measure was taken to insure a dry and warm interior. The walls are of wood studs, sheathed, papered, strapped and lathed and plastered on the inside; and sheeted, papered and metal lathed for the stucco and half-timber work, outside. The interior is finished in B. C. fir, stained a dark greenish brown in the first floor, and finished with a white enamel in the rooms above; and the floors are an egge grained specie of the same wood, stained and oiled throughout. The hall, which gives ready access to all parts of the house, has a brown leather wall covering



Second floor plan, Residence of W. B. Van Egmond, Regina. Storey & Van Egmond, Architects.

stamped in conventional design, and tinted plaster ceilings; while the den is done in red leather below the plate rail, and finished with reddish buff stucco plaster above. A feature of this floor is the built-in buffet and cupboards arrangement, which takes up the space between the dining room and kitchen. The drawing room and

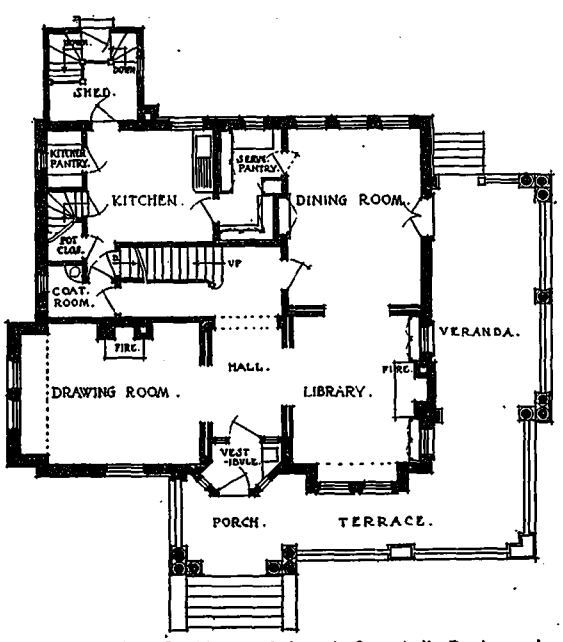
dining room connect by a large arched opening; the latter room being finished with a beamed ceiling, yellow brown burlap panels up to the plate rail, and upper walls



Residence of Joseph Campbell, Regina. Comfortable lines and pleasing color scheme serve to make this home an attractive abode. The walls for the first storey are red brick, with dark brown shingles above, the roof being green and the woodwork white. J. H. G. Russell, Architect.

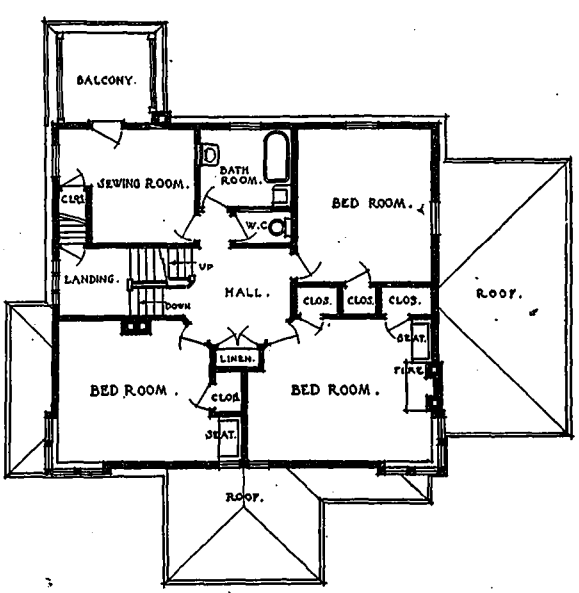
and ceilings in stucco of a buff tone. The second floor has storage space, a sanitary dadoed bath-room and three bed-rooms with built-in closets.

The home of Mr. Joseph Campbell, another Regina house illustrated in these pages, is a dwelling of the



First floor plan, Residence of Joseph Campbell, Regina. J. H. G. Russell, Architect.

modern type with comfortable lines and a pleasing color scheme. A feature of the exterior is a deep covered combination porch and verandah with triple supporting columns, enclosing the front and sides of the house. The first story is of red brick, the shingle work above dark brown, and the roof stained a moss green; while giving a further touch of contrast are the window frames, having small lights in upper sashes, and painted white in keeping with the balance of the woodwork. A well proportioned chimney rises to an agreeable height. The roof, which has a dormer at the front, spreads its broad eaves



Second floor plan, Residence of Joseph Campbell, Regina. J. H. G. Russell, Architect.

in a sheltering manner over the second story. On the

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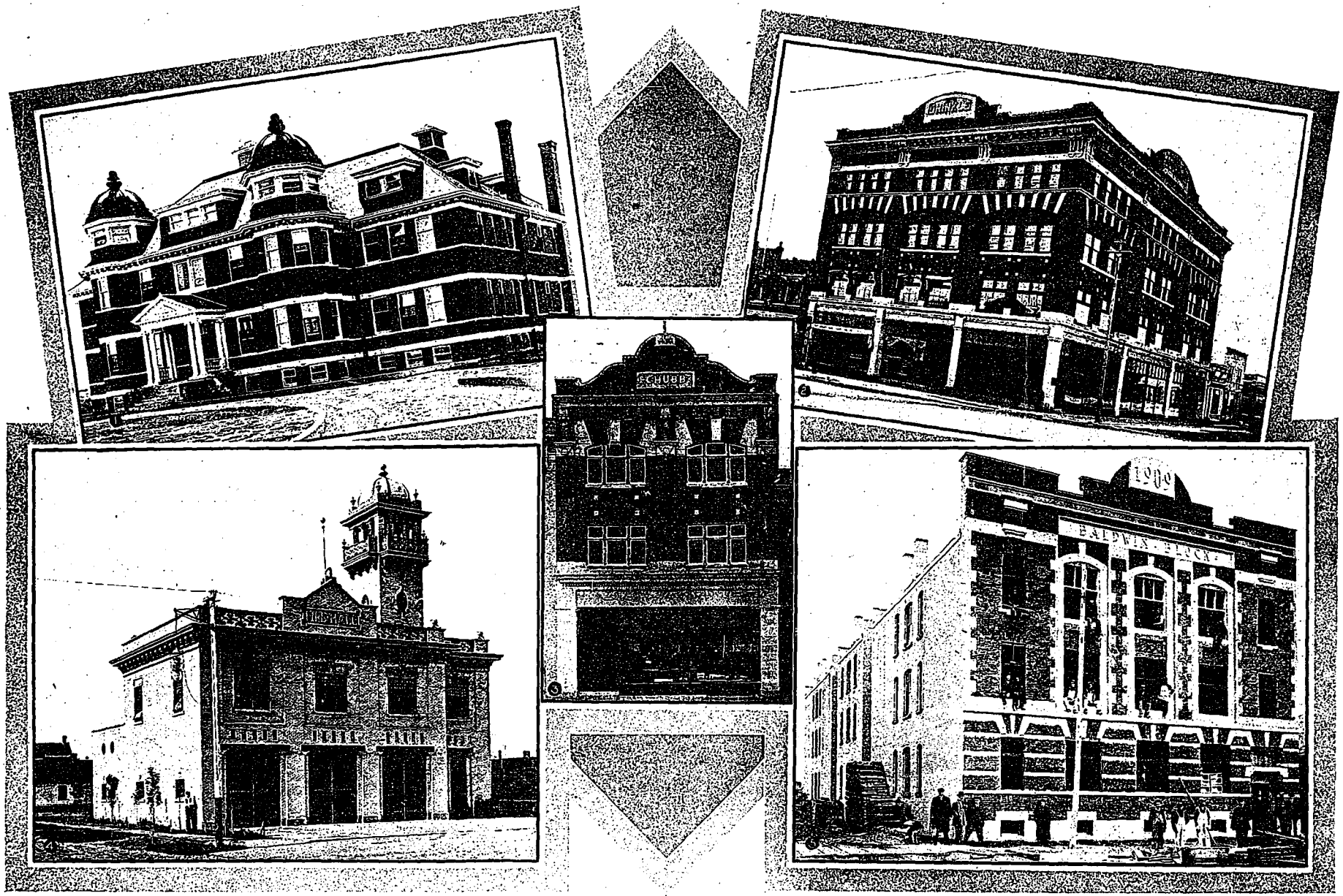


RECENTLY ERECTED BUSINESS AND PUBLIC BUILDINGS IN SASKATOON, FROM DESIGNS BY ARCHITECT W. W. LACHANCE. 1—Saskatoon City Hospital. 2—The Drinkle Block. 3—The Chubb Block. 4—Saskatoon's Fire Hall. 5—Partially completed Baldwin Block.

SASKATOON, A CITY OF MIGHTY STRIDES.—Population Has In reased from 200 to 8,000 in Eight Years.—Examples of Some of Its More Recent Buildings, and Brief Comment on the City's Commercial and Industrial Possibilities.

A THRIVING city in the Province of Saskatchewan that bids fair to ere long become a strong rival of Regina for supremacy as a distributing centre is Saskatoon. This city is one of the most wonderful examples of how cities are built in a day in the West. From a population of 200 in 1900, it had grown to a city of a population of 8,000 in 1908. This growth has not been of the mushroom sort, that one might be led to look for in such rapid development.

A glance at the accompanying illustrations, showing some of the recent buildings constructed in this city, will give a fair idea of the substantial community its citizens have built in so short a time.

Both nature and man have done a great deal for Saskatoon. It is surrounded in every direction by fertile country; it has three trunk railways running through it in an easterly and westerly direction, and it has other lines running north and south, so that the question of whether Saskatoon, in this great rich belt, will continue its wonderful growth, depends absolutely upon its citizens, and the optimism and good judgment of its earlier promoters, already displayed in its history, seems to warrant the contention that Saskatoon will, before many years, be one of the largest and most prosperous cities in Western Canada.

While for some little time to come, Saskatoon's chief development will be along the lines of both wholesale and retail trade, made possible by the rich adjacent farming country and the unequalled railway facilities existing, manufacturers of the lighter sort will undoubtedly follow in time. The labor market and distance from raw materials are not at present conducive to anything large this direction, but it is pointed out by its citizens that when lower freight rates, cheaper coal, and the scheme now under way for harnessing the great power of the Saskatchewan at this point, become accomplished facts, new facilities will be offered that will offset the disadvantages Saskatoon may at present have as a manufacturing city.

From a standpoint of business and municipal buildings, Saskatoon's expansion has been most pronounced. Especially can this be said of the last few years, during which a veritable boom has been experienced in this respect. In the main, the buildings are of a most acceptable type, being substantially built and of a character which leaves no doubt as to the future of the city. The accompanying group of the work of Architect W. W. La Chance, which includes the City Hospital, Fire Hall, and three business structures, are representative of the character of improvements which are being made along these lines. As regards the first-mentioned building, Saskatoon enjoys the distinction of being the first city in Western Canada to build an institution of this kind, and it must be said that in the construction of the building itself, and in the matter of internal equipment and sanitary appliances, the authorities have shown a broad spirit in the appropriation of funds in order that the hospital might be on a par with the better class of similar institutions found elsewhere. The building provides accommodation for 56 patients, 16 nurses, and service staff, and, although the structure was completed only seven months back, plans are at the present under way for two substantial wings, which will practically double the accommodations. The hospital is practically three stories high, with red brick external walls trimmed with Tyndall stone; the system of heating is steam; and the ventilation apparatus, operated on the plenum system.

In the three business buildings referred to, the main facades are of red brick, trimmed with cut stone from either the Tyndall or Bedford quarries. The floor system of the Drinkle Block, which is a four storey structure, 75 by 125 feet, is of mill or slow burning construction. On the interior the arrangement is such as to utilize all available space to the greatest advantage, the rooms are excellently lighted by large, well placed windows, and the sanitary features have been thoroughly considered in every particular. The entire first floor, which is taken up by spacious stores, is enclosed with plate glass fronts on both sides, and has central halls leading to the stairs and elevator connecting with the upper floors. The building is heated by steam, is modern in its appointments, and was erected at a cost of $75,000.

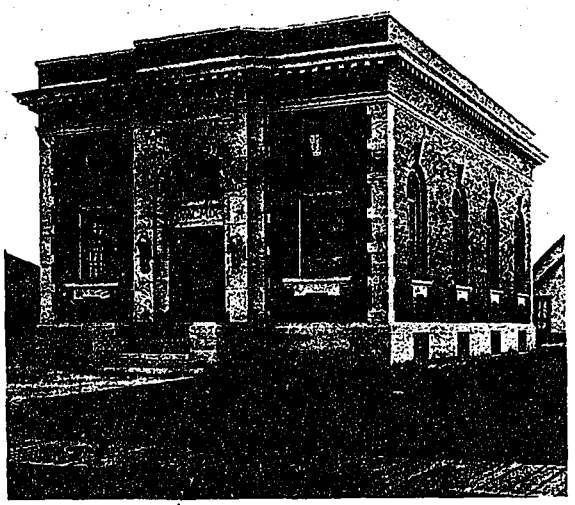
In the Baldwin Block, which is at the present time receiving its finishing touches, the exterior walls are lined with hollow tile. This building, which is a three-storey structure, 50 by 140 feet, will cost $50,000. It is to be devoted entirely to offices, and will contain, in all, thirty-two suites, comprising ninety-two rooms, all of which will be heated by steam and model as regards finish and sanitary equipment.

The Chubb Block, which was constructed at a cost of $20,000, is a building of more modest dimensions, having an interesting facade with a large plate glass store front; while the Fire Hall, the other building in the group, is a most acceptable structure, designed along conventional lines.

One of Saskatoon's public buildings of a smaller type, which is noteworthy in design and construction, is the Land Titles Building, designed by Architects Storey and Van Egmond. It is similar in dimensions to the building used for like purposes which the Saskatchewan Government has erected in Regina. Owing to the importance of the records and papers of the Government Land Department, this building is, as is also the other mentioned structure, of absolutely fireproof construction. There is not a particle of wood or other combustible matter employed in any part of the structure. All the doors, windows and casings, etc., are iron or steel clad, the roof and floors are of concrete, the partitions of hollow tile, and the exterior of dark brown clinker brick wall, trimmed with Tyndall stone of a buff tone. In the interior, which is well lighted on all sides and regulated by an automatic heating and ventilating system, the floor is finished with mosaic tile and the walls decorated by ornament plaster cornices. The building is equipped with large modern vaults, and the files and appurtenances, are of metal. Its cost complete was $30,000.

Another building included among the city's structures of a public character, is the Court House, by the same designers, which was built at a cost of $45,000. This building is well adapted to the local requirements as regards court accommodations for some time to come. The exterior is of red sand mould brick, dressing with Tyndall stone, and enclosed overhead with a metal roof. The two main floors are taken up by the courts and associate departments, while the basement is devoted to jail purposes, and equipped with modern steel cells. The walls throughout the building are tinted in agreeable tones to harmonize with the quarter-cut oak woodwork, and heat is supplied by a low pressure steam system.

As with most Western cities, the rapidly increasing population of Saskatoon, together with a desire to have properly designed and constructed school buildings, has resulted in a number of improvements as regards structures of this character. At the present time, the city has under way a new Collegiate Institute, which is being erected at a cost of $90,000, in accordance with the accepted competitive design of Architects Storey & Van-Egmond. The plan of the building, as is shown in the



Land Titles Building, Saskatoon, said to be the most thoroughly built fireproof structure in Western Canada. It is constructed of dark brown clinker brick, with Tyndall stone trimming, the floor and roof being concrete, the partitions hollow tile, and the doors and windows of the most approved fire-resisting type. Storey & Van Egmond, Architects.

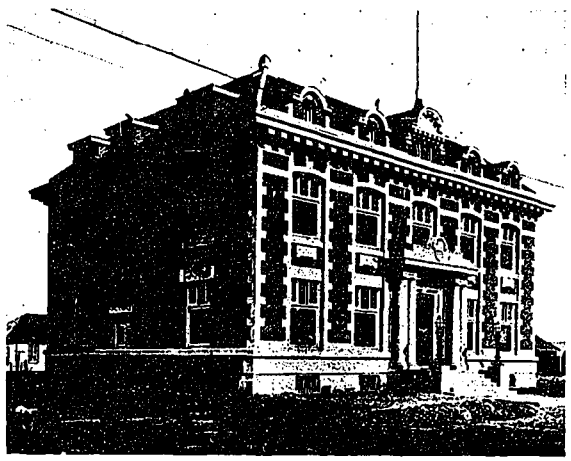
accompanying illustrations, provides for a structure that will readily fulfill its purpose in the simplest and most direct manner. Access to the interior will be obtained by two centrally placed and two end entrances, and communication with the upper and basement floors will be via broad non-combustible stairways enclosed with fire walls and equipped with automatic fire doors. As regards the exterior of the building, there is no evidence of extravagant elaborations. The main entrance is distinctly but not unduly accentuated and the general lines are simple, dignified and of pleasing proportions. A feature of the ground floor will be a central rotunda to which the corridors will connect, and which will produce a more open effect than could be obtained by an elongated corridor system. This floor provides for six class rooms, principal's office, teacher's rooms, stack compartment and reading room; while the second floor, in addition to an equal number of class rooms, contains physical, chemical and biological laboratories, occupying the entire central space at the front of the building. In the basement is a large gymnasium, domestic and manlal training departments, recreation room and splendidly equipped lavatories with shower bath compartments. The floors of the corridors throughout will be fireproof, and in addition to the precaution taken in this respect, and as regards the stairways, two balcony fire escapes will be provided to insure every reasonable means of egress in event of an emergency. The building will be equipped with an approved heating and ventilating system which will produce a uniform temperature of 70 degrees, with at least six changes of air an hour, and keep the air at proper humidity.

REGINA, THE "MODEL CITY OF THE WEST."—Continued from Page 95.

inside, the house is finished throughout in quarter sawed oak. The drawing room and library, both of which have large open fireplaces, are to the left and right of the entrance hall, while to the rear of it is a stair hall giving access to the service department and second floor. The kitchen is at the rear, and adjoining it to the right is the dining room, which has a door opening on to the verandah. The upper stairs contains several good sized bedrooms, with wardrobe facilities, and a bathroom equipped with modern plumbing and fixtures. The designer of this house was Mr. J. H. G. Russell, of Winnipeg.

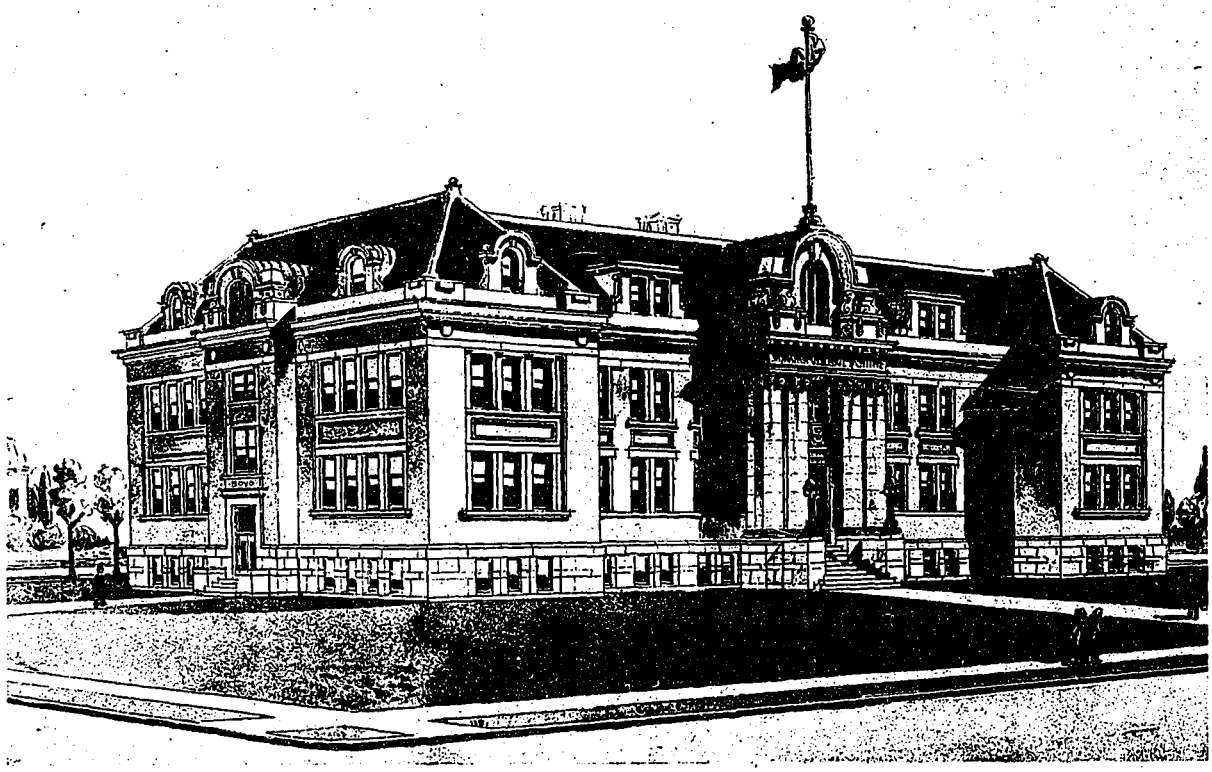
A CONTRACT WITH RESTRICTIONS.

THE WATERFORD reinforced concrete bridge, which has caused so much dispute that the plans for it were finally submitted to the Privy Council of Ireland, is the subject of a recent note in "Engineering" that throws considerable light on the status of the controversy. The council had decided that a reinforced concrete bridge should be constructed, although it was contrary to the wishes of the local authorities, but in reaching a final decision it has coupled with the approval of reinforced concrete some conditions that seem decidedly unusual. It has very properly, ordered that the foundations of the work should be executed in such a manner as to be beyond question, but it has also required the contract to be so drawn that the contractor must maintain the structure for two years after its completion before its acceptance. If the experience during this period is unsatisfactory to the committee in charge of the work they are to have the privilege of requiring the contractor to maintain the structure for four more years, to the satisfaction of the engineer. The contractors are



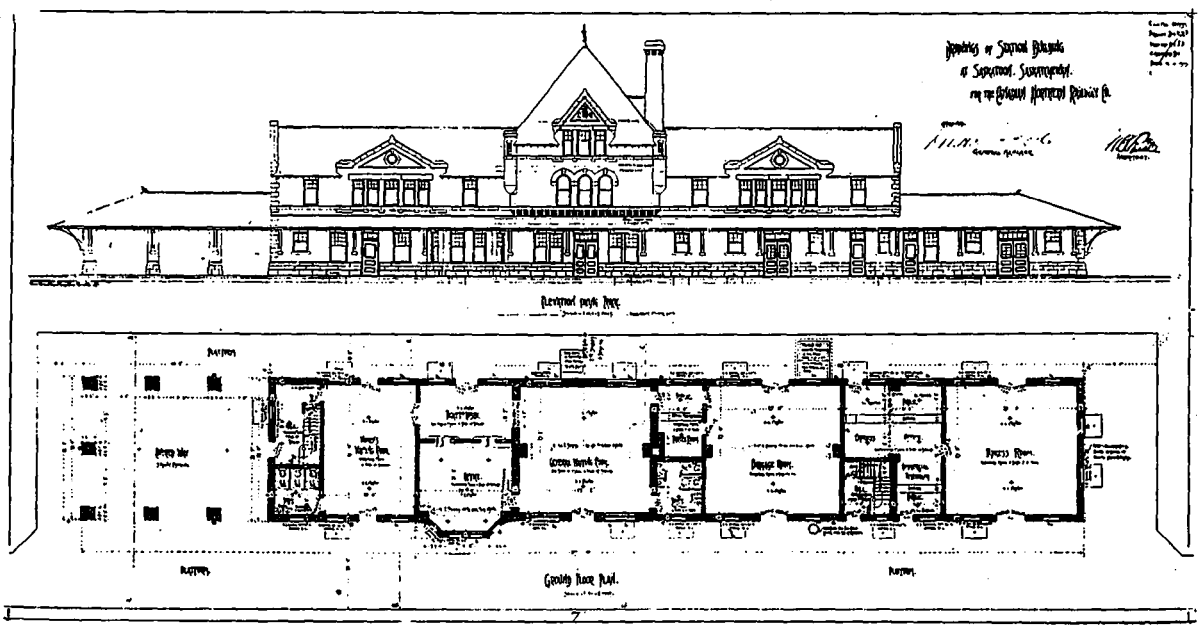
Court House, Saskatoon, built at a cost of $45,000. The walls are of red sand mould brick, with Tyndall stone trimmings, and the interior is finished throughout in quarter-cut oak. Storey & Van Egmond, Architects.

to stipulate in their tenders the amounts they will charge for its maintenance. The case is attracting so much attention in Great Britain and Ireland that for the sake of complete fairness it would seem desirable to start afresh. It is evident that whatever type of structure is constructed it will be a mark of strong criticism, which is bound to influence voters against all bridge work if carried too far; consequently, it would apparently be a good move to take the decision of the Privy Council as

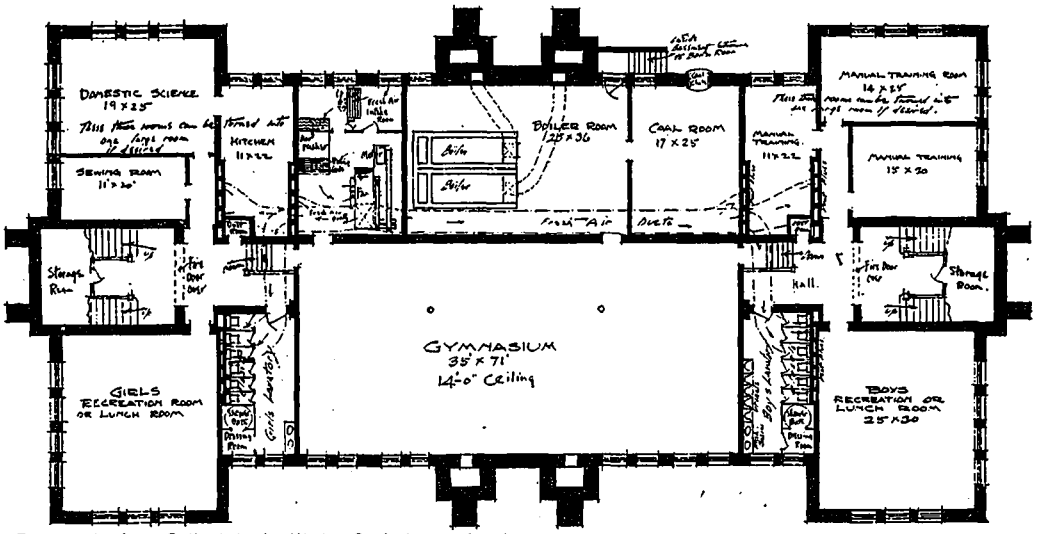


Perspective view of the new Collegiate Institute, Saskatoon, which is now being erected at a cost of $90,000. This building bears additional testimony to the liberal and thorough manner in which the West in general provides for the housing of its school children. Storey & Van Egmond, Architects.

