

PAGES

MISSING



EVERY MODERN CITY SHOULD HAVE

GOOD TELEPHONE SERVICE.

NOTHING WILL IMPRESS A VISITOR IN A CITY MORE THAN THE KIND OF SERVICE THEY MAINTAIN.

IF THE SERVICE IS SLOW AND IRREGULAR HE IS LIKELY TO THINK OF THE CITY AS BEING THE SAME.

HAVE GOOD SPEEDY SERVICE — RELIABLE SERVICE OF WHICH YOU CAN BE PROUD AND AS TO EQUIPMENT WE ASSURE YOU THAT NO MAKE WILL SATISFY YOU BETTER THAN “KELLOGG”.

KELLOGG SWITCHBOARD AND SUPPLY COMPANY
MAIN FACTORY & OFFICE, - CHICAGO.

CANADIAN SALES OFFICES:

DEERING ELEC. Ltd., Regina, Sask.
HOUSTON & CO. Ltd., Winnipeg, Man.
B. C. HOLST & CO., Vancouver, B. C.

BUYERS' DIRECTORY

ACCOUNTANTS.

Gamble & Gladwell.
McIntosh & Hyde.
Ross, H. J.
Stein & Co.

AIR COMPRESSORS.

Belliss & Morcom.

ARTIFICIAL STONE.

Roman Stone Co.
Morrison Co., T. A.

AUTOMATIC TELEPHONES.

Canadian Machine Telephone Co.

BARRISTERS.

Lighthall & Harwood.

BATTERIES, DRY.

Canadian Independent Telephone Co.

BELTING.

McLaren Belting Co., J.C.

BOILERS.

Babcock & Wilcox.
Robb Engineering Co.
Waterous Engine Works Co.

BONDS, ETC.

Bank of Montreal.
Bank of Ottawa
Bank of Toronto.
Brent, Noxon & Co.
Canada Securities Corpor'n.
Can. Bank of Commerce.
City & District Savings Bank.
Dominion Bond Co.
Domion Securities Corp.
Imperial Bank.
Merchants Bank.
Ross, H. J.
Wood, Gundy & Co.

BRIDGES.

Canadian Bridge Co.
Cleveland B. & Eng. Co.
Dominion Bridge Co.

CABLES.

Brit. Insulated Co.
Can. Indep. Telephone Co.
Imperial Wire & Cable Co.
Phillips Elec. Works, E.F.
Standard Underground Cable Co. of Canada, Ltd.

CAST IRON PIPES.

Can. Iron Corporation.
Canadian Fairbanks Morse Co.

CEMENT,

Canada Cement Company.

CONCRETE STEEL DAMS.

Ambursen Hydraulic Const. Co.

CONCRETE MIXERS.

Canadian Fairbanks Morse Co.
London Concrete Machy. Co.
Mussens, Limited.

CONCRETE

REINFORCEMENT

Can. Wire & Iron Goods Co.

CULVERTS.

Pedlar People.

DUST PREVENTIVE.

Barrett Mfg. Co.

ELECTRIC MOTORS.

Northern Elec. & Mfg. Co.

ELECTRIC WIRE.

Can. British Insulated Co.
Canadian Indep. Teleph. Co.
Canadian Machine Teleph. Co.
Imperial Wire & Cable Co.
Phillips Electrica Works, E.F.
Standard Underground Cable Co. of Canada, Ltd.

ELECTRICAL SUPPLIES.

Northern Elec. & Mfg. Co.

ENGINES.

Babcock & Wilcox
Bellis & Morcom.
Robb Engineering Co.
Waterous Engine Works Co.

ENGINEERS & CONTRACTORS.

Aqueducts, Limited.
Austen & Chapdelaine.
Barrow, E. G.
Bayfield & Archibald.
Beaubien, De Gaspé.
Bowring & Logan.
Bowman & Connor.
Brandeis, Charles.
Brown, W. M.
Burnett, Geoffrey K.
Can. Inspection and Testing Laboratories.
Cartwright, Mathieson & Co.
Chipman & Power.
Cleveland & Cameron.
Dietrich, W. N.
Dutcher, Foreman & Gregory
Fairchild, Jones & Taylor.
Francis, Walter J. & Co.
Frew, J. F.
Fuce & Scott.
Galt Eng. Co., The John
Higman & Doctor.
Isdale, John S.
Jacobs & Davies, Incp.
Keefer & Keefer.
Laurie & Lamb.
R. S. Lea and H. S. Ferguson
Leofred, A.
Mace, T. Harry.
Mather, Yuill & Co.
McConnell, B. D.
McCulloch, A. L.
Moon & Silverton
Murphy & Underwood.
Murray, T. Aird.
Phillips, Stewart & Lee.
Potter, Alex.
Ross & Co., R. A.
Smith, Kerry & Chace.
Surveyer & Frigon.
Topp, Charles H.
Wright, P. Mortin.
Young, C.R.

ENGINEERS, TELEPHONE.

Clement, Edw. E.
Dagger, F.
McMeen & Miller..
Zabel, Max. W.

ENGRAVERS.

Amer. Bank Note Co.

FIRE ALARMS.

Northern Elec. & Mfg. Co.

FIRE DEPT. SUPPLIES.

H. K. Martin.
Waterous Engine Works Co.

FIRE ENGINES.

Waterous Engine Works Co.

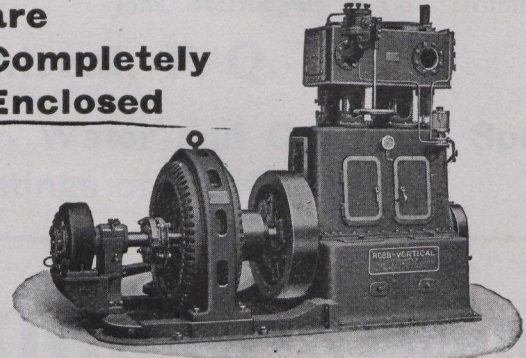
GAS ENGINES.

Can. Fairbanks-Morse Co.

For Cleanliness and the
Protection of Moving Parts

ROBB COMPOUND ENGINES

are
Completely
Enclosed



INTERNATIONAL ENGINEERING WORKS, Ltd.

Owners of works formerly of

ROBB ENGINEERING COMPANY

Works: AMHERST, N. S., CANADA
South Framingham, Mass.

SOLE CANADIAN AGENTS FOR

C. A. Parsons & Co., Newcastle-on-Tyne

Turbines, Turbo Electric Generators, Turbo Pumps, Blowers
and Compressors

39-17

THE DOMINION WOOD PIPE COMPANY LIMITED

New Westminster, B. C.

Manufacturers of

DOUBLE WIRE WOUND



AND

Cast Iron Specials, Valves, Hydrants, Etc.

WELL DRILLING

TOWN WELLS A SPECIALTY

We have the latest scientific instruments for locating subterranean
water courses before drilling.

If you need water, you need us.

SASKATCHEWAN WELL DRILLING CO.
ROULEAU, SASK.

Eugene F. Phillips Electrical Works,

LIMITED

MONTREAL, - - TORONTO

Bare and Insulated Electric Wire,
Electric Light Line Wire,
Incandescent and Flexible Cords,
Railway Feeder and
Trolley Wire.

Jail Cells

We are Headquarters for all Classes of

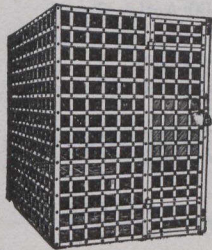
PRISON WORK

Our Village and Town cells are all equipped with our Patented Automatic Locking Device. No Padlock to bother with.

Inquiries Solicited

Canada Wire & Iron Goods Co.

HAMILTON, Ont.