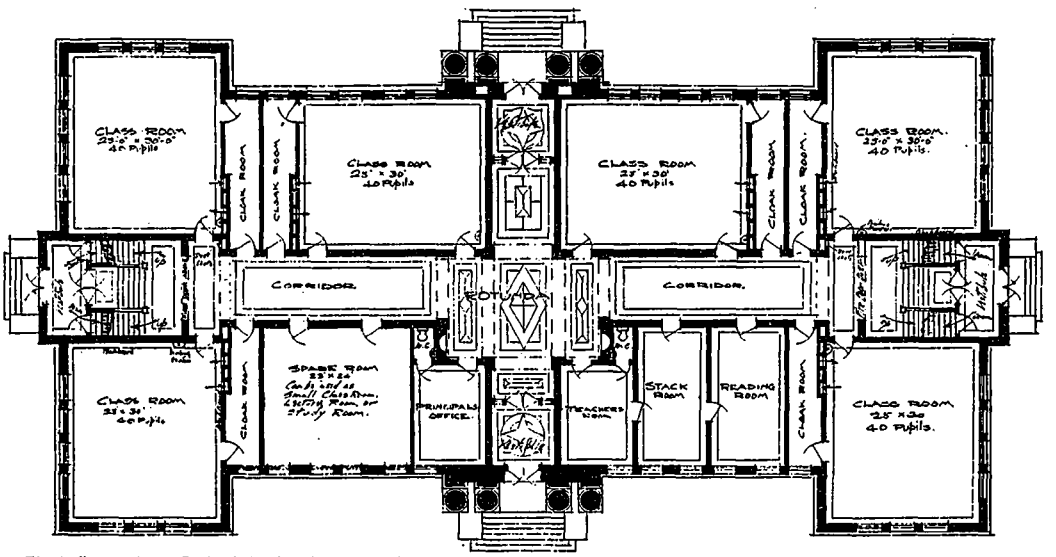
a basis for an entirely new competition. That decision stipulated quite carefully, so far as the reports of it indicate, the features of foundations and superstructure that must receive attention in any designs of reinforced concrete bridges that will be acceptable, and these requirements should be stated in the terms of a new competition in which steel and reinforced concrete builders can take part, both being under the obligation to put in satisfactory foundations and to maintain the structure, if required, for a period of six years at a definite rate. This case is apparently the first public competition between steel and reinforced concrete for an important bridge, and for this reason disinterested observers naturally hope that the conditions of the competition shall be absolutely fair to all parties. The published opinions on the case indicate the existence of a feeling that the reinforced concrete structure which has been the cause of argument was not of a sufficiently conservative design to be compared with the proposed steel bridge; whether this opinion is warranted or not it is impossible to judge from the information at hand.



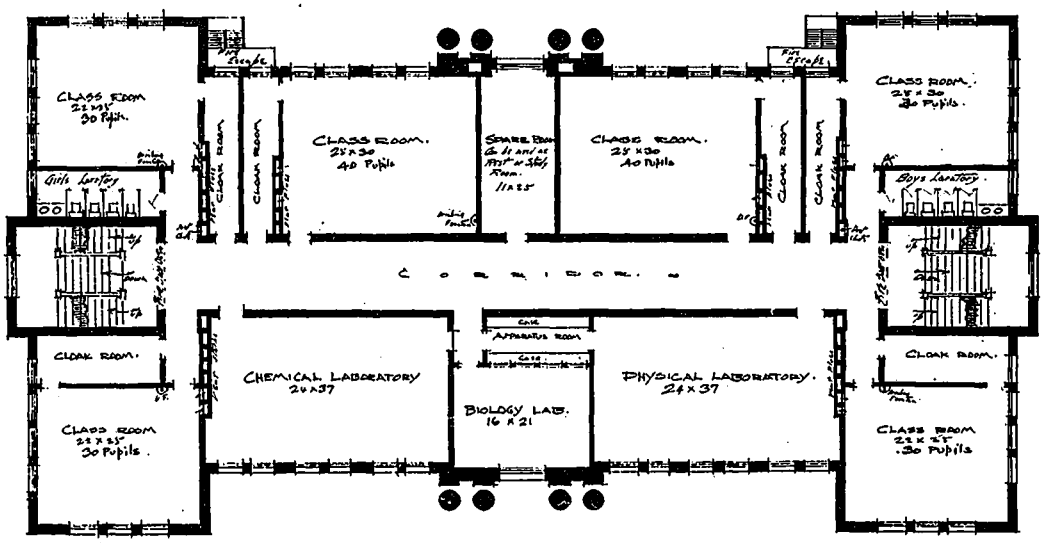
Main elevation and floor plan, Canadian Northern Depot, Saskatoon. W. B. Pratt, Architect.



Basement plan, Collegiate Institute, Saskatoon, showing the location of the large gymnasium, manual training and domestic science departments, recreation room and boiler compartment. Storey & Van Egmond, Architects.



First floor plan, Collegiate Institute, Saskatoon, a feature of which is the fireproof corridors and the four well-placed entrances. Storey & Van Egmond, Architects.



Second floor plan, Collegiate Institute, Saskatoon, showing the general arrangement of the class rooms, cloak rooms and laboratories. Storey & Van Egmond, Architects.

EDMONTON, THE GATEWAY TO THE NORTH.—Its Great Growth, Possibilities, and Progress from an Architectural Standpoint Summarily Set Forth.—Substantial Development Under Way in All Classes of Buildings, and Much Large Work in Prospect.

"THE GATEWAY TO THE NORTH" is the title laid claim to for their city by the citizens of Edmonton. This wonderful new city is generally recognized as the gateway to the vast Peace River country, which has been happily and truthfully termed "The Empire of the North." The story of the growth of this city of Edmonton sounds almost like a fairy tale. Its population has increased from 3,000 in 1900 to 21,000 in 1908, and when it is realised that this rapid growth was made in the face of what, at one time, looked like insurmountable difficulties, it is doubly marvelous. Every early citizer remembers how the C. P. R. refused to come across the great ravine over the Saskatchewan River, into Edmonton, and how it looked as though, if a city were to be established in this section of the country, it would be Strathcona and not Edmonton. Despite this great disadvantage, Edmonton continued to grow until the Canadian Northern came into the city, since which time it has gone ahead by leaps and bounds. Edmonton proved itself stronger than the railroad; it won out, and now the C. P. R. is about to construct a great bridge across the ravine into the city. It was a case of "If the mountain will not come to Mahomet, Mahomet will go to the mountain."

The early settlers in Edmonton deserve much credit for the manner in which they laid out the town, and the present-day citizens are to be complimented upon the manner in which they are building up the city and carrying out their municipal improvement work. The city is located on the south side of a great ravine, at the bottom of which runs the Saskatchewan. The main streets run east and west, while the shorter cross town streets run north and south. The streets in both the business and residential districts are wide and well paved. In fact Winnipeg is the only city in the West whose business thoroughfares are wider than those of Edmonton. While a very large number of the earlier houses were built of wood, mostly all of the residences in the better sections of the city are now being built of brick. A number of brickyards have been established within the immediate vicinity of the city, and bricks are obtainable of a very good quality at an exceedingly reasonable price.

Jasper Avenue is the main business artery, and the business buildings, banks, and hotels on this street, as will be seen in the views that accompany this article, give evidence of the pride and confidence of the citizens in their city. A very significant fact in connection with the solidity of the growth of Edmonton is that though the volume of building during 1908 in almost every centre in Canada was below that for 1907, it was the reverse in Edmonton.

The growth and development of Edmonton during the last five years from an insignificant trading post to one of the most influential cities in the northwest is most interesting, viewed from almost any point, but especially so if we review the development of building operations as reflected by the building permits issued by the city's Building Inspector.

On looking up the records we find that while in the year 1905 the total amount was only $702,724 it rose to $1,868,069 in 1906, to $2,280,210 in 1907, to $2,498,847 in 1908, and up to the end of October, 1909, to $2,200,000.

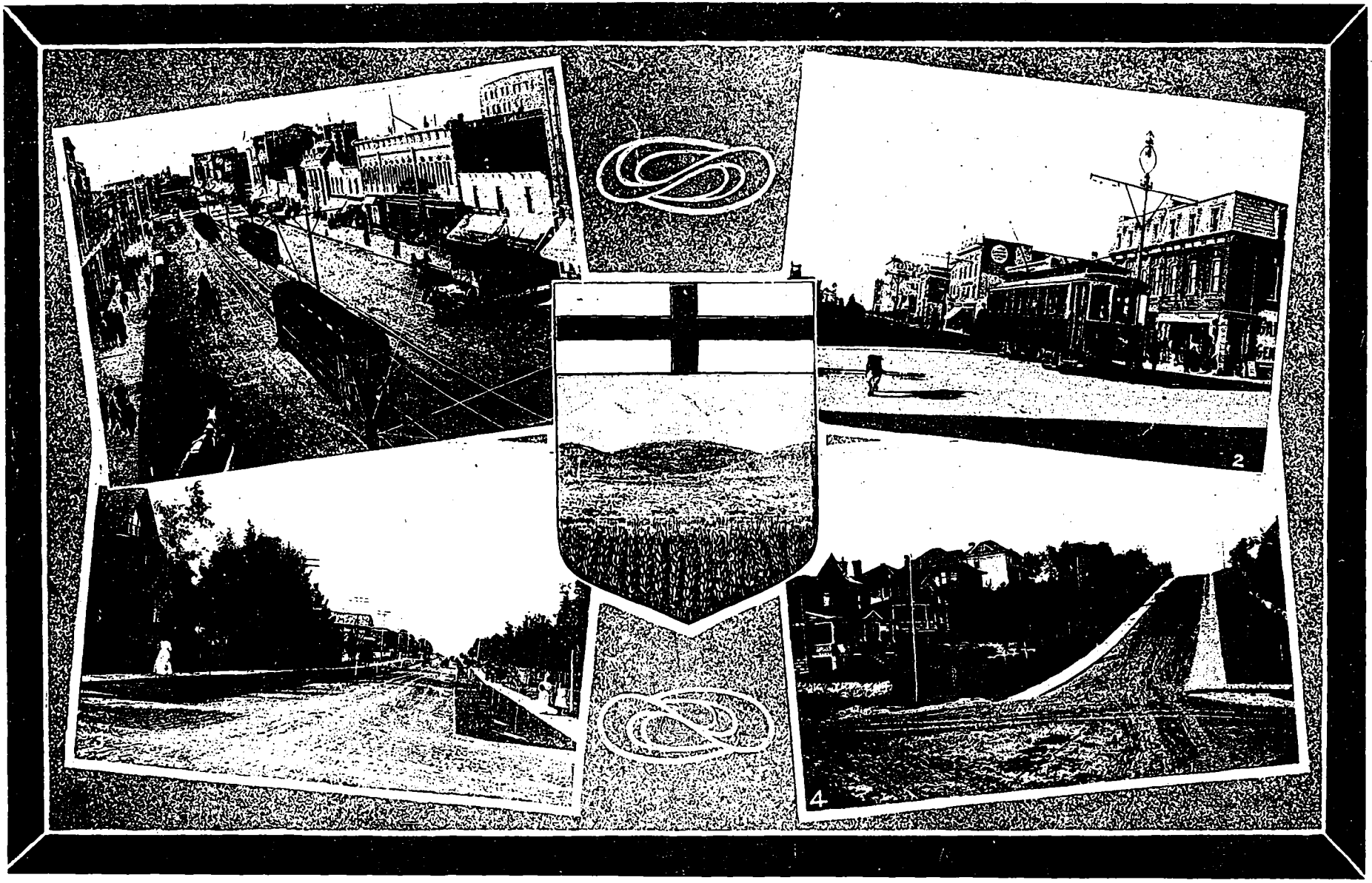
The figures in the aggregate are interesting, but the details are equally as engaging, as they give us a reliable indication of the lines along which true development is taking place. Amongst the buildings which have been erected within the last three years may be mentioned the following:—New Post Office $250,000, Alexander Taylor School $100,000, Norwood School, $130,000, Imperial Bank $100,000, R.C. Separate School $70,000. Bloweу-Henry Building $65,000, Windsor Block $60,000, McDougall Court $45,000, Arlington Apartment House $150,000, Lemarchand Block $200,000, Kelly Block $60,000, the Griffin Packing Plant represents $1,000,000, Jasper Block $45,000, Y.M.C.A. $60,000, Cristall Block $75,000, and many more.

The foregoing will give the reader some idea of the stability of the capital city of Alberta, and buildings such as above will indicate the measure of confidence which the citizens have in the future of the city.

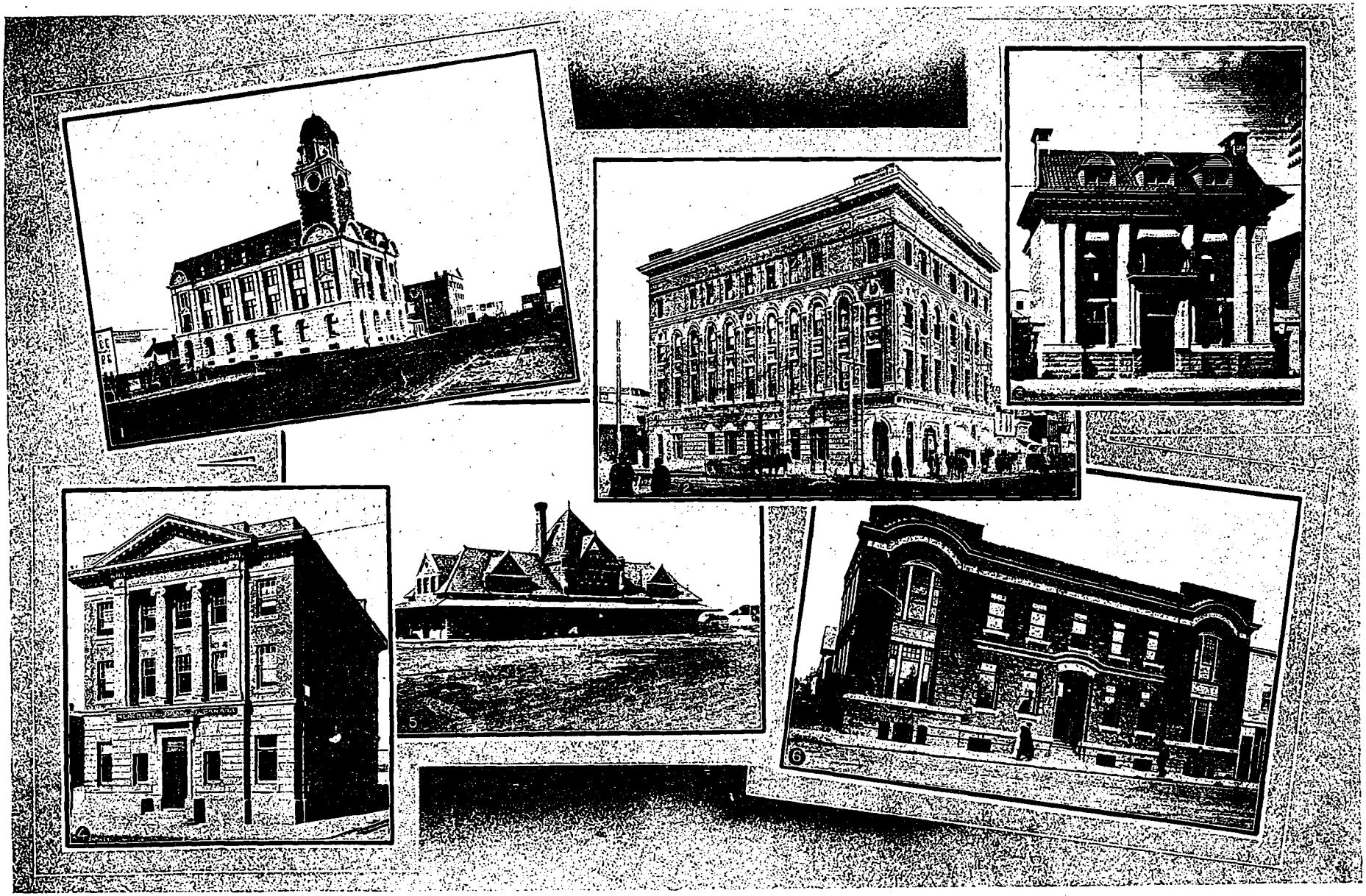
With regard to future prospects the outlook is just as bright, if not brighter, than when viewed several years back. Amongst the buildings under way are the new Parliament Buildings which will cost some $1,300,000, the new Court House $300,000, new Methodist Church $75,000, new High School $109,000, new Union Bank $50,000, Molson's Bank $50,000, McDonald Block $50,000, extensions to the Alberta Hotel $100,000, extensions (second addition) to King Edward Hotel $60,000, City Hospital $150,000, 17th Street Public School $100,000. These figures give some idea of the still greater growth that its citizens are looking forward to.

No city of Edmonton's age and size is better endowed with educational facilities. It is within two miles of the Provincial University, and has two colleges, a High School, in addition to eleven Public Schools. It has also twenty-two churches, two sanitariums, four hospitals, fourteen banks, three clubs, and twenty-two hotels. It owns its own electric plant, its own street railway, and its own waterworks. Immediately on the advent of the Canadian Northern Railway, Edmonton became a permanent distributing centre. A general readjustment of freight rates from manufacturing centres in Eastern Canada and the United States was made by the Canadian Northern Railway, whereby Edmonton was placed on an equal footing with the other distributing centres of Western Canada. In addition to the inward rates being substantially reduced the outgoing rates from Edmonton were also lowered. The Canadian Pacific Railway has definitely announced it to be part of their policy to make Edmonton a wholesale and distributing point. The arrival of the Grand Trunk Pacific in the course of a few months will place Edmonton still further to the front as in this respect.

The city of Edmonton now justly claims to be the leading packing centre of the province, in fact of the middle west. During the year 1908 there were 50,000 head of cattle, hogs, and sheep slaughtered in Edmonton and Strathcona, of which amount 70 per cent. were hogs $750,000 would be a conservative estimate to place on the year's killing. During 1909 these figures will have increased to at least double as the Swift Packing Plant was operating only during the last three months of 1908, and in that time slaughtered 30,000 head of stock. The balance of the 50,000 was handled by the smaller plants. With regard to the Swift Packing Plant, a very complete examination of Western Canada was made before it was decided to build in Edmonton. The buildings and equipment, etc., cost something like $1,000,000 The capacity of the plant is 1,000 head of cattle, 2,500 hogs, 500 sheep

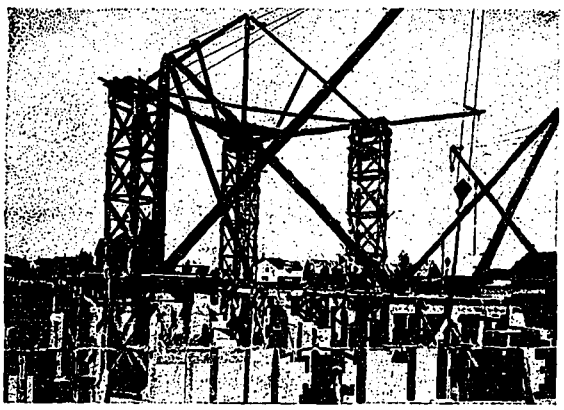


VIEWS OF BUSINESS AND RESIDENTIAL STREETS IN EDMONTON. 1—A glance along Jasper avenue, the city's main business thoroughfare. 2—Jasper avenue, looking west from McDougall street. 3—Sixth street, as seen from McKay avenue. 4—Looking north on Sixth street, from the intersection of Saskatchewan avenue.



EDMONTON'S ARCHITECTURAL PROGRESS, AS REFLECTED IN SOME OF THE MORE RECENTLY ERECTED BUILDINGS. 1—The Post Office building, J. Ewart, Architect. 2—Empire Block, H. G. Johnston, Architect. 3—Canadian Bank of Commerce, Darling & Pearson, Architects. 4—Merchants Bank building. 5—Canadian Northern Railway station, Pratt & Ross, Architects. 6—Telephone Company's Exchange building.

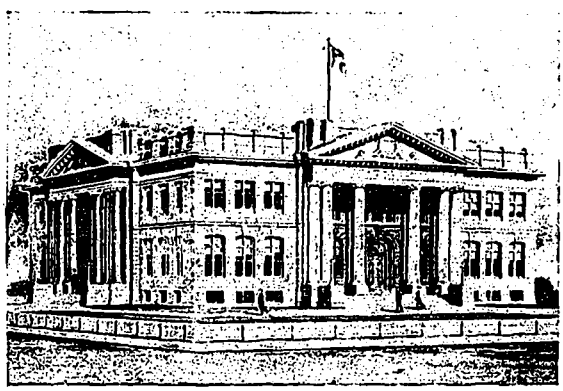
and 300 calves per week. They have not been operating to their full capacity as the building is not quite complete. It is now being finished and the output will be greatly increased The supply of hogs, cattle and sheep is obtained from the C. N. R. district as far east as Saskatoon, along the C. P. R. as far south as Crossfield, and points on the Wetaskiwin and Lacombe branches. As a manufacturing centre, Edmonton has already gained recognition. In addition to the packing industry referred to above, there are lumber mills (capacity 20,000,000 feet per annum), brick factories, brew-



View of construction work on the new fireproof Edmonton Court House, which is being erected at a cost of $250,000, from plans prepared by A. M. Jeffers, Supervising Architect, Provincial Department of Public Works.

eries, sash and door factories, basket factories, aerated water factories, cigar factories, pickle and vinegar factories, box and tub factory, concrete block, pipe and tile factory, etc.