THE PRINTERS OF THIS JOURNAL

The MODERN PRINTING COMPANY

STUDY THE BUSINESS INTERESTS OF THEIR CUSTOMERS

RING UP MAIN 111 OR 112

and their Representative will wait upon you at your convenience, and it may be a few minutes of your time will result in a marked improvement in your Stationery or Advertising Departments.

UPON EVERY OCCASION

GET IN TOUCH WITH

The MODERN PRINTING COMPANY

39 DOWD STREET, - MONTREAL

BUYERS' DIRECTORY.—Continued

ILLUMINATING ENGINEERS-

Morton-Wright, P.

INCINERATORS.

Heenan & Froude.

JAIL CELLS.

Can. Wire & Iron Goods Co.

LADDERS, FIREMEN'S.

Waterous Engine Works Co.

LANDSCAPE ARCHITECTS.

Dunnington-Grubb & Harries.

Haylor, Guy W.

Ouhet, F. A.

Schlemm, Leonard E.

Todd, Frederic G.

LAW BOOKS.

Carswell Co., The.

LEATHER BELTING.

McLaren Belting Co., J. C.

LITHOGRAPHERS.

Amer. Bank Note Co.

LUMBER.

Naugle Pole & Tie Co.

Partridge-Dyer L. Co.

Valentine-Clark Co.

METAL CULVERTS.

Pedlar People, The

METERS, WATER.

Buffalo Meter Co.

MUNICIPAL FORMS.

Modern Printing Co.

MUNICIPAL VAULTS.

Office Specialty Co.

NUMBERS.

Davidson Mfg. Co., Thos.

Warminton, J. N.

ORNAMENTAL IRON.

Can. Wire & Iron Goods Co.

PAVEMENTS.

Canada Cement Company.

Carritte-Paterson Mfg. Co.

Paterson Mfg Co.

PATENTS.

Clement, Edw. E.

Munn & Co.

PIPE, IRON.

Can. Fairbanks Co.

Can. Iron Corporation.

Martin & Co., Jos. R.

POLES.

Naugle Pole & Tie Co.

Partridge-Dyer Lumber Co.

Valentine-Clark Co.

POLICE SUPPLIES.

H. K. Martin.

PUBLIC ACCOUNTANTS

Gladwell, Wilson & Co.

Ross, H. J.

Stein & Co.

PRINTERS.

Modern Printing Co.

PUBLISHERS.

Carswell Co., The.

RAILINGS.

Can. Wire & Iron Goods Co.

ROAD MACHINERY.

Amer. Road Mach'y. Co.

Morrison, T. A. & Co.

Mussens, Limited.

Waterous Engine Works Co.

Wettlauffer Bros.

ROAD PRESERVATIVE.

Carritte-Patterson Mfg. Co.

Patterson Mfg. Co.

ROAD ROLLERS.

Hamilton Mach'y Co.

Morrison, T. A. & Co.

Mussens, Limited.

Waterous Engine Works Co

SCIENTIFIC INSTRUMENTS

Isdale, John S.

SEWER PIPE.

Dominion Sewer Pipe Co.

Morrison, T. A. & Co.

SEWER PIPE MOULDS.

London Concrete Machy. Co.

Wetlanfer Bros.

STAIRCASES.

Can. Wire & Iron Goods Co

STEAM ENGINES.

Babcock & Wilcox, Ltd.

Belliss & Morcom.

Robb Engineering Co.

Waterous Engine Works Co.

STEAM FIRE ENGINES.

Morrison, T. A. & Co.

Waterous Engine Works Co.

STONE.

Roman Stone Co.

STREET NAMES.

Davidson Mfg. Co., Thos.

Warmington, J. N.

STREET SPRINKLERS.

Mussens, Limited.

STRUCTURAL STEEL.

Canadian Bridge Co.

Cleveland Bridge & Eng. Co

Dominion Bridge Co.

National Bridge Co.

Structural Steel Co.

Belliss & Morcom.

SUCTION GAS PLANTS.

Can. Fairbanks-Morse Co.

Mussens Limited.

SUPPLIES & MACHINERY.