As in Regina, the most important buildings now under course of erection are the Parliament Buildings of the Province of Alberta, the corner stone of which was recently laid by Earl Grey, Governor-General of Canada. The structure was designed by Mr. A. M. Jeffers, provincial architect, under whose supervision the buildings are being erected. Mr. Jeffers has given most careful study to all structural details, assisted by the structural



Edmonton's new Court House, as it will appear when complete. Designed by Mr. A. M. Jeffers, Supervising Architect, Provincial Department of Public Works.

engineer, John Chalmers, and in collaboration with Mr. Fingland, structural engineer and architect of Winnipeg, who is acting in an advisory or consulting capacity for the Government in connection with the building. The complete design was submitted to Professor Nobbs, of Montreal, who is professor of architecture at McGill University, and after his revision was finally approved and adopted.

The building is situated upon the high ground at one time occupied by the residence of the chief factor of the Hudson's Bay Co., and overlooking the river hundreds of feet below and the plateau, where the fur company's old fort still stands. The structure has a site which cannot be surpassed for scenic beauty in the province, if in Western Canada. The location is nearly central in Edmonton from an easterly and westerly direction, and lies almost midway between the capital and the sister city of Strathcona upon the southern bank of the Saskatchewan. In these respects, as from a standpoint of picturesque beauty, the historic site could not have been excelled.

Although it is almost two years since work was started upon the excavations little more than the foundations have been completed up to the present time. The delay was first caused by tardy shipment of the structural steel and, later, by the slow delivery of the granite and freestone of which the super-structure will be built. On May 18th last the masonry was begun, and at present the granite basement walls have been completed three-quarter way round the buildings.

They rise to a height of over twelve feet, and present such a stately and substantial appearance that they give some idea of the magnificence of the structure when it will be completed. Inside the granite work is the brick which makes the walls over three feet thick.

The Norwood School, Edmonton. Roland W. Lines, Architect.

The structure is being built in the form of a huge "T," having the main facade parallel to and 200 feet south of Saskatchewan Avenue, on which the building fronts. The design is classical, following the lines of the Corinthian order. The main entrance or central pavilion, facing the city to the north, is 83 feet wide, flanked on the east and west sides with administrative wings. Each wing is 13 feet long, exclusive of entrance steps which extend away from the ends a distance of 42 feet each.

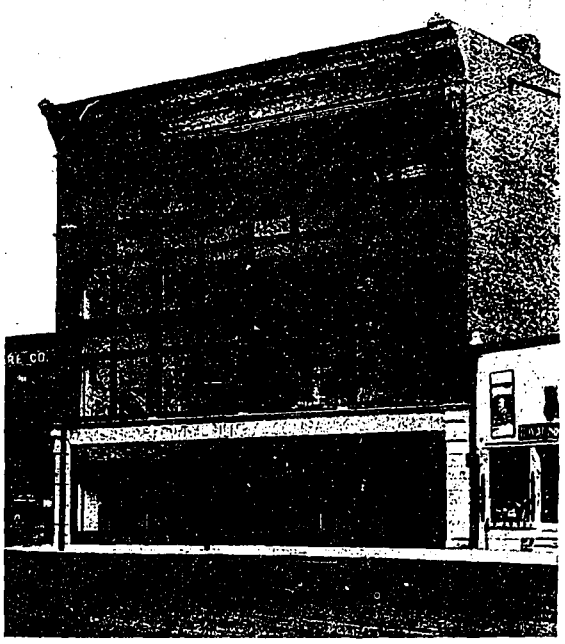
The main entrance pavilion, including entrance steps, extends north from the main facade, a distance of 75 feet, from which point the building measures south 290 feet. It is 58 feet high from the ground line to the top of the main cornice, and from the entrance line to the base of the lantern on the dome is 88 feet. In general the buildings occupy a plot of ground 427 feet by 290 feet, and from the ground to the top of the dome is 178 feet

The building is of strictly fireproof construction, having broad concrete footings and foundation walls up to the ground line. Above ground the exterior walls are faced with stone masonry, backed with brick work and furred on the inside faces with hollow, porous terra-cotta blocks for the purpose of providing air spaces to prevent

dampness and to make a solid background for plastering work. The interior is of steel construction, consisting of steel columns supported on concrete footings and steel floor beams and roof trusses. All of this steel work will be fireproof, using concrete bricks or terra-cotta as best suited for the work. The steel work is a

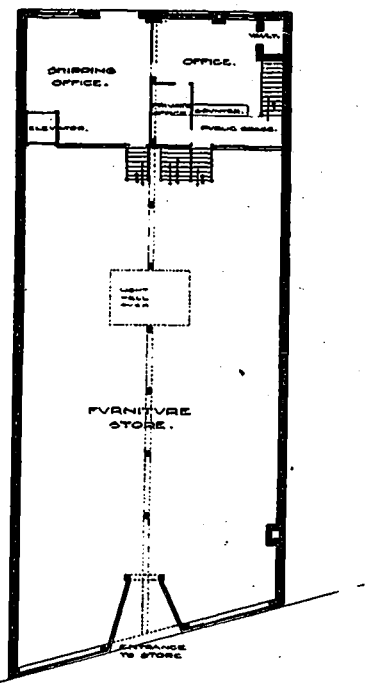
Alex. Taylor School, Edmonton. Roland W. Lines, Architect.

unit in itself and is not dependent on interior partitions for support. The walls of the rotunda and vaults are built of first-class brick masonry. All other interior walls are built of hollow porous terra-cotta blocks and so designed that at any time any partition or set of partitions or any floor may be removed without interfering with the construction of the building, and with a minimum interference with the business operation of any department. The walls will be of reinforced steel concrete construction or protected steel beams, having marble and tile floor finishes.



Store and warehouse of the Blower-Henry Company, Edmonton. R. Percy Barnes, Architect.

An outstanding feature in the building development of the towns and cities of the prairie provinces, is the large number of improvements which are being made as regards public buildings and school structures. Practically all sections are witnessing unusual activities in this respect, and the type of buildings erected, as a rule, are permanently constructed and well adapted to meet the requirements of the community in which they are located. One of the important structures now under way is the new Edmonton Court House, designed by Mr. A. M. Jeffers, supervising architect of Provincial Department of Public Works. In construction, the building, which is a two story and basement structure, will be of the fireproof type, enclosed by walls of Calgary stone. The two accompanying views show the progress of the work up to date, and the Court House as it will appear when completed. Owing to the location of the site, the design provides for two entrances of equal importance, one on McDougal Avenue, and the other on May Street. Both of the entrances will be similar in treatment, following the Ionic order, and be approached by broad granite steps flanked on either side

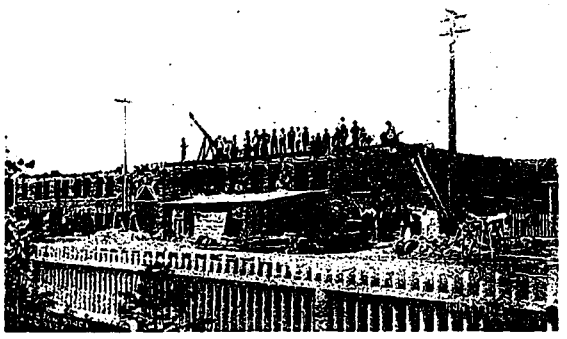


Ground floor plan, Blower-Henry Company's building, Edmonton. R. Percy Barnes, Architect.

by low masonry walls, surmounted with electroliers of an appropriate design. On the interior the plan provides for an arrangement that will readily facilitate the business of the various courts and departments. The central feature will be a spacious rotunda, finished with a panelled ceiling and having marble and plaster columns and pilasters. This will give direct entrance to the supreme court chambers, and the principal departments, and will connect with the second floor by a marble and iron staircase. On the second floor the rotunda is surrounded with a gallery, having ornamental plaster columns, pilasters and beamed ceilings, the centre feature of the ceiling being an ornamental ceiling light set in plaster work. Opening off the gallery are the public entrances to each of the four court rooms and library. Between the court rooms are located the jury room and judges' retiring room. In general, the building will be finished in oak and ornamental plaster work, being appropriately panelled and finished to harmonize with the particular use of each court or room. A system of model vaults for court records, etc., will be installed on the first floor; and in addition to the main entrance, access to the building will be obtained from two entran-

ces opening in from the lane, one of which will connect with the police headquarters located in the basement.

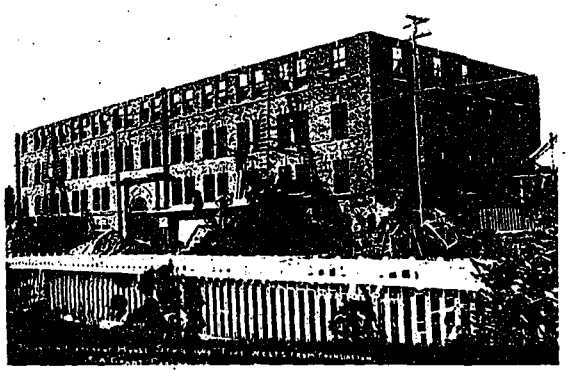
As regards school building construction, the accompanying ilustrations will enable the reader to form a fairly comprehensive idea, as to the substantial type of structures Edmonton is providing to meet her needs along this particular line. These are the Norwood school, and



The ability of Western contractors to carry out construction work in a thorough and expeditious manner is convincingly demonstrated in the erection of the Arlington Apartments, Edmonton. This view, which gives an excellent idea of the ground dimensions of the building, shows the stage to which the work had advanced on August 25, 1909, just thirty-five days from the date the contractors undertook the removal of a cottage which originally occupied the site. R. Percy Barnes, Architect.

the Alex. Taylor school, both of which were designed by Architect Roland W. Lines, of that city. Both are two stoory and basement structures, with brick exterior walls and cut stone entrances and trimmings. The corridors are wide and direct in their arrangement, the rooms well lighted, and the stairways so situated as to expidite access or egress to or from any part of the building. In each case approved heating and ventilating systems have been installed, and all vulnerable points, such as the portions over the boiler room, etc., are fully protected so as to minimize any danger from fire.

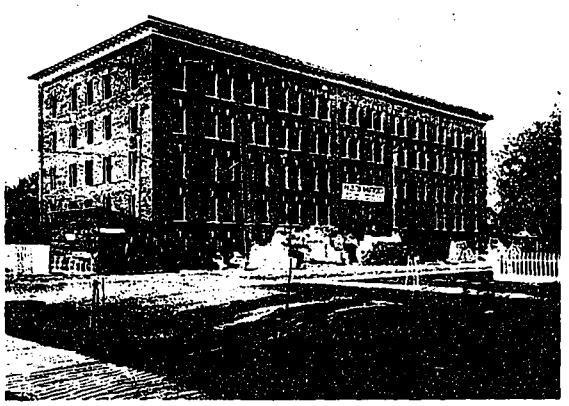
Included in the group of illustrations which contains Edmonton's new postoffice, are the Canadian Bank of Commerce, the Empire block, and Merchant's Bank, Tel-



Process view of Arlington Apartments, Edmonton, taken on September 4th, 1909, showing the work five weeks after the concrete foundation was installed. R. Percy Barnes, Architect.

ephone building, and the station of the Canadian Northern Railway. It is hardly necessary to dilate upon the featrues of these buildings, as in each case the external design is such as to speak for the character, equipment and advantages of the building within. Both banks are representative of the splendid structures which the Canadian financial institutions are establishing in the Western field; and the Empire block and Telephone building are, both in design and construction, buildings of which the larger Eastern cities might feel justly proud.

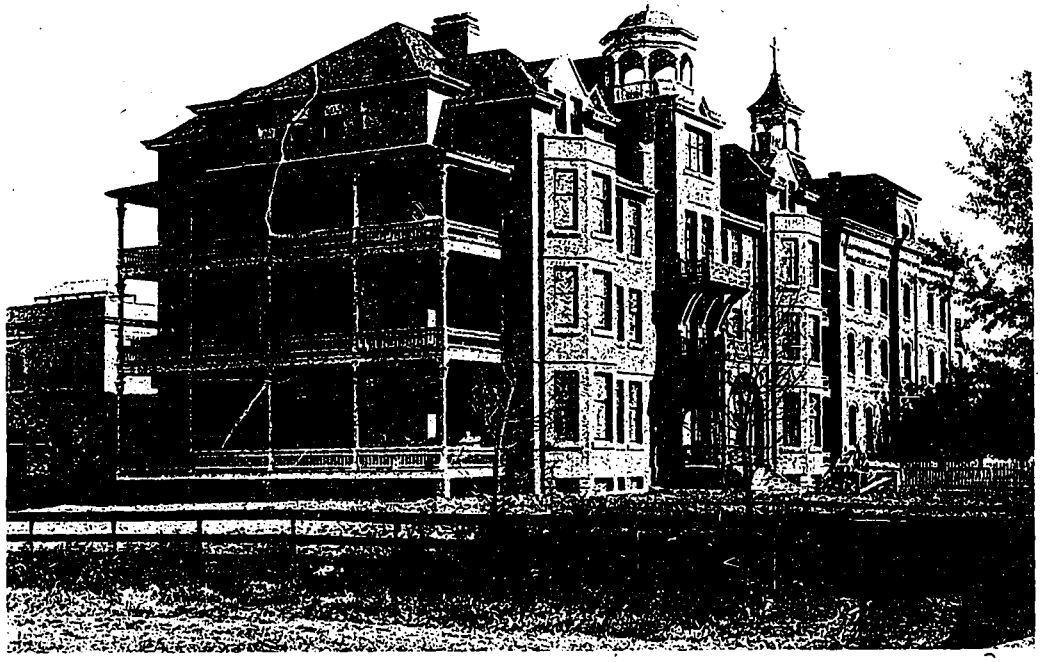
The Blowey-Henry block is one of Edmonton's more recent additions in the way of a commercial building, is a four-story structure, fronting on Jasper Avenue, and was erected at a cost of $60,000. It is admirably suited for the purpose for which it is used—that of housing the business of a large furniture concern—the building being splendidly lighted and allowing the maximum space for the display of goods. The ground floor is occupied by a spacious store, with the offices and shipping rooms of the company at the rear, while the entire three upper floors form three vast show rooms, in which the articles of furniture can be seen to advantage. The walls of the building are of brick, and the front, which is of steel contsruction, is faced with Calgary stone, and marble from the Kootenay quarries. The large plate glass windows of the show rooms, are pivoted to open on the Tabor patent system, and communication from one floor to the other is obtained by a broad staircase and an Otis electric elevator. Heat is supplied by a low pressure steam system, and the appointments throughout are modern in character. The designing and supervising



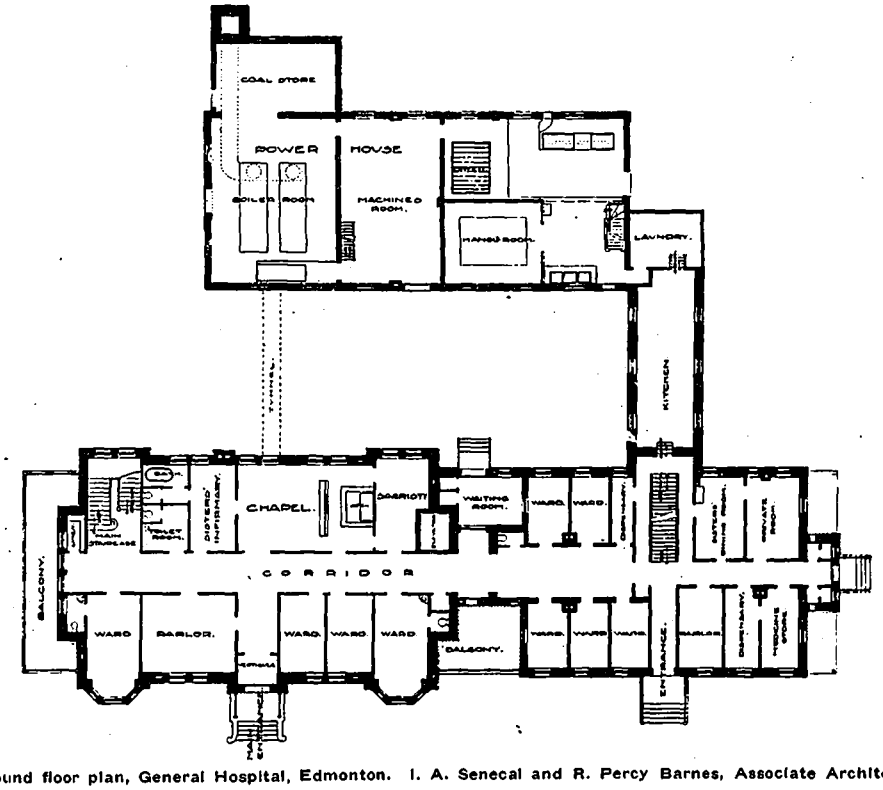
Arlington Apartments, Edmonton, from a view taken September 18, 1909, showing the building entirely enclosed. The building contains forty-five modern suites, and is equipped with the most approved sanitary appliances and heating and ventilating apparatus. R. Percy Barnes, Architect.

architect of the building was Mr. R. Percy Barnes, Edmonton.

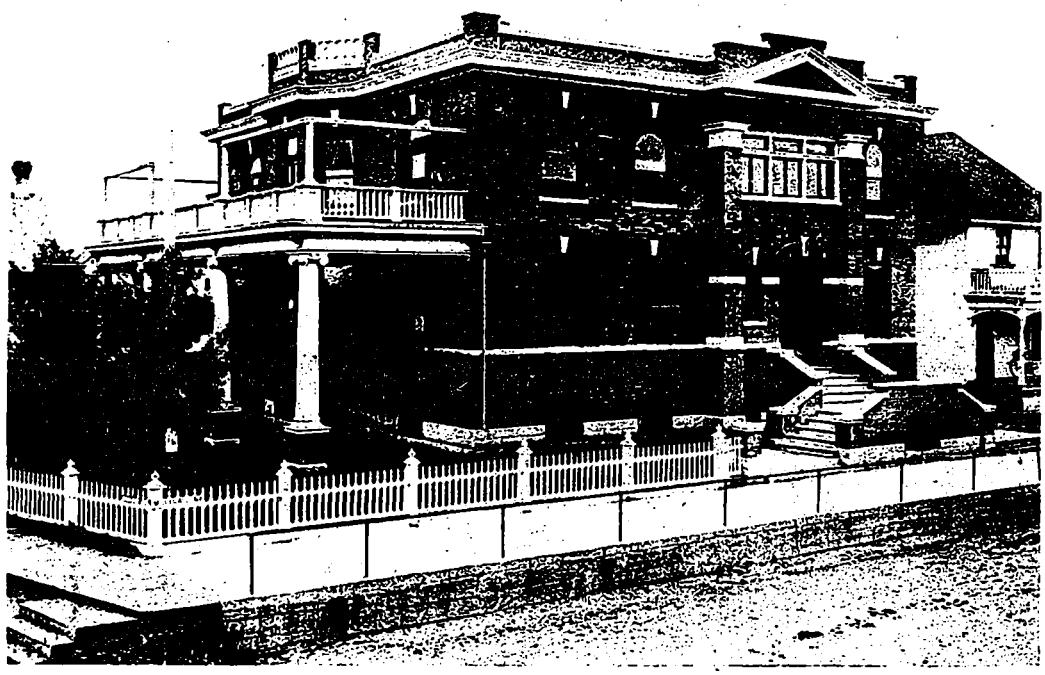
That western contractors are capable of perfecting a working organization which enables them to carry out construction work in equally as thorough and expeditious a manner as the builders in the eastern provinces, and the United States, is convincingly demonstrated in the three accompanying process views of the new Arlington Apartments, Edmonton, also designed by Mr. Barnes. This building, which received its finishing touches a short time back, contains forty modern suites, and is equipped with the most approved sanitary appliances, and heating and ventilating apparatus. The first view shows the stage to which the work had advanced on August 25, 1909, just thirty-five days from the date the contractors undertook the removal of the cottage which formerly occupied the site. Considering the character, size and ground dimensions of the building, of which a comprehensive idea can be obtained from the third view, the erection of this structure was executed in a remarkably short time. Five weeks from the time the concrete foundations were installed, the brick walls



New Extension to General Hospital, Edmonton. I. A. Senecal and R. Percy Barnes, Architects.



Ground floor plan, General Hospital, Edmonton. I. A. Senecal and R. Percy Barnes, Associate Architects.

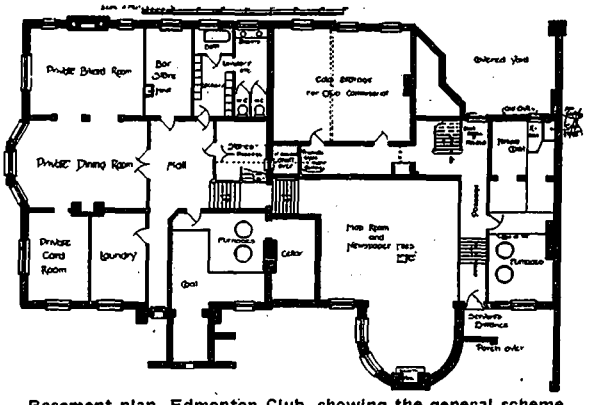


The Edmonton Club, Edmonton, Alta., which has a membership of over 200 professional and business men. This view shows the building as far as it has been completed. A large addition forming a part of the original scheme is to be built to the right of the entrance, thus making the structure one of the most commodious and best appointed club houses in Western Canada. A. M. Calderon, Architect.

Writing-room, Edmonton Club, Edmonton, Alta., showing the fireplace and the general character of the appointments. A. M. Calderon, Architect.

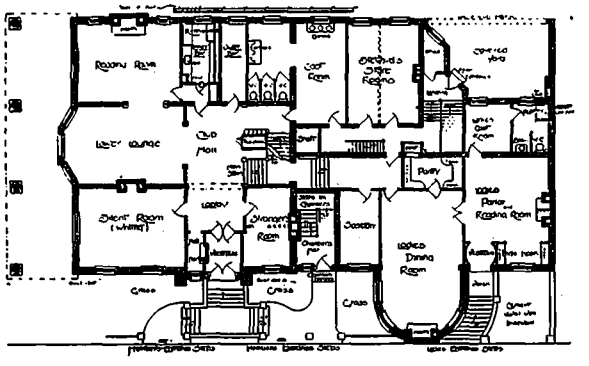
had been carried up to the fourth floor line, while on Sept. 18th, exactly fifty days from the commencement of operations, the structure was entirely enclosed and ready for the final work of the interior.

Further work of Mr. Barnes' is seen in the new extension to the Edmonton General Hospital, which he designed in collaboration with Architect I. A. Senecal.



Basement plan, Edmonton Club, showing the general scheme of rooms in the present portion of building and proposed addition. A. M. Calderon, Architect.

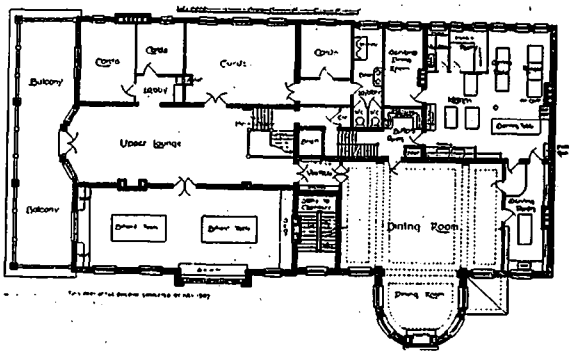
This improvement consisted of a large five story addition to the original hospital building, and a separate two story building for the accommodation of the power plant and laundry rooms. The latter structure is connected to the main building by a kitchen wing and an underground passage way. Externally, the building, which faces Victoria Avenue, is faced with local red brick and trimmed with Calgary stone, while on the interior every consideration has been given in the arrangment and finish of the various rooms and corridors, to bring the sanitary features up to the highest standard requirement. A pleasing feature of the exterior is a system of balconies opening off the corridors at the end of the building, for convalescent patients. The new addition provides accommodation for fifty patients, and in-



Ground floor plan, Edmonton Club, showing the arrangement of the present portion and the general lay-out of the rooms in the extension which is to be added to the building A. M. Calderon, Architect.

cludes a large operating room on the top floor with roof lights and north windows. The general contractors for the extension were Connell & Spencer, Edmonton, and the entire work was carried out at a total cost of $125,000.

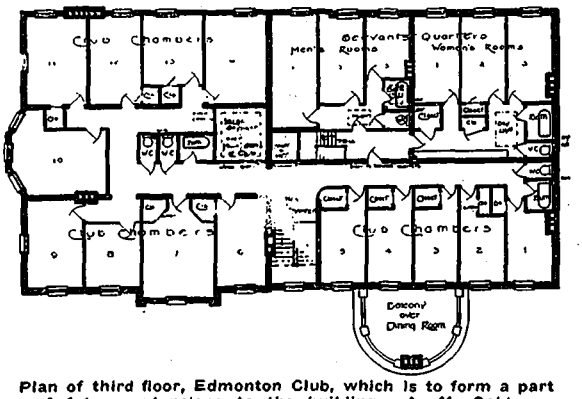
The social feature of the business life of Edmonton centres in the new home of the Edmonton Club, a rapidly growing organization, whose membership at the present time includes over two hundred prominent business and professional men of both the city and province. This structure, which was designed by Architect A. M. Calderon, and built at a cost of $22,000, although complete in itself, represents only a portion of the building as originally planned. A large addition is to be built to the right of the main entrance (see accompanying plan), as soon as additional accommodation is necessary, thus making it one of the most commodious and best appointed houses in western Canada. The exterior of the building is of red pressed brick with cut stone trimming and belt courses, and the interior is finished largely in quarter-cut oak. Besides the usual club advantages, the plan provides for a number of interesting features. Entrance to the building is obtained by easy ascending stone steps through a panelled vestibule and hall. The club hall, which is centrally located and connected with the lower lounge by an arch door, gives direct access to all parts of the building. Upstairs the arrangement



Second floor plan, Edmonton Club. A. M. Calderon, Architect.

of the rooms obviates a system of passages. A feature of the plan is a large central hall way or lounge, with a door opening onto a balcony, 12 by 60 feet, overlooking the Saskatchewan valley.

The residence of Mr. George W. Swaisland, on Victoria Avenue, Edmonton, was also designed by Mr. Calderon. It is a solid pressed brick house, built on a concrete foundation, and was erected, including the cost of site and stable, at an outlay of $11,000. At the front is a large verandah and an upper balcony covered by a gable projection, which overlooks the Saskatchewan valley and affords a splendid outlook of the surrounding country. A feature of the interior is a large living room which takes up the entire front portion of the first floor. adjoining this room is a transverse hall, with an entrance, vestibule and staircase, and giving access to the dining room and kitchen at the rear. The dining room



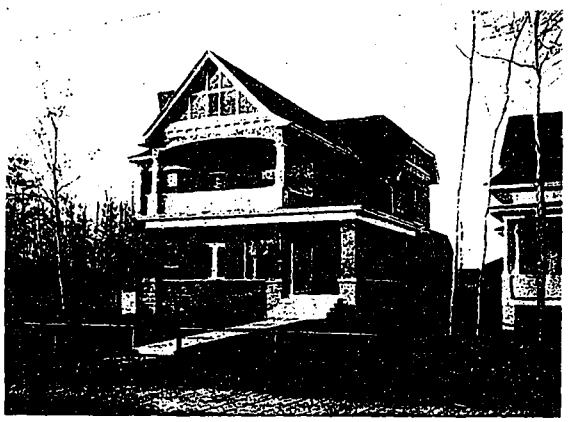
Plan of third floor, Edmonton Club, which is to form a part of future extensions to the building. A. M. Calderon, Architect.

has a beamed ceiling and a large bay window, while in the living room is a large open fireplace built of Roman and Pompeian pressed brick. In addition to the second floor of the house is finished in hardwood, while the that of the living room, three bed chambers, bath room

and dressing room, there is a good sized attic containing a billiard room, and servant's room. The entire lower floor of the house is finished in hardwood, while the second floor has white enamel trim and mahogany doors.

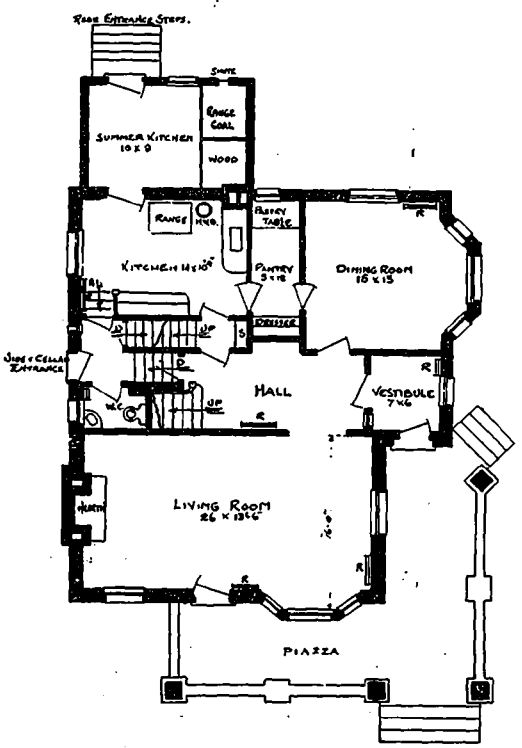
BUILDING ACTIVITIES IN NOVEMBER.

AS YET the lateness of the season has, seemingly, had no deterring effect upon operations in the building line. The sound of the hammer and the metallic ring of the trowel resounds throughout the



Residence of G. W. Swaisland, Victoria avenue, Edmonton. A. M. Calderon, Architect.

land, and even the section where the severity of the north winds usually lessens the force of activity, the march of progress still remains but little checked. While the mildness of the weather has been instrumental in giving a furthering impetus to late fall developments, yet the



First floor plan, Residence of G. W. Swaisland, Edmonton. A. M. Calderon, Architect.

needs of a great growing country and heavy demand for new accommodations are, in the main, the real motive factors in the great upbuilding which is taking place.

The returns for November show a healthy proportionate increase in all provinces in the Dominion. Permits were issued for new work representing an aggregate value practically doubling that of the same period of last year, and the comparative amounts, as supplied CONSTRUCTION, places the average gain for the month at 57 per cent., a most remarkable advance for this time of the year.

Out of the list of eighteen cities reporting, only three decreases are noted and these are so widely divergent in location as to only serve to emphasize the sound situation which still obtains in general. The three places affected were: Victoria, which suffered a decline of 46 per cent., the first loss registered this year; Edmonton, which fails to equal last year's figures for the month by 21 per cent., and London, which fell behind on the month's work to the extent of 27 per cent.

Aside from these three places, the month was characterized by a series of gains. The largest increase registered was in the case of Regina, which made a phenomenal advance of 430 per cent. Halifax, which apparently is recovering from her slump of the past few months with a vengeance, note the second highest gain, that of 403 per cent, and Fort William stands the next in order with a substantial increase of 278 per cent.

The gains in general are of most gratifying proportions, and only two cities reporting increases, have failed to double their figures by at least one half. Toronto, as usual, looms up with the largest volume of work, having issued permits aggregating in value $1,940,650, as against $1,379,749 in November, 1908, which gives the city an increase of 40 per cent. Ontario, in fact, with the exception of London forged ahead substantially. Berlin registers a 200 per cent. gain; Brantford one of 61 per cent.; and Hamilton an advance of 56 per cent. Port Arthur failed to submit comparative figures, and the amount noted only refer to work undertaken in the fire limits; and as regards London, it might be mentioned, that while the city has experienced a slight depression for the month, it has so far this season undertaken new work amounting to $818,129, as against a total of $441,860 for the entire year of 1908.

Montreal's increase of 73 per cent. reflected fully the pronounced activity in that city; while further east, in addition to splendid headway made in Halifax, (235 per cent.), Sydney's big advance, (235 per cent.), and St. John's gain of 86 per cent. shows conclusively that the forward movement in that section is quite general.

As regards the West, the month witnessed an undertaking of an unusually large amount of work. Besides Regina's great gains, as previously mentioned, Calgary annexed another enormous increase (242 per cent.), while Vancouver over-reached her last year's figures for the month to the extent of 77 per cent. Winnipeg, too, managed to top the amount for November, 1908, by 19 per cent., and Lethbridge, although not submitting comparative figures, shows by her amount of $96,175, that she is well on the safe side of the game.

	Permits for November, 1909.	Permits for November, 1908.	Increase, Per cent.	Decrease, Per cent.
Berlin, Ont.	$6,000	$2,000	200.00	.....
Brantford, Ont.	36,750	22,790	61.25	.....
Calgary, Alta.	211,550	61,700	242.86	.....
Edmonton, Alta.	63,365	80,505	.....	21.29
Fort William, Ont.	138,365	36,575	278.30	.....
Halifax, N.S.	104,575	20,750	403.97	.....
Hamilton, Ont.	165,850	165,850	56.35	.....
Lethbridge, Alta.	96,175	.....	.....	.....
London, Ont.	37,475	51,700	.....	27.51
Montreal, Que.	482,940	279,068	73.05	.....
Port Arthur, Ont.	13,350	.....	.....	.....
Regina, Sask.	49,205	9,276	430.45	.....
St. John, N.B.	33,900	18,200	86.26	.....
Sydney, N.S.	10,070	3,000	235.66	.....
Toronto, Ont.	1,940,650	1,379,749	40.65	.....
Vancouver, B.C.	615,829	346,800	77.57	.....
Victoria, B.C.	55,585	104,710	.....	46.91
Winnipeg, Man.	291,900	244,600	19.33	.....
	$4,353,534	$2,767,498	57.30	.....

CALGARY AND ITS PROGRESS.—A Rapidly Growing Industrial and Commercial City with Many Substantial Business Buildings and Splendid Homes.—Wonderful Development Reflected in Large Volume of New Construction Work.

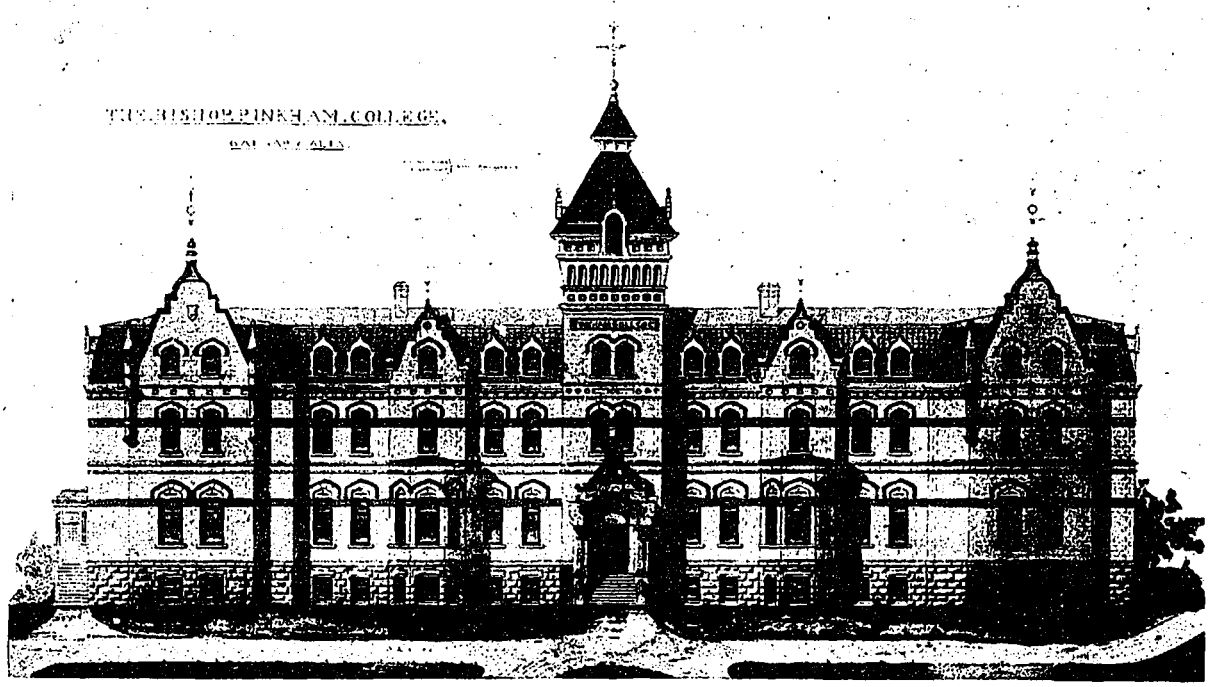
A CITY that has taken upon itself the appearance of a busy metropolitan centre to a greater extent possibly than any other city between Winnipeg and the coast, is Calgary. The visitor to this, the last big city in Western Canada this side of the Rockies, is impressed from every side by the evidences of business development and growth. Everybody is hustling, everybody is busy, and everybody appears to be making money. Calgary's growth has been no less great than that of the many other younger cities that have sprung up in the West during the past five years, but there is an atmosphere of stability and permanance that is very often lacking in other younger Western cities. The buildings have an appearance of permanence and solidity, a condition that is not in many of our prairie cities. In fact, Calgary's buildings give it the appearance of an old wealthy aristocratic Eastern city. This is a condition undoubtedly due to the fact that stone is used to such a great extent, and Calgary is blessed with a natural resource enjoyed by few sections in the West. It has an abundant quantity of an excellent building stone, known as Calgary stone; a stone that when taken from the quarries is soft, and hence easy and inexpensive to work. It, however, has the exceptional property of hardening rapidly and ages in the walls beautifully. To the traveller it is almost a relief, after having passed through such a vast area of flat prairie country, to get into Calgary, where the land commences to take on an undulating aspect.

Calgary's streets are narrower than those of most Western towns, and the change may be said to be pleasing to the traveller. Built along the banks of the Bow river as it is, at the foot of a hill, gives it a picturesque beauty possessed by few cities. Calgary, as a distributing, as well as a manufacturing centre, is the most important at present west of Winnipeg, and the large number of big warehouses and manufacturing buildings recently erected, or now under course of construction, is an indication of its continued supremacy in these particular lines.

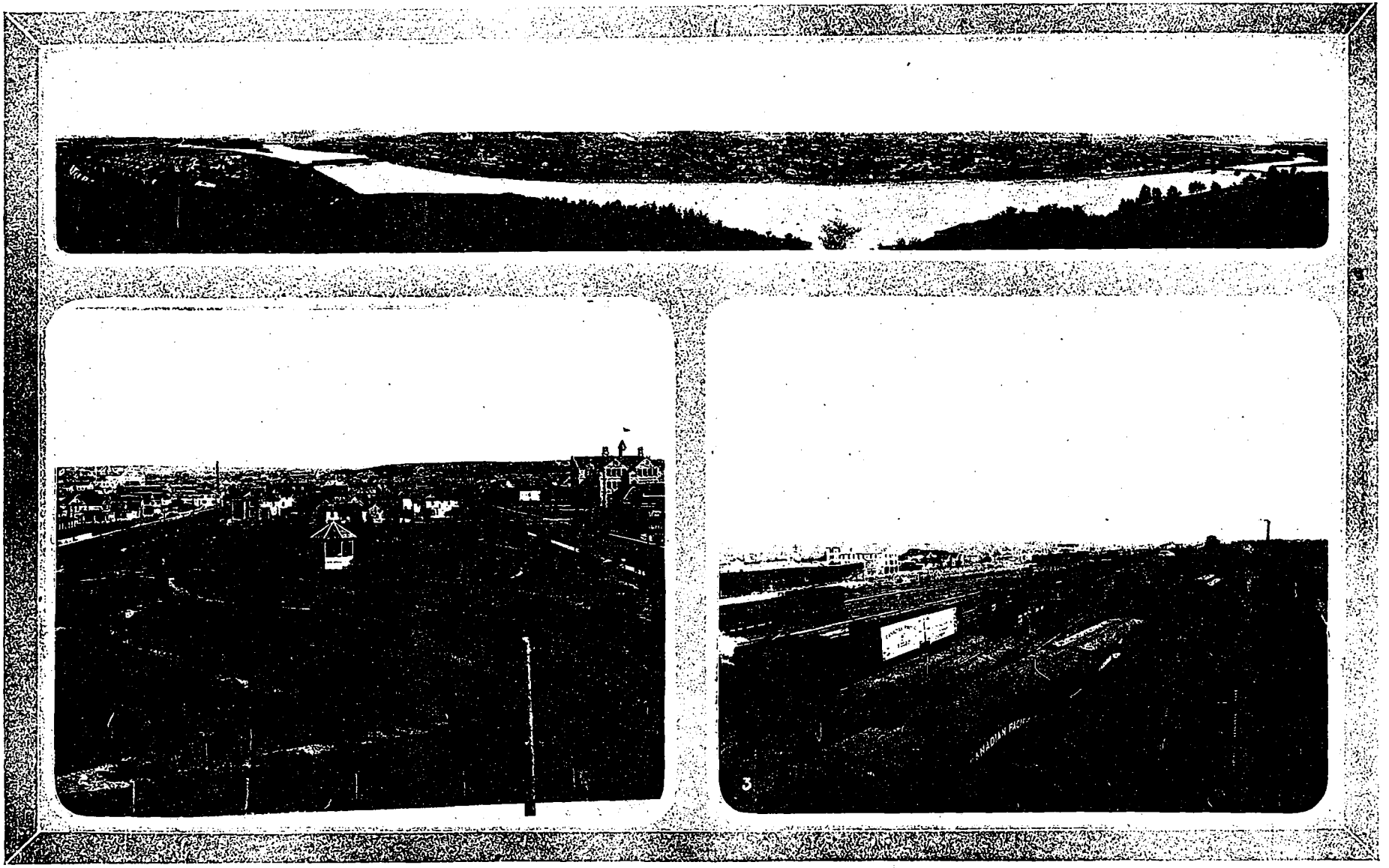
The architecture of its business buildings is not by any means ornate or elaborate, but there seems to be an element of stability, yes almost massiveness, generally prevalent in the buildings in the business districts. In residence architecture, we are safe in saying that Calgary has more high-class, elaborate and expensive homes than any city between Winnipeg and the coast. This indicates two things; first, that there is much wealth in Calgary, and second, that the importance of the city as a centre has attracted to it some very able architects, of which Calgary has a comparatively large list.

Calgary's population increased from 6,000 in 1900 to 23,500 in 1908, during which year her customs receipts amounted to $426,425, her bank clearings to $64,810,229, and her building permits to $1,004,520. The present year has been the busiest building year ever experienced in the city of Calgary. Permits for large buildings, totalling $2,390,000, were issued up to October 31st. This amount does not include churches, private residences, apartment blocks, and other small blocks, and the indications are that the total permits will reach the $5,500,000 mark for 1909. When it is considered that Calgary's population is less than 25,000, it will be understood what wonderful activity these figures represent.

The city covers an area of 12 square miles (7,780 acres), and has 130 miles of streets, 47 miles of grano-

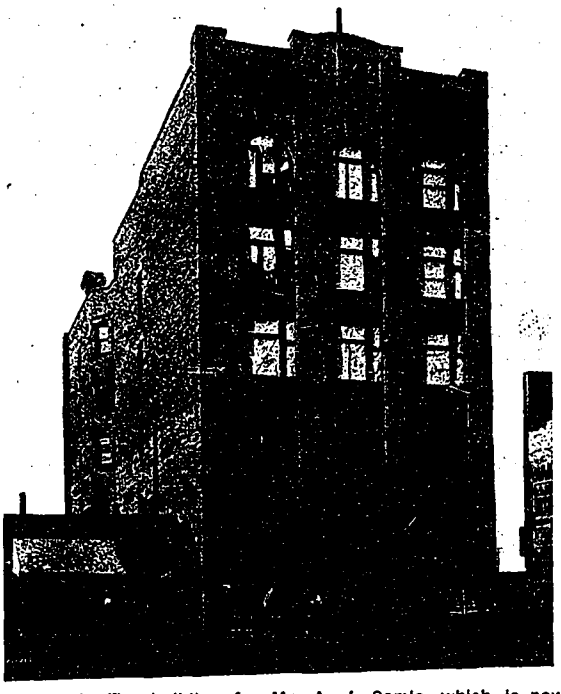


The Bishop Pinkham College, one of Calgary's architectural assets in the way of an educational institulton. Hopkins & Wright, Architects.



PANORAMIC VIEWS OF THE CITY OF CALGARY, SHOWING THE GREAT EXPANSION WHICH HAS TAKEN PLACE IN RECENT YEARS, AND THE GROWING IMPORTANCE OF THE CITY AS A TRAFFIC CENTRE. 1—The city as it appears from the opposite shore of the Bow River. 2—City Park, situated between the business and residential sections. 3—View along the tracks in the C.P.R. yards.

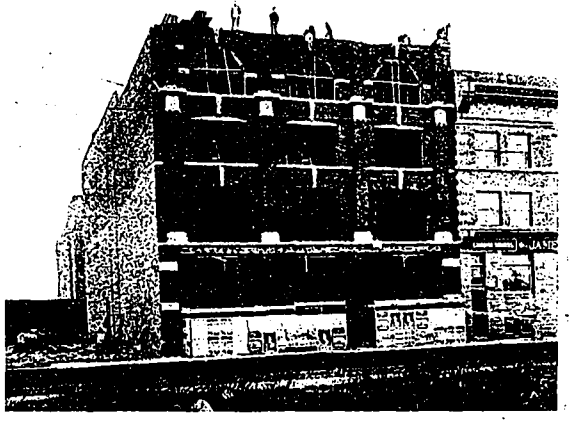
lithic side-walks, 25 miles of plank side-walks, 7½ miles of pavements, 32 miles of sewer, 39 miles of water mains, as well as a gravity system water supply that is 14 miles



Store and office building for Mr. A. J. Samis, which is now being completed on Eighth avenue east, Calgary. Dowler & Michie, Architects.

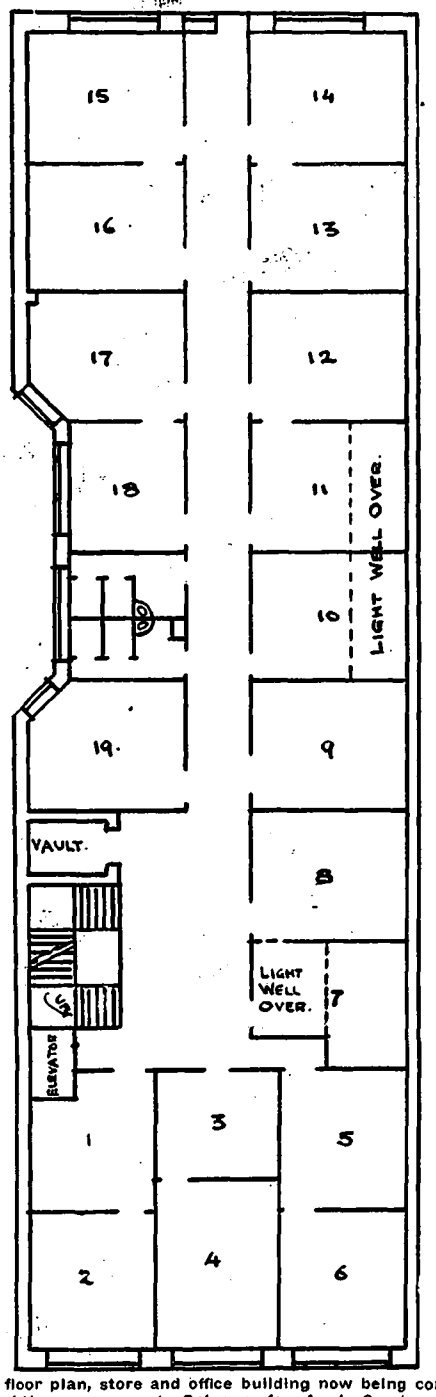
in length before reaching the city, and has a street railway system 16 miles in length. The municipality owns and operates successfully the electric light and power system and its street railway system, the latter clearing on an average of over $5,000 per month. During the last year the city installed 5½ miles of street paving, 13 miles of granolithic side-walks, 7½ miles of sewers, 13½ miles of water mains, and the entire street railway, making a record in civic advancement that has in all probability never been surpassed.

Calgary expresses its growth various ways. New buildings have risen on every hand and within the past



Four story office and warehouse, now being built in the business district of Calgary for Dr. T. H. Blow, at a cost of $42,000. Dowler & Michie, Architects.