Morrison, T. A. & Co.

Mussens, Limited.

Waterous Engine Works Co.

TELEPHONES.

Canadian Indep. Teleph. Co.

Canadian Machine Teleph. Co

Garrioch, Goddard & Co.

Kellogg S. & Supply Co.

McMeen & Miller.

Northern Elec. & Mfg. Co.

TURBINES.

Belliss & Morcom.

Robb Engineering Co.

VAULTS, SAFETY.

Office Specialty Co.

WATER WORKS SUPPLIES.

Buffalo Meter Co.

Can. Fairbanks Morse Co.

Can. Iron Corporation.

Mussens, Limited.

Dom. Wood Pipe Co.

WELL DRILLERS

Sask. Well Drilling Co.

WIRE, ELECTRIC.

Imperial Wire & Cable Co.

Phillips Electric Works, E.F.

Standard Underground Cable Co. of Canada, Ltd.

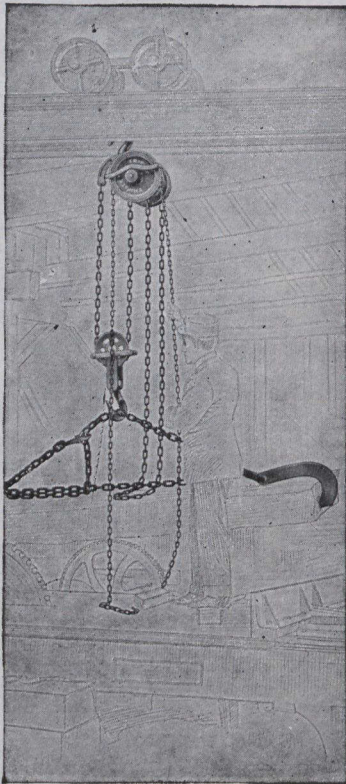
WINDOW GUARDS.

Can. Wire & Iron Good

WOOD STAVE PIPE.

Dom. Wood Pipe Co.

THE TRIPLEX BLOCK



Join Both Ends to the Middle

THE moving of a heavy load necessitates hoisting apparatus at both ends of the trip. The modern practice is to make this triple service **continuous**. The load is carried to destination and lowered without being released by the Triplex Block which lifted it.

A Brownhoist Trolley designed for this purpose reduces the problem to its simplest term.

With this combination hoist-vehicle, one man can do ten times as much work as by the old methods.

The Book of Hoists is an illustrated report of special value to engineers. Send for a copy before you forget it. Triplex Blocks are of steel construction—sheave, gears, pinion, chain and hooks.

SAFETY—Each Block Tested to 50 per cent Overload.

TRIPLEX BLOCKS { 16 sizes: One-fourth of a ton to forty tons. 300 Active Stocks all over the United States and Canada.

Also Duplex Blocks, Differential Blocks and Electric Hoists.

Yale Products: Locks, Padlocks, Builders' Hardware, Door Checks and Chain Hoists

The Canadian Fairbanks-Morse Company

LIMITED

MONTREAL, ST. JOHN, OTTAWA, TORONTO, WINNIPEG,
SASKATOON, CALGARY, VANCOUVER, VICTORIA.

No Village is Too Small for An Efficient Fire Alarm System

¶ The largest cities in the world that have the best equipped and trained fire departments recognize the importance of a good fire alarm system.

¶ If so much depends upon the alarm system where the fire fighting equipment is up to date, isn't it more important that a call system be perfect where there is little or no equipment for fighting fires.

¶ No village is too small for a dependable fire alarm system.

¶ Ninety nine per cent of the municipal fire alarm systems installed throughout the country have been supplied by us.

¶ The reputation for reliability credited to our equipment has been earned by years of actual service.

¶ Our nearest house will be pleased to give you full particulars about fire alarms and their installation.



THE *Northern Electric*
AND MANUFACTURING CO. LIMITED



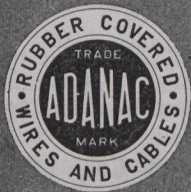
Manufacturer of Telephone and Fire Alarm Apparatus and
Distributor of Electrical Supplies for every possible need.