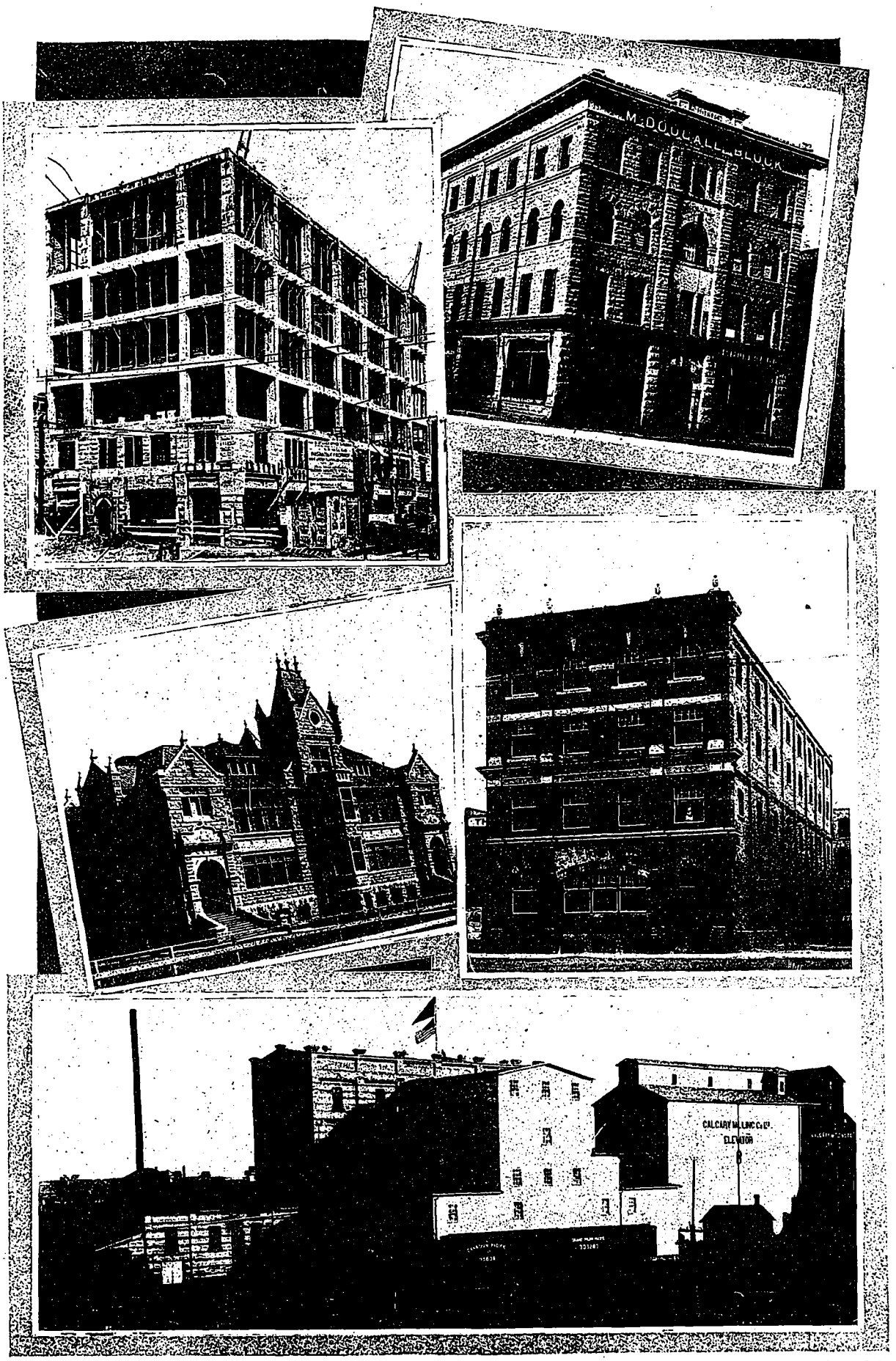
few years both the business and residential districts have undergone a vast transformation. Where two story business buildings served to meet the commercial requirements of yesterday, three, four and five story structures are in demand to-day. The very air breathes the prosperity which the city is enjoying, and the earth exhales the fragrance of a new and growing life. Industrially the city has made substantial progress, as is evidenced in its milling and packing plants, while in all departments of activity the sound of the builder's hammer resounds



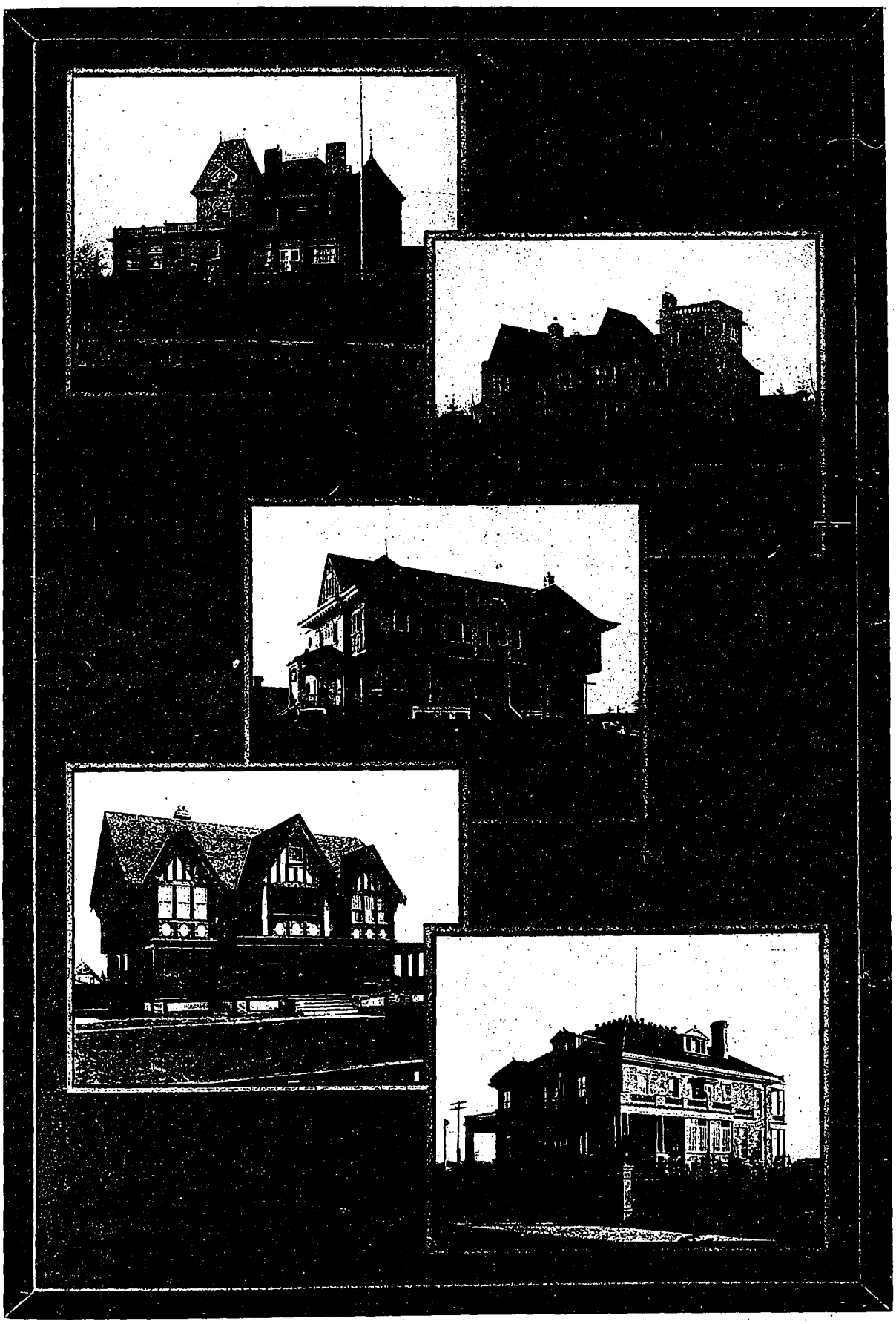
Typical floor plan, store and office building now being completed on Eighth avenue west, Calgary, for A. J. Samis. Dowler & Michie, Architects.

incessantly and re-echoes with each blow, the wonderful development that is taking place.

Such buildings as the McDougall block and Jorgenson building, both large four story structures with brick or stone fronts, together with the concrete constructed plant of the Calgary Milling Company, and the Colleg-



A FEW STRUCTURES WHICH BEAR WITNESS TO CALGARY'S SUBSTANTIAL GROWTH. 1—Process view of work on Calgary's Grain Exchange, Hodgson & Bates, Architects. 2—McDougall Block. 3—Calgary Collegiate Institute, D. S. McElroy, Architect. 4—Jorgeson Block, J. Llewellyn Wilson, Architect. 5—Plant and elevators of Calgary Milling Company.



EXAMPLES OF DOMESTIC ARCHITECTURE IN CALGARY. 1—Residence of Roper Hull, Hodgson & Bates, Architects. 2—Mr. Nunn's residence, Hodgson & Bates, Architects. 3—Residence of A. J. Sayre, Hodgson & Bates, Architects. 4—Home of P. Burns. 5—Residence of Senator Lougheed.

iate Institute and Bishop Pinkham's College, with their walls of native stone, testify in broad lines to the metropolitan proportions Calgary is attaining. But these, however, only bear witness to what has already been accomplished. Possibly the real gauge of the city's future is the large number of business buildings under way, and in immediate prospect. One of the more important of the new structures which is at the present time being erected, is the Grain Exchange building, a six story concrete structure, enclosed by walls of native stone, which, when completed, will give the city a direct com-

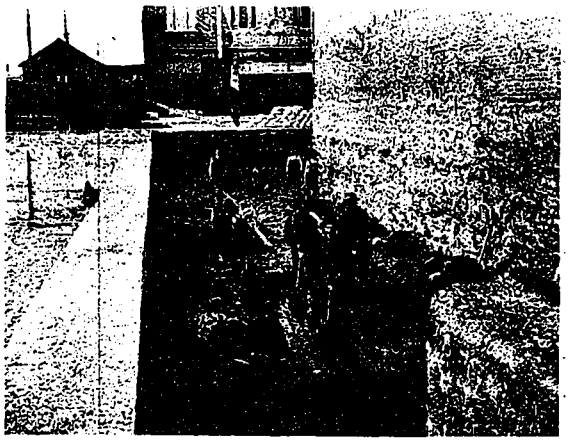
Business building for Bailley Bros., now being built on Eighth avenue east, Calgary, at a cost of $16,000. Dowler & Michie, Architects.

mercial advantage in handling the grain of the surrounding country. Another building is the four story brick store and office building, designed by Architects

Putting in the foundation work on Eighth avenue west, Calgary, for Alderman J. S. Mackie's new five story, brick and stone, store and office building. Dowler & Michie, Architects.

Dowler and Michie, for A. J. Samis which is now receiving its final touches on Eighth Avenue east.

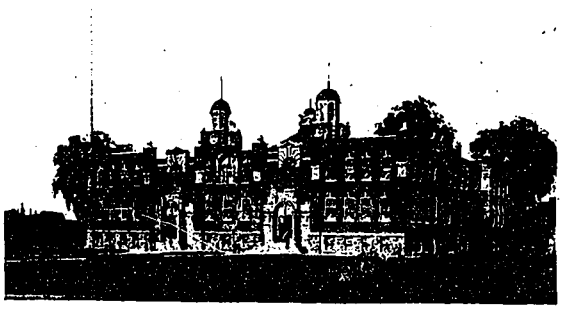
All along Eighth Avenue, in fact, there is a manifest outcropping of new buildings and construction work. The concrete foundations are in for a new five-story brick and stone store and office building for Alderman J. S. Mackie, and preliminary work has been started on a



Preliminary stage in the erection of a four story brick and stone store and office building on Eighth avenue west, Calgary, for the Hon. F. A. McNaughton. Dowler & Michie, Architects.

four-story structure of similar construction, and for similar purposes for the Hon. F. A. McNaughton. In addition, a $42,000 office and warehouse, four stories high, is being completed for Dr. T. H. Blow, and other inceptive stages of the new work are everywhere visible throughout the downtown district.

All the latter mentioned structures were designed by Architects Dowler and Michie, and represent but a portion of new improvements being carried out by one firm. In each case the architects of the city are busy and there is a large volume of new work in prospect for the com-



Perspective view of Calgary's new $150,000 High School, for which contracts were recently let. Roland W. Lines, Architect.

ing year. The building reports during the past twelve months have in no way exaggerated Calgary's outspreading development and were the visitors to the city five years ago, to return to-day, they would find bigger Calgary, better and more substantial in every way than they could possibly anticipate.

As regards domestic work, it is only necessary to refer to the splendid homes of Senator Lougheed, Patrick Burns, and the residences of A. J. Sayre, Mr. Nunn and Roper Hull, designed by Architects Hodgson and Bates—to learn that Calgary is accomplishing in this respect. With the increasing wealth of the country has come a demand for substantial homes and a better appreciation of design—and it is quite probable that at no great distance in the future, we can turn to Calgary and the West for some of our best examples of buildings of this type.

HOIDGE MARBLE

Rotunda, Electric Development Co.'s Plant, Niagara Falls, Ont. E. J. Lennox, Architect.

The above photograph shows some of our work carried out in Rouge Jasper, Jaune Fleuri, Breche Violet, White Italian, Verde Antique, Red Numidian, Secuna and Sylvian Green. : : : :

We make a special study of High-class Marble Work, and have standing to our credit some of the handsomest interiors in Canada. Our facilities enable us to undertake contracts in any part of the Dominion, and our entire organization is at your service in the matter of designing Interior or Exterior Marble Finish.

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REINFORCED CONCRETE IN THE WEST.

PERHAPS ONE OF THE BEST illustrations of the confidence which the business men of the West have in the future of their country, is in the substantial class of buildings which are being erected. One cannot observe the many modern fireproof structures which are springing up in all parts without becoming conscious of the progressive spirit which is abroad. The Westerner displays a sharp discernment and a strong sense of value in the selection of his material, and he builds not for to-day alone, but for to-morrow and the future as well.

In the great development which is taking place in the West, reinforced concrete has come to be a most generally accepted method of construction. Splendid examples of use in all types of buildings can be seen from Winnipeg to the Coast, and from the International border to the most northern towns. At Regina, the new fireproof Parliament Building now under way for the Saskatchewan Government, is built throughout of concrete, reinforced according to the Kahn System. Another substantial structure is the Grain Exchange at Calgary, now nearing completion, which will be one of the finest and most thoroughly fireproof buildings in that section. Again, one can turn to such splendid Winnipeg buildings as the Kenmore Apartments, which cannot be excelled from a structural standpoint, and the Roslyn Court Apartments, and the Rookery, and the warehouse of the Gutta Percha Rubber Company, which is of the highest type of construction known. The Fort Garry Station, now being built, may also be included, in that its floor system throughout will be of reinforced concrete construction, as will also the entire new shops of the Transcontinental Railway, which are now in course of erection.

These buildings alone represent those which have been built, or are being carried out according to the Kahn System. To enumerate the entire list of reinforced concrete structures, would require more space than is at present available. They simply serve to give an idea of the progress which is being made in the West in the erection of sound, substantial buildings, and it must be admitted that the Eastern section of Canada could do no better in placing itself on a safe constructive basis, than to emulate the example set by the younger, though more progressive, Western section.

A WESTERN SUPPLY HOUSE.

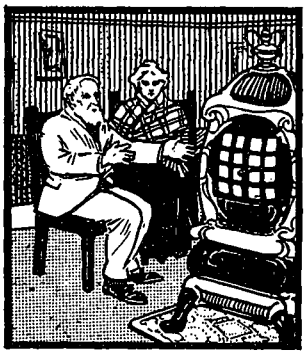
WITHOUT QUESTION, one of the largest building material supply firms in Canada, is Dunn Bros., of Winnipeg, with branch offices at Regina and Saskatoon. Mr. Sam. Dunn, who is the senior partner of this firm, is well known to both eastern and western architects and contractors, and has, in the last few years, built up a business that is in keeping with the progressive spirit of the West. It will be surprising for eastern firms to learn that Dunn Bros. have in their main yards in Winnipeg, seventy head of horses for the delivering of the products which they supply to the trade in Winnipeg alone. Almost everything in the shape of building material, from brick to shingle stain, is handled by this firm, including hydraulic pressed brick, terra cotta fireproofing, architectural terra cotta, Portland cement, lime, hardwall and wood fibre plasters, sewer pipe, mortar color, expanded metal and metallic lath, firebrick and clay, steel shingles, siding and ceilings, roofing tile, paints and varnishes, Cabots quilt linofelt and plaster decorations.

One of the most recent lines that this firm has undertaken to handle, is Kootenay marble, which has been used exclusively in the construction of the Great West Life Insurance Building, Winnipeg, the architect of which is John D. Atchison. It is claimed by the Canadian Marble Works, who have their main office at Nelson, B.C., that this product is the most non-absorbent and most sanitary marble quarried in Canada. The Candian Marble Works own and operate what they claim to be the largest and best equipped marble quarries in Canada, and it is contended that "Kootenay" marbles, because of their close grain, are non-absorbent and, therefore, do not stain. More than this, they are perfectly sanitary. All varieties and colors, for both exterior and interior work, are quarried, and beautiful contrasts for decorative purposes, can be supplied, that are especially adapted to bank and public building interiors. Tests of this marble made by McGill University, show the following results: compression over 10,000 lbs. per square inch; absorption (48 hours immersion) 4-5ths of 1 per cent.; analysis-calcium carbonate 99.4. In view of the exceptionally large amount of high class materials being used in the construction of Western buildings, it is fair to say that "Kootenay" marbles will become popular among architects and contractors.

FIREPROOF PARTITIONS.

THE WORD FIREPROOF is used by most architects and engineers very loosely. Particularly is this so when applied to partitions. Before any intelligent discussion of fireproof partitions can take place it is necessary that we should first come to a definite understanding of what is meant by the term. To obtain a fireproof partition it is not sufficient that the material composing it should be fireproof. Expansion stresses destroy many a partition built of perfect material. Is is necessary, then, that the partitions be found standing after a fire? This question brings the term fireproof into the range of meaning of some architects and leaves it out for others. A partition which is standing in good condition after a fire is obviously non-combustible. It may, however, have allowed the fire to pass through it. For this reason it might be entirely satisfactory as a fireproof partition in some cases, but could not be regarded as fulfiling its purpose if used as walls for a vault or as a fire wall between two portions of a factory.

If, however, a partition is not only found standing after the fire, but has confined the fire to the side on which it started, there is no question of the suitability of the term. It is desirable, nevertheless, that the lesser degrees of fireproofing should be properly recognized by a generally understood technical term. Possibly two words "fire resistant" and "fire retardant" should be substituted for the word "fireproof." A fire resistant partition would be one which would be found standing after the fire, but not necessarily one which would confine the fire. The fire retardant partition would, as its name implies, be one which would confine the fire to the side on which it originated. This must be regarded as an essential quality for any partitions which are to be used as fire walls or vault walls. With this definition in mind, it is necessary to consider what degree of fireproofing should be demanded



Extreme Cold is not so trying as Uneven Warmth

Every Architect, whether he is building a house, church or public building, must realize the evident truth of this statement.

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will heat any structure, from the trimmest little house to the largest office building, evenly and healthfully, from top to bottom, and soon save enough in fuel and repairs to pay for the entire installation.

King Radiators are manufactured to make complete the most perfect heating system in the world. They are designed to give the greatest radiating surface and yet be compact and pleasing to the eye. Their style and ornamentation will blend perfectly with any scheme of decoration.

Each section of the King Radiator is tested to a pressure of 100 pounds and any one that shows the slightest sign of weakness or imperfection is thrown away.

Daisy Boilers are designed to get all the heat out of the fuel they consume. The fire-pot is large and deep, with corrugated sides, which prevents any dead ashes from gathering around the fire.

Come, Mr. Architect, do away with all old-fashioned heating systems—instal a Daisy Boiler and King Radiators in your next building—and reflect credit upon yourself for your wise selection.

Write for our booklet "Comfortable Homes." We will be pleased to send you a copy.

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for the generally termed fireproof partitions which are used in office buildings and apartment houses. A fire retardant partition must necessarily have all the openings protected. The high cost of metal frames and wired glass for openings and the difficulty of enforcing on the tenants irksome regulations regarding the leaving of fire doors always free to operate, all make the use of such partitions only advisable in exceptional cases. A fire resistant type —the ordinary so-called fireproof partition—is far cheaper. cheaper.

At the recent disaster at San Francisco, nearly every type of fireproof partition was presented in quantity and tested. The lessons of the fire were studied, and the results published by a number of the different engineers and committees. Probably the most carefully considered report made, was that of the committee of the American Society of Civil Engineers. Twenty-six members of the Society were resident in "'Frisco" at the time, and all

Fireproof partitions in "Men's Own" Building, Winnipeg. John D. Atchison, Architect.

of these afterwards were engaged professionally in the reconstruction of the city. The report, which contained complete data from personal observation regarding the entire extent of damage to every alleged fireproof building in San Francisco, explains that apparently all types of block partitions, such as tile, plaster block, and so forth, were affected in the same way. There was no room for expansion to take place, and the partitions consequently attempted to usurp the place of the columns and crushed themselves against the ceiling. Where this did not take place, it is said, the heat was evidently not sufficiently intense to cause the result. Herringbone lath and metal stud partitions in passing through the same experience buckled, but did not fall. There were, however, isolated instances where these partitions were attached to wood floors, and fell owing to the burning out of the floors.

The summary of the report states "that the failure of lath and stud partitions was due to the disintegration of the plaster rather than to the crushing of the material composing it. For this reason it has been suggested that the best possible fireproof partition would be made with herringbone lath and metal studs plastered with a scratch coat of Portland cement plaster, followed by succeeding coats of lime or patented plasters."

The investor demands in commercial buildings low cost and high efficiency above everything. Herringbone lath and metal stud partitions, it is claimed, stand pre-eminent in this regard. The weight of the skeleton is negligible. Practically the entire weight of the partition is that of the plaster. The saving in weight, it is said, due to the adoption of this character of partitions, is generally 8 to 10 per cent. of the total live and dead load on the floors, and consequently saves this proportion of the total cost of the framework of the building and of the foundations. It is maintained that the first cost of these partitions is considerably less than first cost of other equally fireproof types, and that their use is very rapidly increasing. Their low cost and availability, it is contended, has not only caused them to displace other types of fireproof partitions, but has made the use of fireproof partitions feasible in many situations where they could not otherwise be utilized. The general adoption of these partitions in Canada, which is slowly but surely taking place, will result in a considerable increase in the number of our Canadian fireproof buildings.

CONCRETE TILE FOR FLOORS AND PARTITIONS.

AN INNOVATION in the manufacture of structural tile, has been created by a man by the name of Pauly of Youngstown, Ohio. Mr. Pauly has invented a machine with a system and formulae, that makes possible the manufacture of concrete structural tile floor spans, partitions, etc., as well as concrete sewer pipe and fittings. The Canadian rights in connection with this most important patent have been secured by the Stinson-Reeb Builders' Supply Co., of Montreal, who have undertaken to lease these machines on a royalty basis together with instructions in regard to their use, with exclusive rights for limited territories in Canada.

The machine in question will make all useful sizes and shapes in the above mentioned materials. They are made of a wet mixture of cement and an aggregate of sand, stone or slag, are poured into moulds, then steamed and ejected in perfect forms.

The object of the Stinson-Reeb Supply Co. is to offer the opportunity to manufacture with the Pauly machines, by their methods, in various territories in Canada. It is a business that renders a good legitimate profit, where the right kind of aggregates can be had at reasonable figures. Particularly attractive is this offer, for the reason that it is of the few lines in which competition is practically eliminated. Repeated fire tests of the tiles made on this machine, have been made with the greatest possible severity, and it has been demonstrated beyond question that their fireproof value is equal, if not superior, to anything made to be used for like purposes, heretofore produced. It is contended that every engineer and architect, who has investigated this tile, has given it unreserved endorsement.

A letter to the above mentioned sole agents for Canada, will bring full details with regard to the proposition they have to offer.

"KINNEAR" DOORS.

"KINNEAR" DOORS, sold and distributed in Canada by Mussens Limited, of Montreal, have gained exceptional favor with architects in Western Canada.

It is contended by the manufacturers that the doors are the simplest, most convenient, and "with steel slats," the best doors for fire protection. They have been used extensively by architects and contractors in the East, and their sale is being pushed very strenuously in the West.

We might state here, that these doors were used in the warehouses of the International Harvester Company, at Calgary and Saskatoon, and the new Collegiate Institute at Saskatoon will also have "Kinnear" doors, which will serve to cut off the main corridors of each floor from the stair well, in a case of fire.

The firm of Mussens Limited has, undoubtedly, been more successful in the promotion of their contractors' and engineers' supply business in the west than any other eastern firm of like nature. They have a profusely illustrated catalogue, showing the application of the "Kinnear" doors in various buildings, such as warehouses, office buildings, railway shops, roundhouses, pulp

The Colonial Engineering Co.

Began operations in Canada 2½ years ago. At that time the Canadian power users had little or no confidence in the reliability of gas engine power. Several gas engine installations (undertaken by inexperienced concerns) were just being thrown out—as failures.

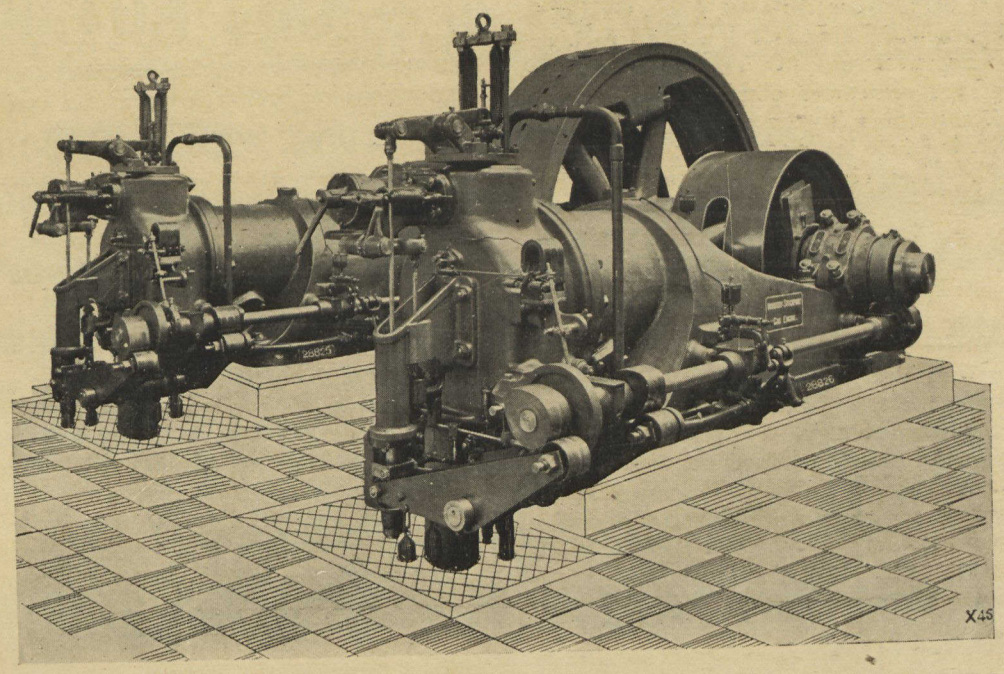
Public confidence was badly shaken—indeed there was none.

The average power user looked upon a gas engine as a wild and untried experiment. He didn't know that Thousands of the HORNSBY-STOCKPORT gas engines are actually making good all over the world and that it only remained to be demonstrated in Canada.

The first thing we did was to get Ames-Holden, Ltd. (the largest Shoe Manufacturers in the Dominion) to let us put in a 200 H.P. plant—we taking *all* the risks.

The City of Chatham, Ont., gave us a similar contract—200 H.P.—we taking *all* the risks.

The Empire Mfg. Co., London, Ont., did the same. All these plants were installed and started nearly two years ago, and they not only made good but *exceeded our representations.*



Since then we have made eleven other important installations—and with precisely the same result in each instance—*absolute success.*

And we are now installing the largest suction gas engine plant on this Continent—in Montreal, and which is guaranteed to compete successfully with water power.

There are just two reasons for our success:

FIRST—*We build the best engine in the world*—its record for efficiency and durability not having been approached by any other design.

SECOND—We know how to install such plants. We do the work right and we *stand by it.*

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and paper mills, schools, churches, freight sheds, elevators, etc., which they will be pleased to send to those who are interested.

PRISM GLASS.

ONE OF THE greatest mistakes that are sometimes made in the specifications for a business building is in the matter of the purchase of prism glass for basement lighting. Frequently an architect specifies a brand of prisms that thoroughly satisfies him as being the best procurable, but, either through indifference, or lack of knowledge of the great difference that exists between prism glass, he permits the contractor to substitute an inferior product for the one originally specified. The result is, he gets prism glass, but by no means the best, and, as everything effecting the lighting of the building, such as frame-work, and so forth, are what might be termed fixed charges, and in view of the fact that the cost of the glass proper is comparatively small, it is pretty much like economy in the wrong place, to permit the installation of anything but the very highest quality or grade of prism obtainable. The Luxfer Prism Company claim for their prisms, a superiority that cannot be approached by any other prism on the market in Canada, and a most determined effort to educate architects and owners to the necessity of insisting upon their original specifications being carried out by sub-contractors. It often occurs that blanket contracts, of which the installation of the basement lighting is but a small part, are taken by firms not necessarily in the prism business. These contracts are sometimes obtained by virtue of price, and it often remains for the contractor to get his profit by substituting inferior materials to those specified. When the architect considers the great importance of the lighting problem, he will realize that he can ill afford to permit any but the highest character of glass to be installed, and he can easily protect himself, as can the owner, by insisting that his specifications be not violated.

The Luxfer Prism Company are among the few manufacturers of prisms who are satisfied that they can conveniently handle the situation, and provide adequate lighting, so long as architects and owners will stand by them, and insist upon no departure from their specifications. The Luxfer Prism Company is located at 100 King st. W., Toronto, and carry a complete line of multiprisms, window prisms, art glass, canopy glass, prism frames and so forth.

A NEW WIRE LATHING.

A PRODUCT which will readily commend itself to architects and builders, is the new patent trussed hard wire lathing which the B. Greening Wire Company, Hamilton, has recently put on the market. This ingenious form of lathing combines within itself the best features found in the better class of wire and metal laths, in addition to a number of splendid individual points which will, undoubtedly, lead to it being broadly specified. One advantage claimed for this particular lathing is that owing to the trussed formation it can be nailed directly along the studs, joists or sheeting without any furring, lapping or lacing, which is a feature of considerable importance in that it insures the lowest possible cost of erecting.

Another feature is, that owing to the alterrat transverse or short wires being offset from each other in different planes the cloth has no "face," and therefore cannot be scraped free of plaster, which is a strong objection to fabrics of "face." The truss principle of this lathing, it is claimed, renders it of such a decided rigidness, that it gives a sustaining power of 3½ times that of a square mesh cloth of equal weight per square foot.

The lathing can be supplied in continuous lengths up to 100 yards, with a selveage on either side, and in widths to suit the spacing of the studs or joists; and it will be found to be particularly adapted to conform to any desired curvature, and take the bends of sharp corners without the necessity of being cut. Architects and builders will find it most profitable to investigate the merits of this product, and samples, together with additional matter relative to its many excellent points, will be gladly furnished by B. Greening Wire Company, upon request.

A TREATISE ON INSULATION.

IF NONPAREIL CORKBOARD insulation is as meritorious as the splendid volume relating to it, recently issued by the Kent Cork Company, Ltd., Montreal, then, indeed, is it an excellent product. The appearance of this most complete book is perhaps the best indication as to the sterling qualities of "corkboard," for the various purposes it is used, in that no manufacturer or firm would go to the trouble and expense which this edition involved, without the full knowledge that their product possessed every functional property, and would serve to the most efficient degree, the character of work for which it is intended. It would not be indulging the imagination to say that as a work of trade literature, this little volume stands pre-eminently in a class by itself. There is no cataloguing, nor listing of prices, no attempt at comparison, but a comprehensive treatise covering 118 pages on corkboard insulation and its various applications, together with complete specifications, as the case may be. In this respect it marks a pleasing departure from the usual publications of this character, and inaugurates a new method of propaganda which makes it a work of permanent value to the architect and engineer.

Among the many important subjects with which the volume deals, are: The Vital Importance of Insulation, Essentials Frequently Overlooked, Principals of True Economy, The Transmission of Heat, Radiation, Conduction, Convection, Old Methods versus New, etc., which, together with the data of floor, ceiling and wall construction, makes this publication of inestimable value to those who are interested in the design and construction of any type of building in which insulation is required. The volume is attractively bound, highly illustrated with halftones and sectional diagrams, and printed in a clear readable type. In short, it is a most comprehensive work of reference, and a library asset which no architect or engineer should be without.

VALLONGO SLATES.

PERHAPS THE MOST extensively used slate in the world, is the product from the Vallongo Quarries, England. It is specified in all parts of the globe, for billiard beds, brewery tanks, switchboards, sanitary work, and in all classes of construction in which slate is required. At these quarries it is nothing unusual to quarry block forty feet long and ten feet wide, so that slabs can readily be supplied to meet any given dimensions. This slate is particularly free from metal, and in England, its very superior quality in general has led largely to its adoption in the tube railways, where it is employed for platforms and footings through the tunnels. One of its advantages in this respect is that, in addition to being non-inflammable, it does not wear slippery, and is most suitable in every way for this particular class of work. For chimney pieces and enamelling it is unsurpassed in that the slate takes on a most perfect surface; while for roofing, it is a most excellent product, as the slates are most durable and never change color. These quarries are owned and operated by the Vallongo Plate and Marble Quarries Company, Ltd., of London, England, who have recently

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opened an office in the Board of Trade Building, Montreal (in charge of F. Barkin), for the purpose of placing their product in the Canadian market, and Canadian architects and builders will find it greatly to their interest to investigate the many excellent merits of this splendid slate when specifying work of this nature.

A CANADIAN PRODUCT.

SINCE THE FIRST ISSUE of CONSTRUCTION it has not only been the policy of the Journal to in every possible way, promote the employment of Canadian architects, the awarding of contracts to Canadian contractors, and the buying of Canadian building materials and equipment, but the publishers themselves have adhered very religiously to the policy of giving the preference to Canadian manufacturers in the buying of the materials with which CONSTRUCTION is published. We have very often been complimented upon the high-class printing, the good paper, and excellent half-tones used in CONSTRUCTION, and would say that each and every one is a Canadian production.

The quality and texture of paper is always one of the most important elements that affect the appearance of the finished publication, and we are free to say that CONSTRUCTION'S appearance, as well as the manner in which our illustrations show up, is attributable, to a great extent, to the use of Ritchie & Ramsey's Red Seal Coated Book Paper. The very excellent surface of this paper enables us to get the results shown in the half-tones in our paper. For high-class work, whether for periodicals or catalogues, we know of no brand or make of paper, either domestic or imported, that will give better results than this Ritchie & Ramsey's Red Seal Coated Book Paper. It is with a great deal of satisfaction that we have been enabled to publish a highclass journal of the nature of CONSTRUCTION without having had to import our coated paper.

THE WORLD'S TIMBER SUPPLY.—Interesting Data Presented Before Winnipeg Meeting of British Scientists.—By Prof. Somerville.

MUCH ATTENTION has recently been given to this subject, and the general opinion is that prospects are not reassuring. Britain paid £27,000,000 for wood on the average of the five years 1904-8, as compared with £18,-00,000 in 1889-93, an increase of fifty per cent. Even Germany, with nearly twelve times the area of forest that England possesses, pays annually £12,000,000 for imported timber. Although the United States of America exports wood and wood products to the value of £20,000,-000 per annum, she has to pay as much for imports.

In Europe, Sweden and Russia are the chief timber exporting countries, and it seems unlikely that these countries can maintain supplies. Sweden, it is officially stated, is over-cutting her forests to the extent of more than 100,000,000 cubic feet yearly, while Russia is already reducing her exports. In various official publications, the Department of Agriculture of the United States has drawn attention to the prodigal method in which her forests are exploited, and has pointed out that in a few years she will not even have timber enough for her own supplies.

There are only two regions of the world that may contain sufficient areas of virgin coniferous forest appreciably to affect the situation. The one is Canada, which in the Northwest and also north and east of Lake Superior contains large tracts of untouched forest. The growing stock of extensive stretches of country west of the Rocky Mountains is undoubtedly large, and is now having an appreciable effect on market supplies.

The timber that may become available along the line of the new Grand Trunk Railway is much more problematical. The area is vast, but the density of the stock is said to be poor, and the individual trees and rate of growth are small.

The other region that contains large stretches of virgin forest is Siberia. Although the density of Siberian forests cannot compare with well-stocked land in Europe or America, her areas are so vast that it cannot be doubted that this country possesses enormous stores of wood. But the difficulty in her case is to get them out. The navigation of the Arctic Ocean is too dangerous to be undertaken for timber cargoes at anything like present prices. Nor would it be profitable to move timber along the Trans-Siberian Railway. The only way to get part of Siberia's timber to market is to float or ship it down the rivers, such as the Amur, that debouch into the Pacific. This is already being done to some extent, and in time such supplies will go some way toward satisfying the demands of China, Japan, and Australia.

The growing scarcity of supplies of timber is clearly reflected in the prices on the world's markets. Thus in Britain the largest class of timber has risen in value twenty-eight per cent. in the last fifteen years. Concurrently with the rise in price there has been a marked falling off in quality, so that the real rise in price has been much more than the figures indicate. The United States Department of Agriculture recently issued a table, which showed the prices ruling for various classes of timber in various American markets during the past twenty-two years. Of thirty-two brands of timber, nine had risen over 100 per cent. and only two had risen less than twenty-five per cent.

Effective relief through the agency of timber substitutes seems improbable. Concrete and iron are of course used to some extent in place of wood, and there is a talk of sugarcane stalks becoming important in paper making. But with it all, the demands for wood continue to grow, and although economic prophecies have often proved to be wrong, it seems impossible to escape the conclusion that the future of the world's timber supplies is distinctly disconcerting.

It would therefore appear to be in the interests of every country to take energetic steps to prevent the wasteful destruction of timber by forest fires, to see that denuded areas are at once regenerated, and to undertake the planting of all land that can be better utilized under silviculture than through the agency of pastoral occupation.

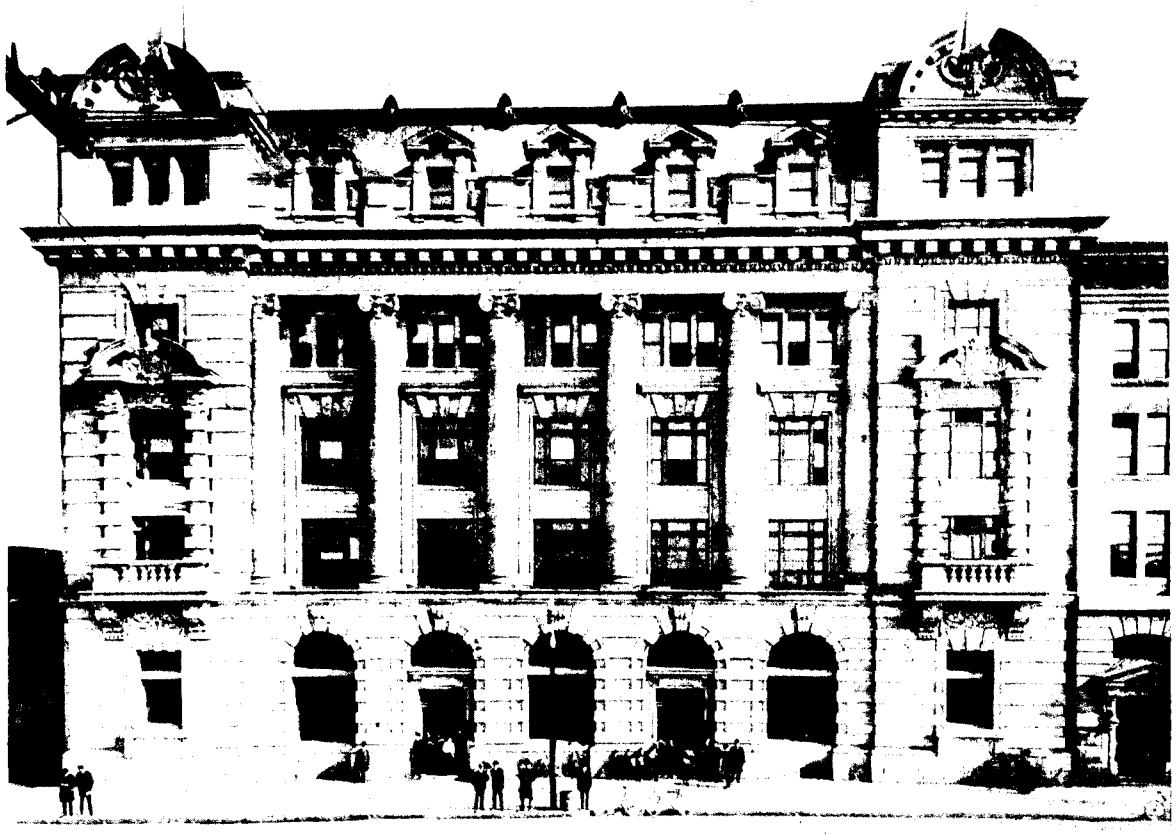
THE EFFECT OF PAINTING radiator surfaces upon the heat transmission through radiators has been investigated by Mr. John R. Allen, who embodied the results of his experiments in a paper read before the last meeting of the American Society of Heating and Ventilating Engineers. In comparing the effect of the various coats, Mr. Allen took the heat transmission of a bare radiator as standard. He found that the transmission of heat was almost the same with 14 coats of paint applied to the radiator as with two coats, and that the effect apparently depended upon the last coat applied. From this he concludes that the heating effect of the radiator is more affected by the condition of the surface than by the material through which the heat is conducted. He states, however, that the vehicle for carrying the pigment may have some effect in the value of heat transmission of paints, as better results were obtained with copper bronze and shellac than with copper bronze and linseed oil. In general, Mr. Allen is led to consider copper and aluminum bronzes the poorest coverings, and enamels as the best materials tried, while white lead and zinc paints have only slightly less transmission effect than a coat of enamel.

"Diamond Brand"

Hardwood Flooring

Is Good Flooring

OAK, MAPLE, BIRCH AND BEECH



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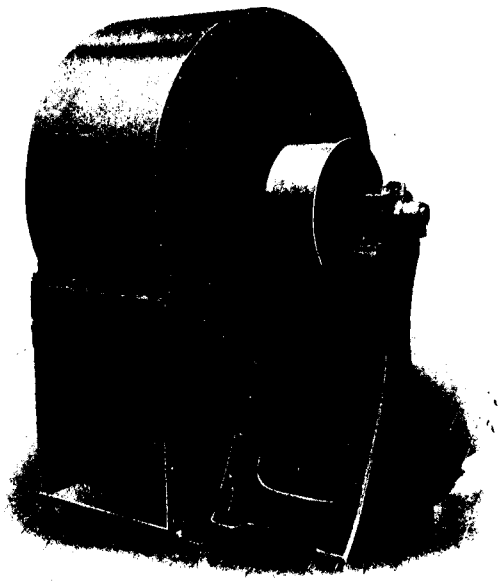

Top Horizontal Discharge, Steel Plate Exhaust Fan

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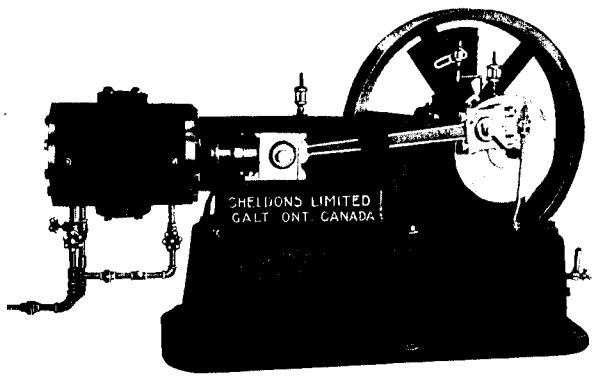
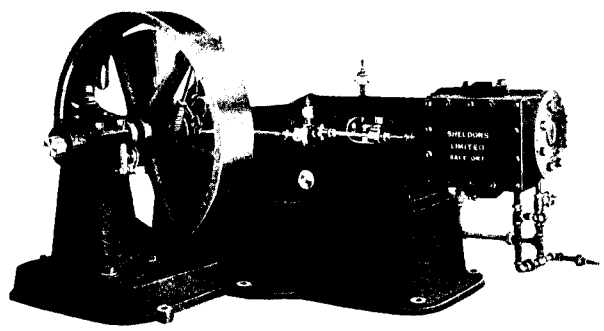
We can provide Vertical or Horizontal Automatic Engines to operate on either high or low pressure steam. These can be furnished either direct connected or belted to the fan. The Low Pressure engines are designed specially for application to School House work,





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These fans are applicable under all conditions calling for large volumes at apparently low operating and low horse power consumption. Special features worth considering are: **Their light and specially Rigid Construction. Their Great Capacity as compared with the small space occupied.** Their power and weight are reduced to a minimum, while their Efficiency and Durability are maintained to a high standard of perfection. **These fans operate Silently under all conditions.** We have applied these fans successfully to problems in Heating, Ventilating, Cooling, Drying and Forced and Induced Draft.

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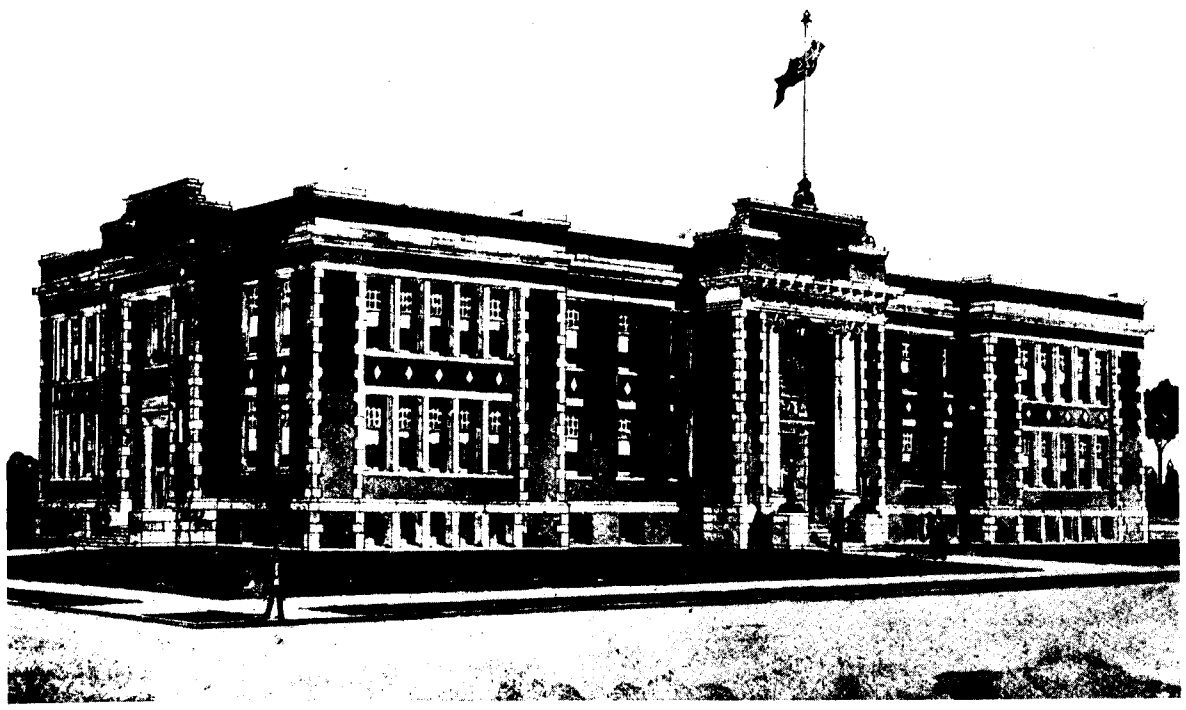

Regina Collegiate Institute. Storey & Van Egmond, Architects.

"The ventilating appliances for this building were furnished by us to the General Heating Contractors, Messrs. Potts & Smith, Regina, and embody one of the most complete heating and ventilating systems for a building of this class that has been installed in recent years in Canada."

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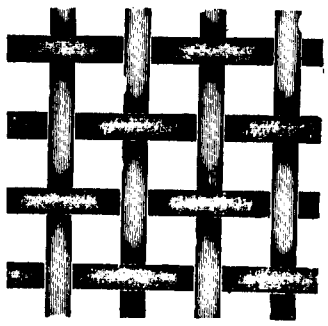

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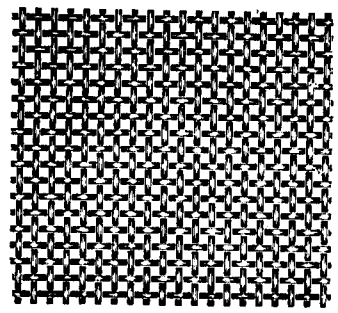

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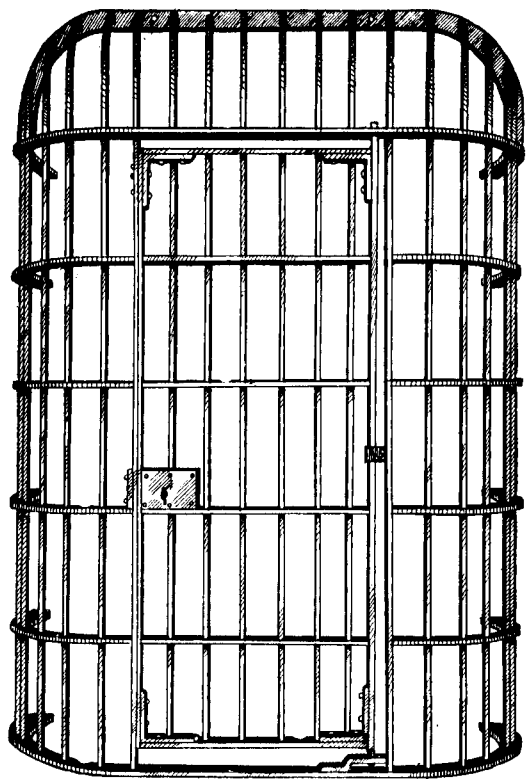

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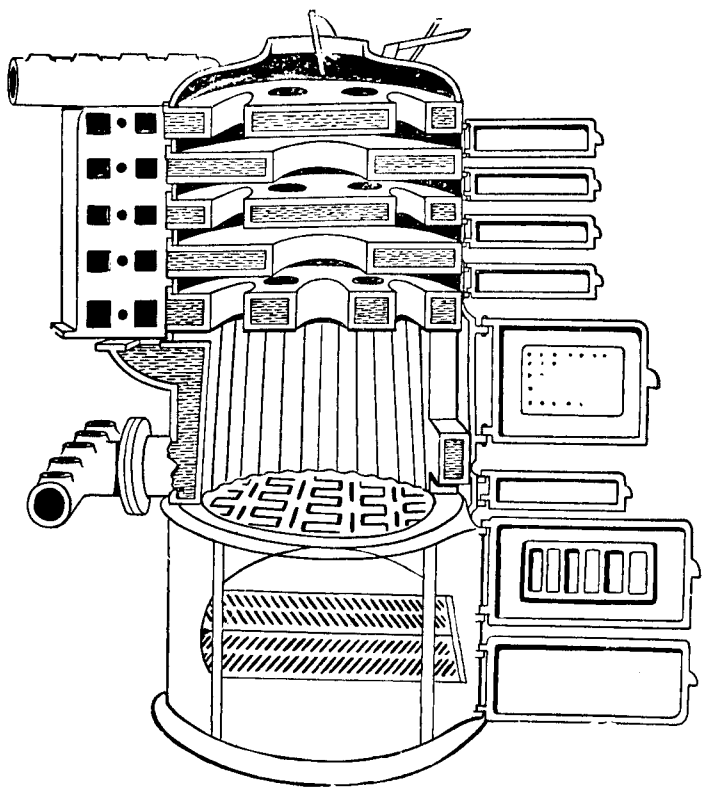
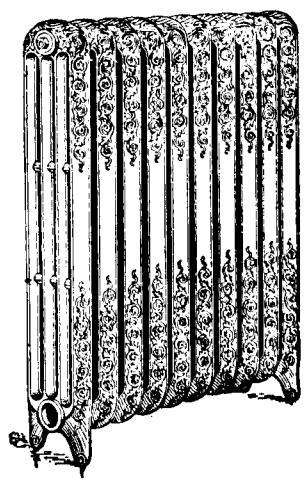


In the season just closing "Sovereign" Boilers and Radiators have out sold—and out classed—every other make of heating apparatus available in Canada.

The confirmation is everywhere in the number of new buildings in which "Sovereign" Boilers and Radiators have been installed—and in the complete satisfaction they are everywhere giving.



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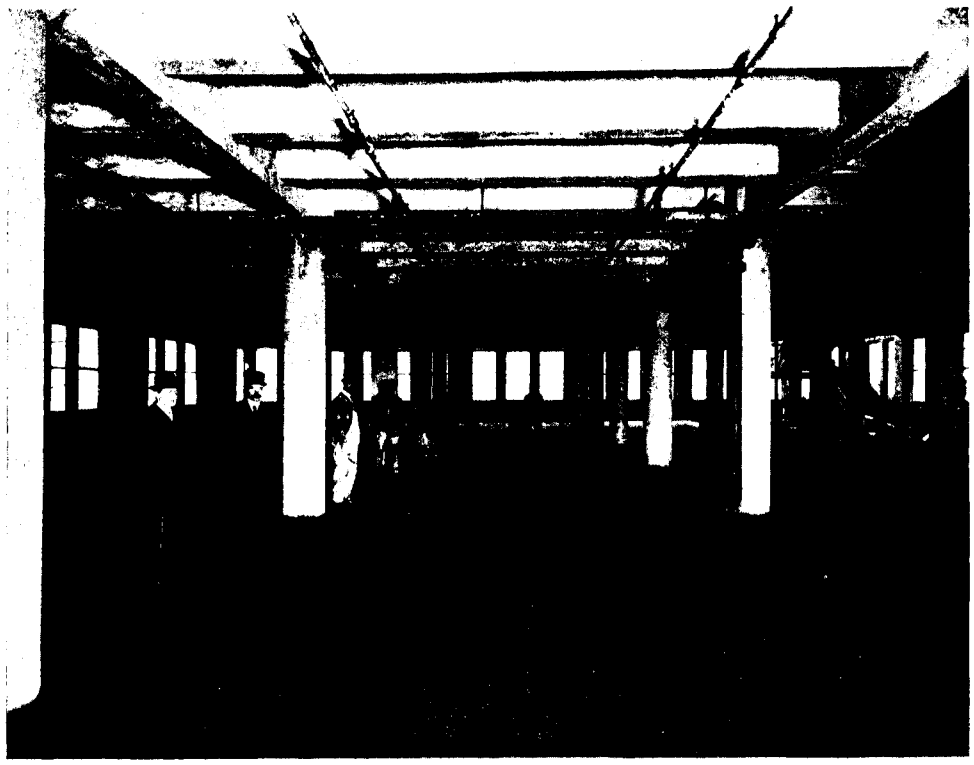
HYGIENIC "RO

A PERFECT COM



Interior view of the Hygienic Roman Floor laid on the third floor of No. 4 Factory of The T. Eaton Co., Ltd. This floor contains about 15,000 square feet laid in one sheet, in a light shade of terra cotta. This floor was laid in four days, an average of about 3,800 feet per day.

Hygienic "Roman" Floors are Sanitary, Durable, Heat and Cold Non-Conducting, Handsome in Appearance, Won't Crack, Check or Bulge, and Easily and Economically Laid on Any Good Solid Foundation.

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Interior of the newly remodeled Hotel Aberdeen, corner of Chestnut and Queen streets. Mr. McMillian, proprietor. Note the side wall, coping and floor, including base, is of the Hygienic Roman composition.

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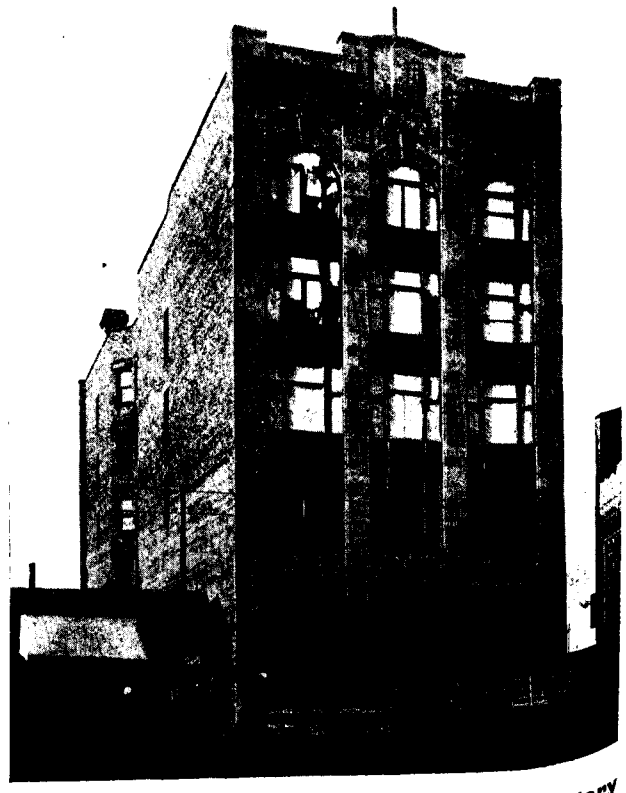

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We are the only Elevator Firm in Canada that makes their own Castings, and we also make Dumb Waiters, all sorts of Protective Devices for Elevator Openings, and are the Patentees of the only thorough Fireproof and Automatic Elevator Door made.

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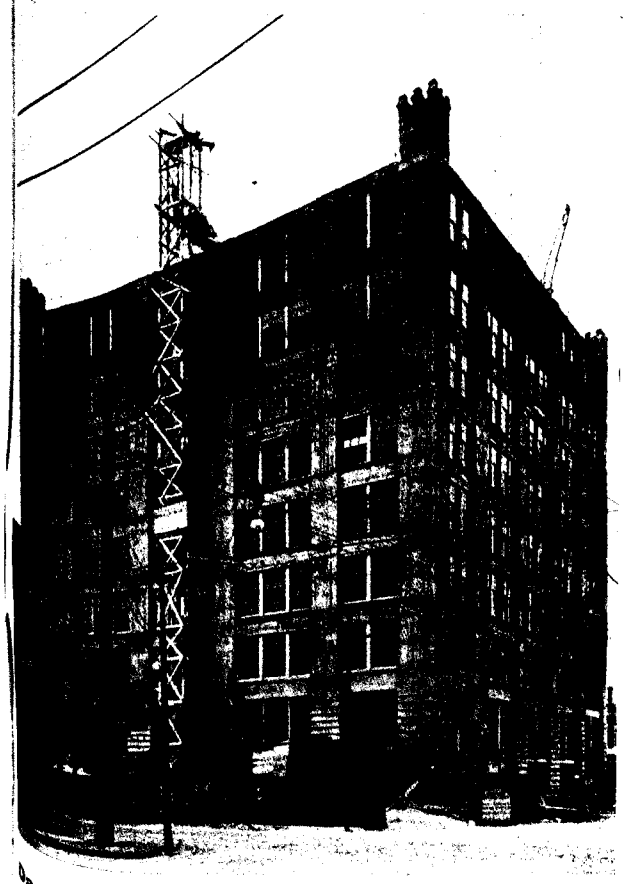

Canada Life Building — Toronto

WE have installed all the interior stairs which are at present in the Toronto schools, and have the contract for all the stairways which are now being placed. We also put the Fire Escapes on the Place Viger Hotel, Montreal; Lake Louise Chalet; also Schools at Montreal, Brockville, Dundas, Wallaceburg, Stratford and numerous other places.

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For Independent Use or with Compressed Air. Burns Kerosene or Crude Oil. : :

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How often it happens that a piece of structural steel requires heating previous to being erected.

Consider the time gained in making alterations or repairs on the job, besides decreasing the cost of the operation by more than 50 per cent.

Manufacturers who have no compressed air equipment will find the self-contained Heater a very efficient tool, as it is equipped with a substantially arranged pump for the compression of oil and air. Connection to air lines can also be made.

The King Torch Heater can be moved from place to place and operated satisfactorily by one man, which also means a great saving in labor over other methods.

As this Heater is equipped with a patent burner having unique mechanical features, it is possible to obtain a heat of 2,200 degrees Fahrenheit, thus making it suitable for use on such difficult work as straightening steel shafting, heating heavy rails, straightening bridge members, etc., etc.

Boilermakers will find this Heater invaluable for such purposes as heating and straightening boiler plates without removing same, laying on patches, taking out buckles on crown sheets and many other operations.

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Foundrymen can save time and expense in using this Heater for starting fires in cupolas, skin drying molds, etc.

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THE King Portable Rivet Furnace as shown in the illustration, is without a doubt the most compact and most economical oil furnace on the market.

The capacity of this furnace is only limited by the quantity of rivets which can be handled.

As many as four thousand rivets have been heated in ten hours at a cost of seventy cents for fuel and the heater's wages.

For small shops, this style furnace is especially suitable, being entirely complete in itself, and when Oil is put in the tank it is only necessary to attach the compressed air or steam hose; and the furnace is ready to work.

Dimensions and weight of The King Rivet Furnace:

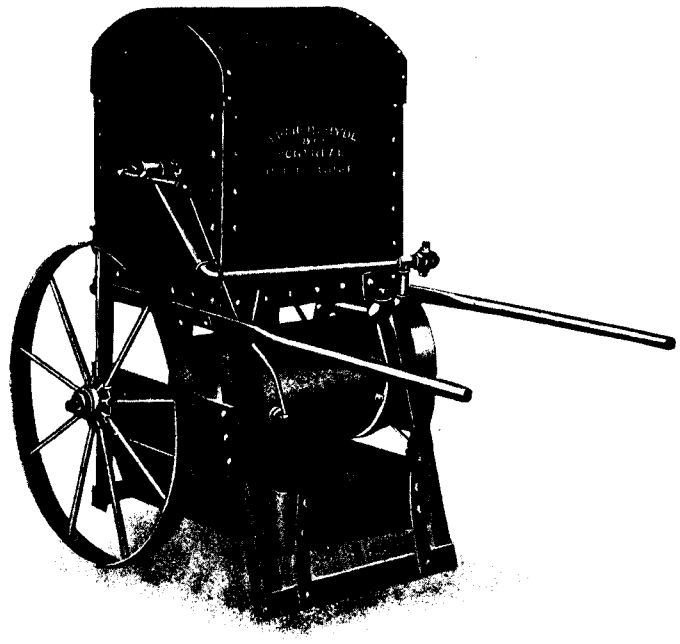
Height, over all, 51 inches.

Width, outside wheel hubs, 3 feet.

Total length, over all, 5 feet 4 inches.

Dimensions of furnace opening, 10 in. by 5 in.

Capacity of oil tank, 10 gallons.



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Manufacturers of Oil Furnaces

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LUXFER
MULTI-PRISMS

are accepted by all architects in the spirit which prompted the writing of the following letter. This letter is pointed and full of meaning, and well worth the attention of every architect in Canada. It is from Mr. Wm. Fingland, Winnipeg, Architect of the Enderton Building:

WM. FINGLAND
ARCHITECT AND STRUCTURAL ENGINEER
KENNEDY BUILDING
317 PORTAGE AVENUE

WINNIPEG, Oct. 27th, 1909.

The Luxfer Prism Co.,
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Gentlemen:—

I take pleasure in writing you to let you know that we have your prisms successfully installed in the Enderton Building, and also to express my appreciation for the prompt way in which the order was filled.

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Luxfer Prism Co., Limited
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MAKES CEMENT STUCCO WALLS FIREPROOF WINDPROOF DAMPPROOF

Provides Unlimited Possibilities for the Builder

The accompanying photo is an actual illustration of where Truss Fabric helped to transform a "rusty" old homestead into a beautiful and secure residence.

THE Cement Stucco house has come to stay. It's the house that can stay in spite of fire and earthquake and climate.

Whenever the building man plans to erect a new cement stucco structure, or to cement over an old brick or stone structure, he is in need of Truss Fabric. Why? Because, as it is well known that the re-enforcement of a wall is a greater factor in resisting the strains of tensile forces than the actual wall itself, much necessarily depends on the character and reputation of the re-enforcement.

Truss Fabric is made by people who have excelled as manufacturers of dependable fire-proof products, who have not only scored successes in Canada but in other parts of the world as well.

Have you exhausted the possibilities of stucco work? Here is a case (illustration above) where the bricks in a residence had become scaled and sheared, and the general appearance was of a dilapidated character. But an inexpensive and pleasant transformation was secured by attaching Truss Fabric to the bricks and plastering the whole exterior with cement.

In such an instance, Truss Fabric is the guarantee that the cement will adhere forever, and the cement is the guarantee the Fabric will never corrode; so with this telling combination the contractor was able to give the owner Rigidity, Security, Comfort and Beauty.

It is amazing what pleasing effects can be secured in ornamental plaster. The plastic nature of the material is itself an assurance of unlimited opportunities for

PEDLAR Truss Fabric

Messrs. Rhodes, Curry & Co., Ltd., of Amherst, probably the largest building contractors in Canada, east of Montreal, suffered from a serious fire about a year ago. Part of their plant was burned down and in making preparations for rebuilding, they looked around for ideas, new ideas that would enable them to rebuild for all time—Did they rebuild in Brick? NO! Did they rebuild in Corrugated Iron? NO! They rebuilt of wood—balloon frame, and covered the outside sheathing with Truss Fabric and Cement Plaster and lined the interior with Pedlar's Lath and Plaster and they have today, practically, fire-proof buildings and these are easily heated and kept warm in the severest weather owing to the air space in the walls. These people know how to build for themselves, they having built for thousands before.

Truss Fabric is perfect Expanded Metal Lath corrugated. The corrugation produces a non-failing key behind the face of the fabric; thus the slab is re-enforced—surest argument you can get against the possibilities of plaster cracking or disintegrating. We want you to further take into consideration that we use only high grade sheet steel, work it cold to preserve the temper and automatically do the meshing. Do you wonder we insist that Truss Fabric is ideally suited for binding cement and plaster to flat surfaces?

Truss Fabric is equally suited to buildings in course of erection where it would generally be applied to wood sheathing, or to buildings already completed where it would be applied to brick or stone walls.

Truss Fabric never sags, never requires the assistance of stiffening bars or forms. Whenever it is used you find mechanical bond to an exact degree, ideal distribution of strength and a perfect sectional area.

graceful lines, for feelings of lightness or heaviness. Then when we take into account the fine shadings of treatment which can be secured by tooling the surface we at once see there need never be a single cumbersome effect.

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In my recollection there has been many building theories discussed and championed, but I believe no other theory has been proven more capable in practice than re-inforced concrete. When my Company commenced the manufacture of Fire Proof Products I had more than ordinary ideals before me and more than ordinary faith in their possibilities. I knew there would be skepties and men who will not be shown—I also knew there is a kind of proof irresistible—wherever there is a pair of eyes. That kind of proof my various branches have for the architect or contractor who pays too much for his fire-proof products, who uses the foreign article, or who still adheres to wood. Can I count on you to at least start the ball rolling by putting up to us the burden of proof?

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Write for Sample and Free Booklet "FIRE-PROOF" No. 53

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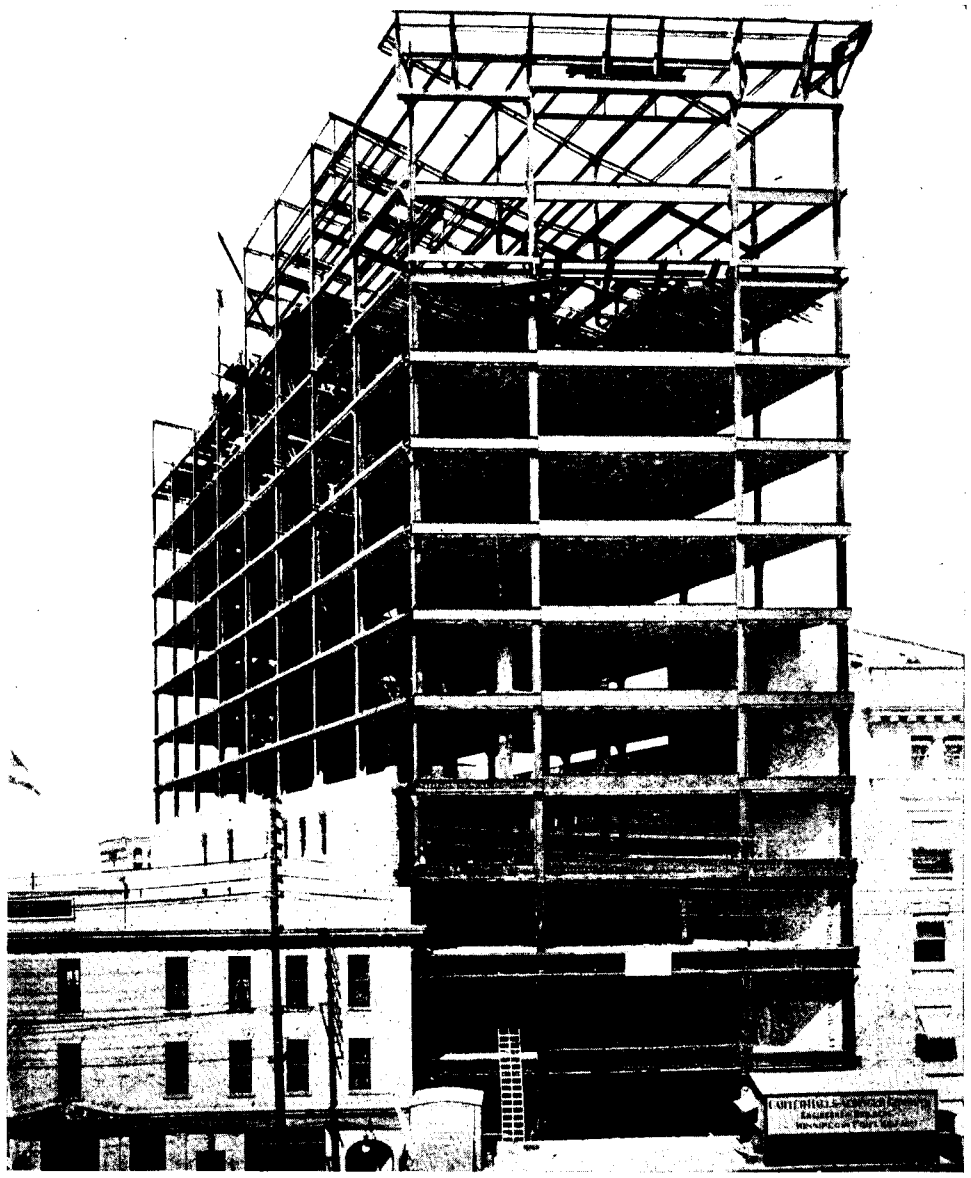

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(FORMERLY KNOWN AS THE NATIONAL SYSTEM)

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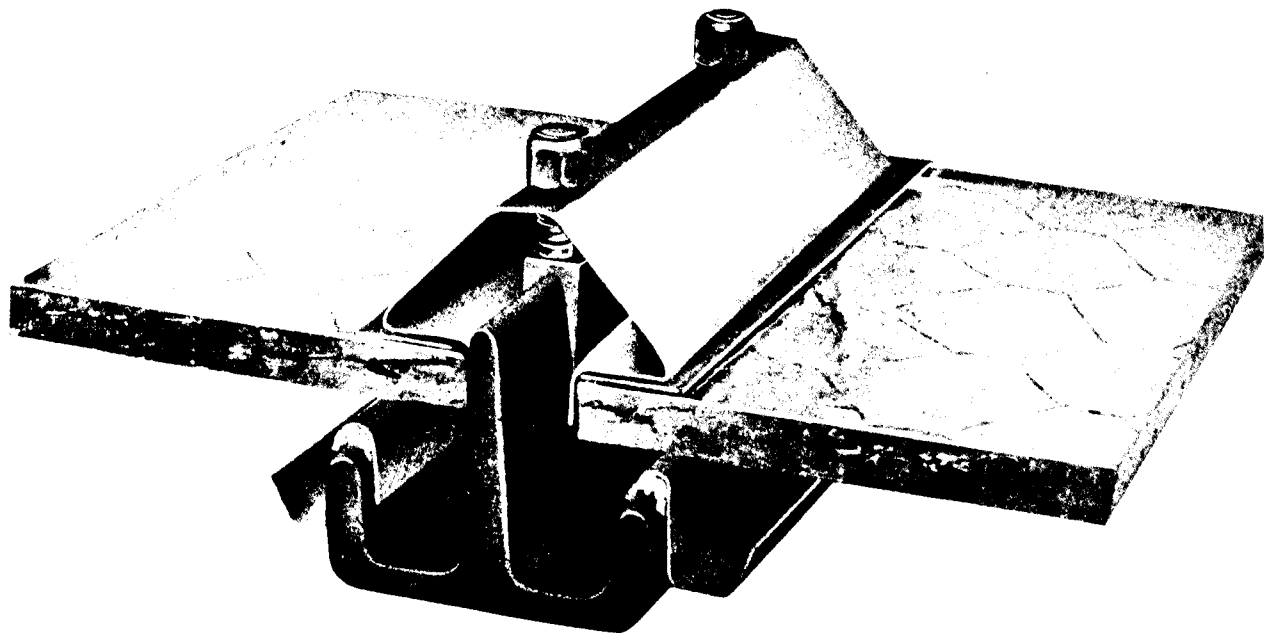

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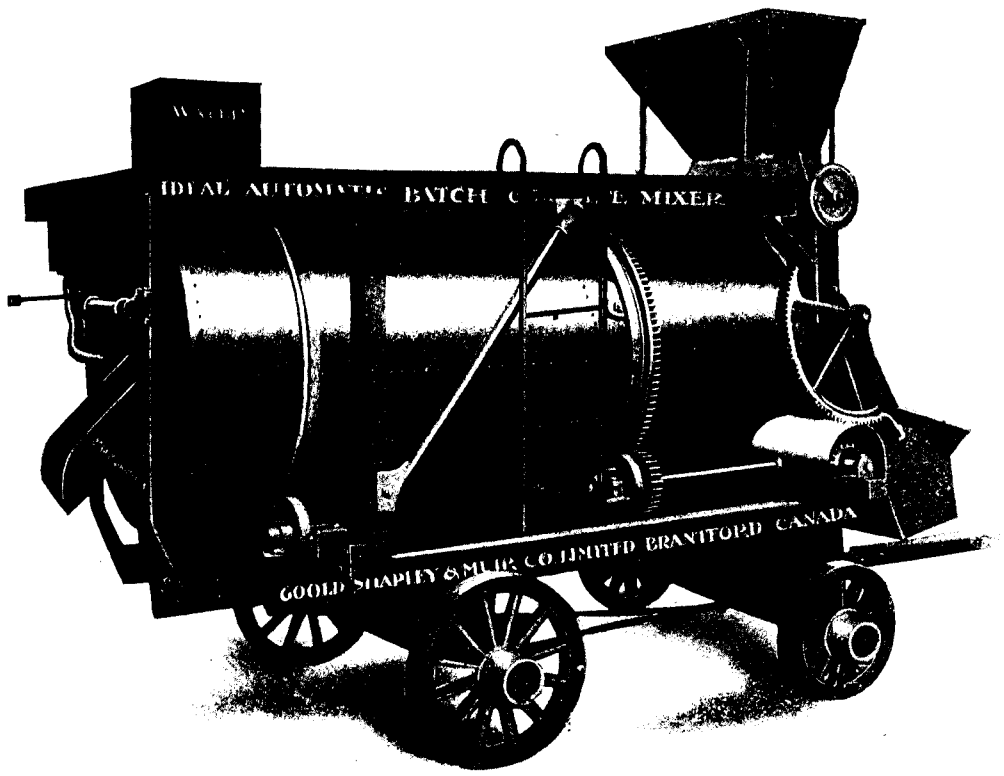

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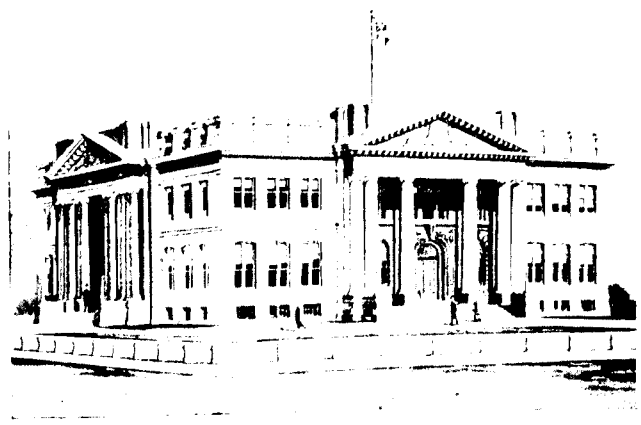

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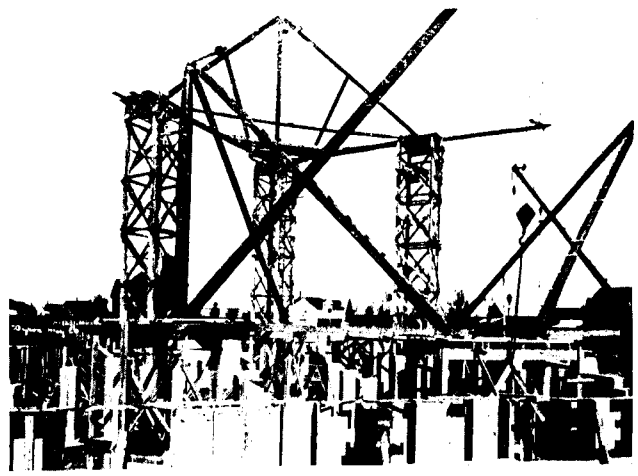

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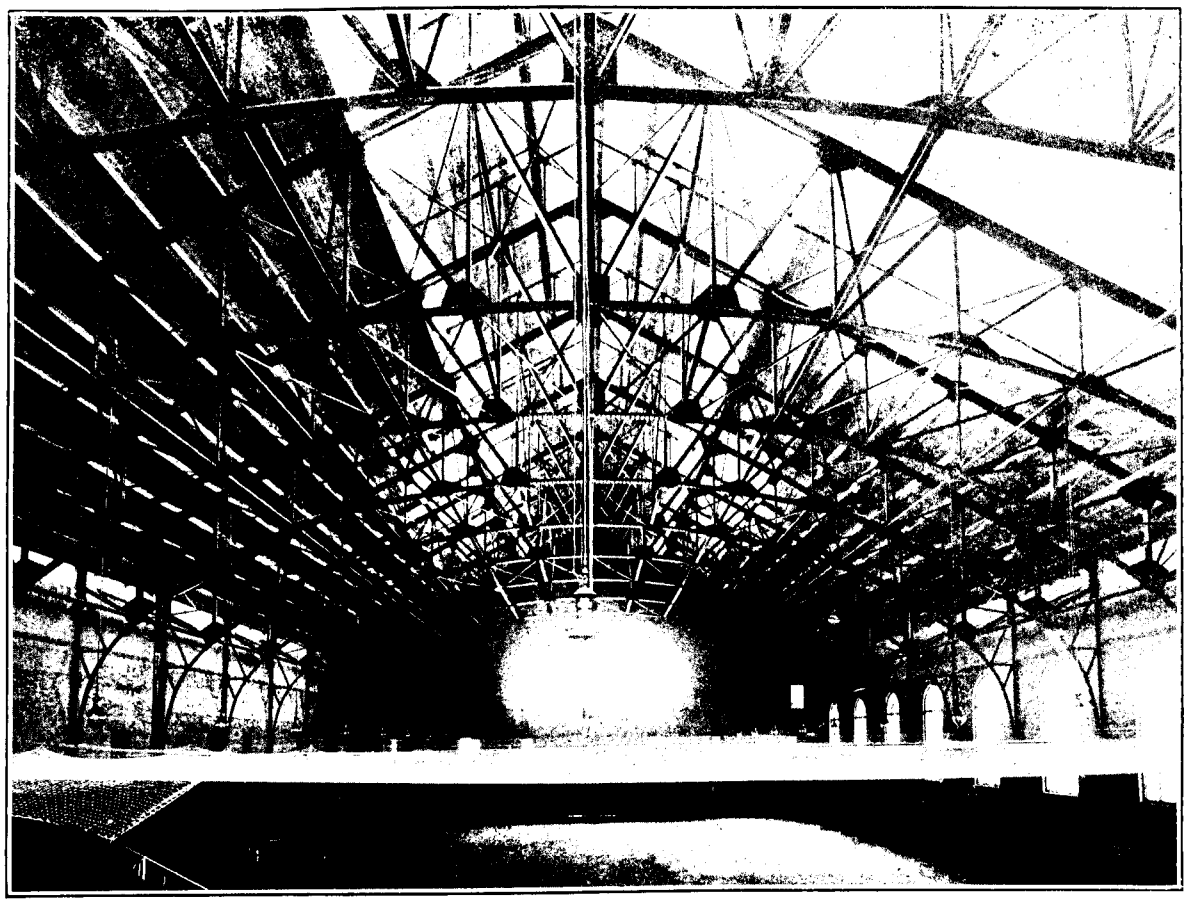

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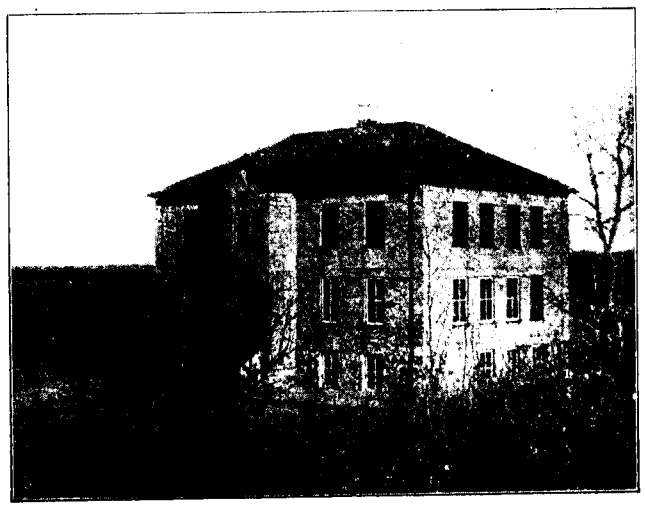

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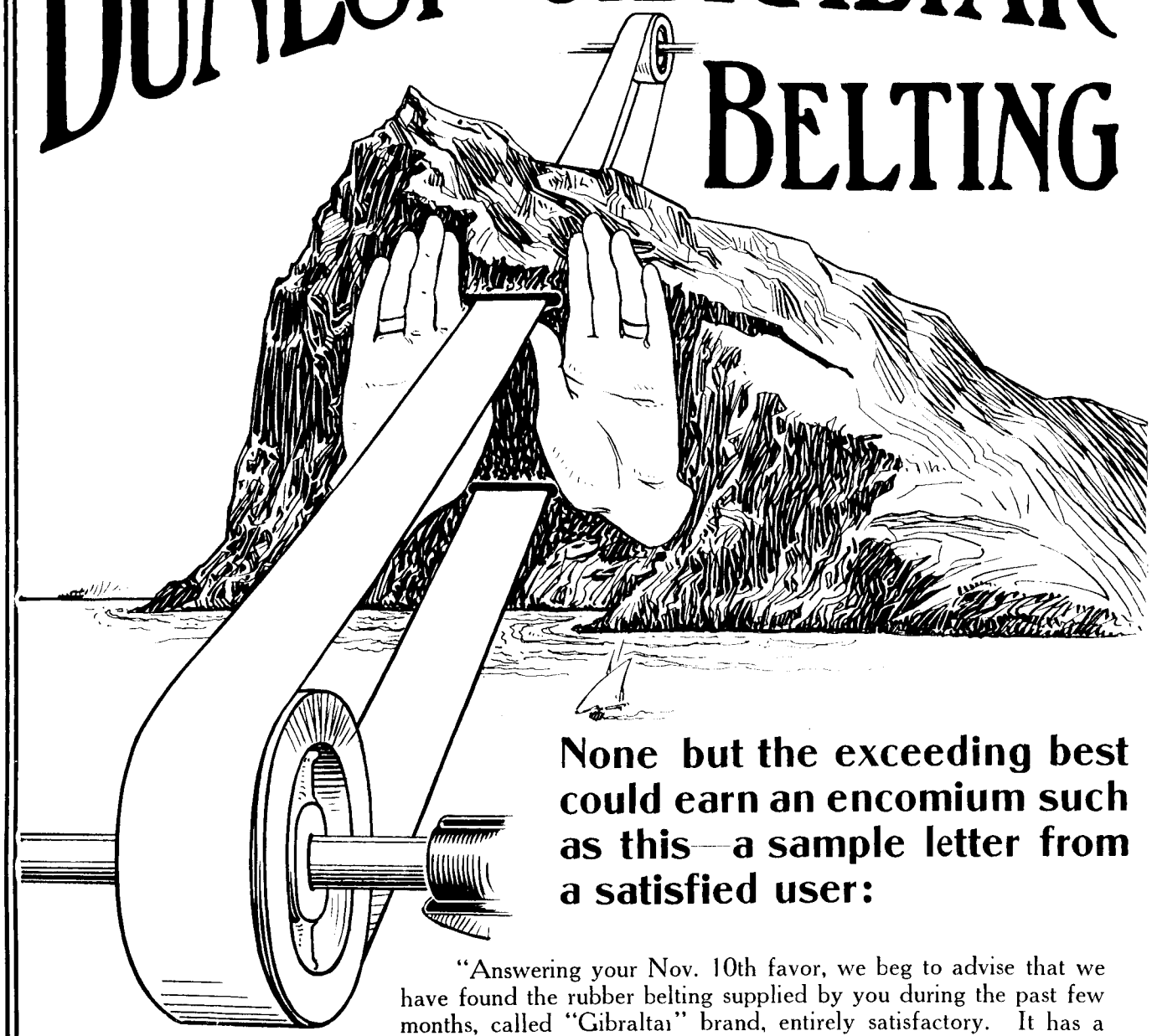

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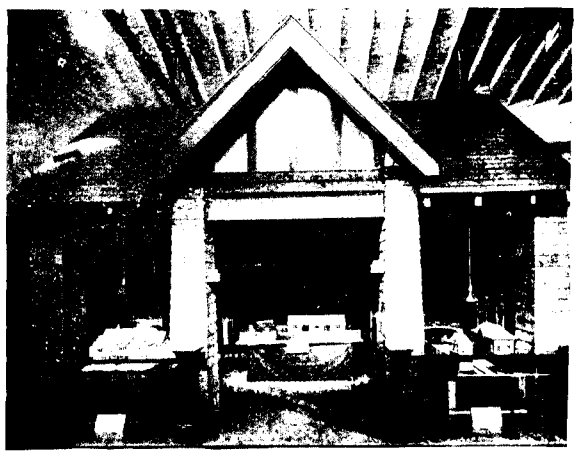

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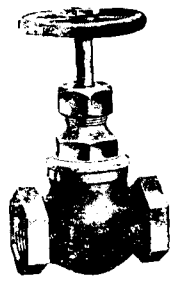

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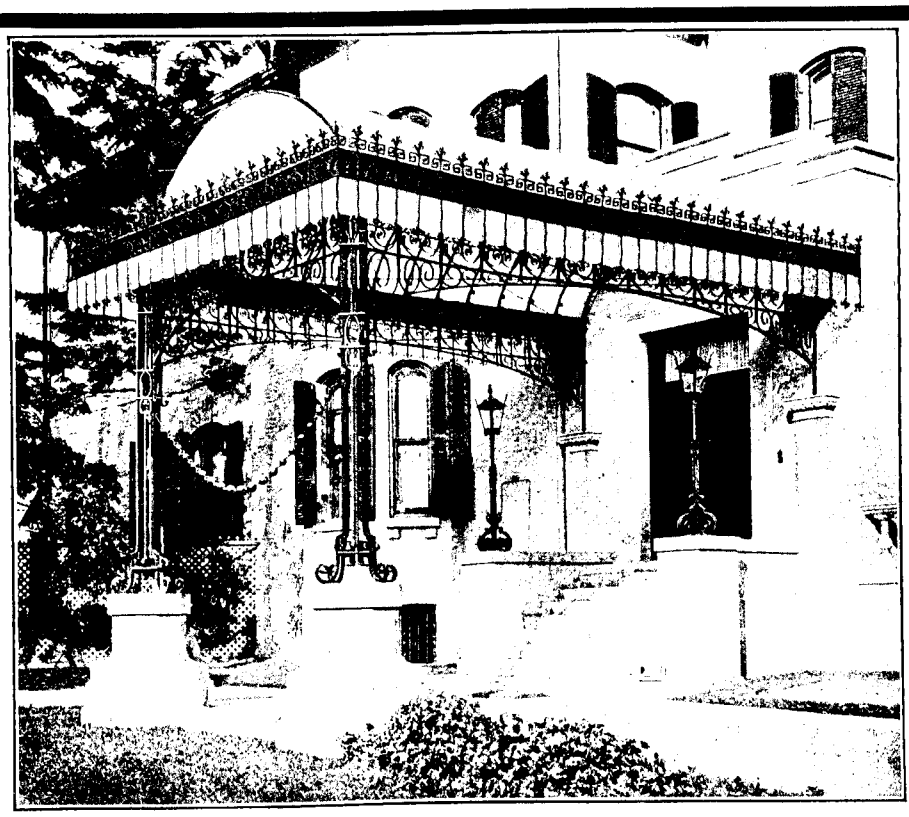

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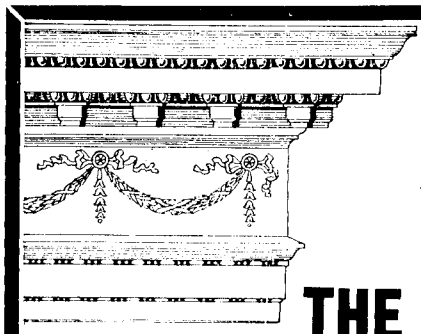

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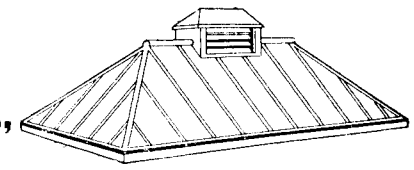

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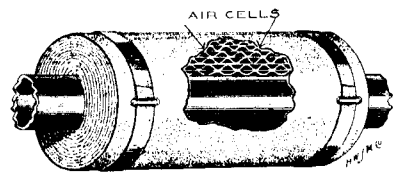

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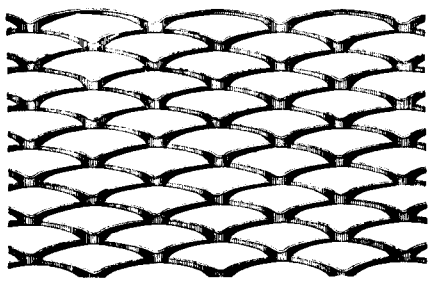

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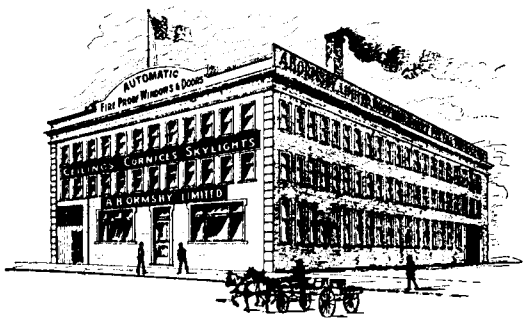

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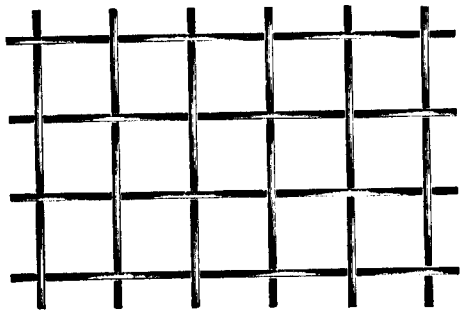

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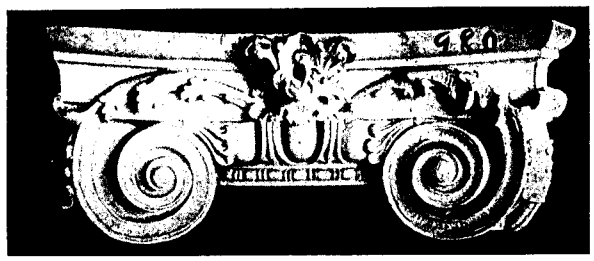

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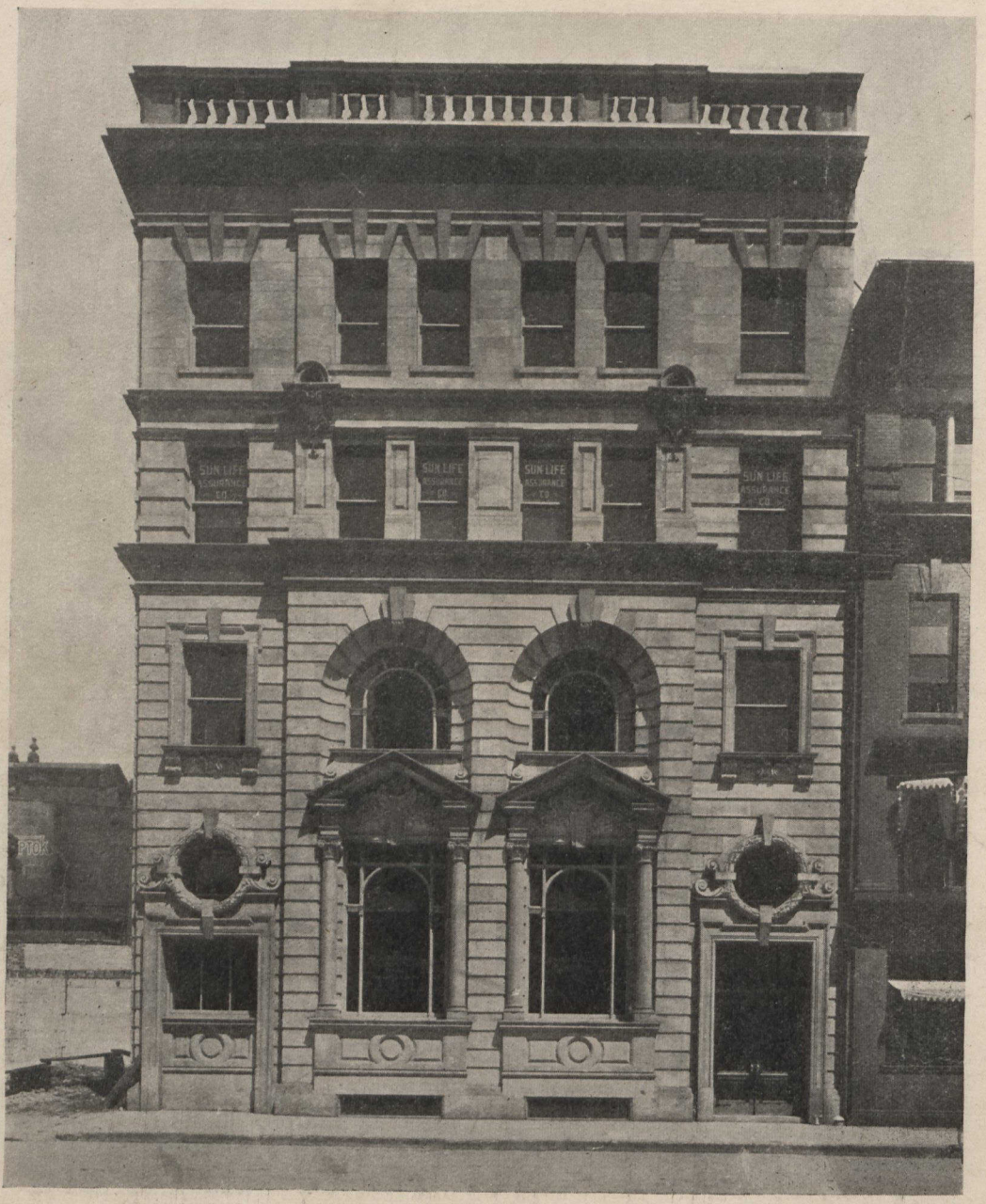

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