MONTREAL HALIFAX TORONTO WINNIPEG REGINA CALGARY EDMONTON VANCOUVER

ALPHABETICAL INDEX OF ADVERTISERS

	PAGE		PAGE		PAGE
Ambursen Hydraulic Cons. of Can.....	293	Dunnington-Grubb & Harries.....	303	Naugle Pole & Tie Co.....	290
American Bank Note Co.....	297	Dutcher, Maxwell & Co.....	301	Northern Electric & Mfg. Co.....	244
Aqueducts, Limited.....	299	Fairchild, Jones & Taylor.....	302	Office Specialty Co.....	246
Austen & Chapdelaine.....	301	Francis Walter, J. & Co.....	300	Outhet, R. A.....	303
Babeock & Wilcox, Limited.....	246	Frew, J. F.....	299	Partridge Dyer Lumber Co.....	290
Bank of Montreal.....	294	Fuce & Scott.....	299	Paterson Manufacturing Co., Limited.....	287
Bank of Ottawa.....	296	Galt, Eng., Co., The John.....	302	Phillips Electrical Works, Eug. F.....	243
Bayfield & Archibald.....	298	Gladwell, Wilson & Co.....	293	Phillips, Stewart & Lee.....	302
Beaubien, DeGaspe.....	299	Higman & Doctor.....	300	Potter, Alexander.....	301
Bellis & Morcom.....	232	Haylor, Guy Wilfrid.....	303	Robb Engineering Co.....	242
Bowman & Conner.....	292	Imperial Bank of Canada.....	296	Robertson Limited, J. M.....	301
Bowring & Logan.....	301	Imperial Wire & Cable Co.....	245	Roman Stone Co., Limited.....	292
Brandies, Charles.....	299	Isdale, John S.....	300	Ross, H. J.....	292
Brent, Noxon & Co.....	295	Jacobs & Davies.....	302	Ross & Co., R. A.....	298
Brit, Insulated & H. Cables Ltd.....	290	Keefer & Keefer.....	299	Royal Bank of Canada.....	294
Burnett, Geoffrey K.....	303	Kellogg Switchboard & Supply Co.....	241	Saint-Cyr, J. B.....	298
Canada Cement Co... Cover Page.....	2	Laurie & Lamb.....	298	Sask. Well Drilling Co.....	242
Canada Iron Corporation.....	304	Lea, R. S. & H. S. Ferguson.....	300	Schlemm, Leonard E.....	303
Canadian Bank of Commerce.....	294	Lighthall & Harwood.....	292	Smith, Kerry & Chace.....	299
Canadian Bridge Co., Ltd.....	304	London Concrete Machinery Co... Cover Page	4	Standard Underground Cable Co., of Canada.	290
Canadian British Insulated Co.....	290	Leofred, A.....	299	Stein Co., W. T.....	290
Canadian Fairbanks-Morse Co.....	244	Martin & Co., Jos. R.....	293	Surveyer & Frigon.....	298
Canadian Wire & Iron Goods Co.....	243	Mather, Yuill & Co.....	302	Todd, Frederick G.....	303
Can. Independent Telephone Co., Limited....	289	McLaren Belting Co., J. C..... Cover Page	4	Topp, Charles H.....	298
Can. Inspection & Testing Laboratories.....	300	McMeen & Miller.....	302	Trussed Steel Concrete Co.....	296
Carswell Co., The.....	293	McCulloch, A. L.....	298	Valentine-Clark Co.....	290
Carritte-Paterson Manfg. Co.....	287	McIntosh & Hyde.....	246	Warmington, J. N.....	304
Cartwright, Matheson & Co.....	300	Merchants Bank of Canada.....	294	Waterous Engine Works Co., Limited.....	246
Chipman & Power.....	300	Modern Printing Co.....	243	Wood, Gundy & Co.....	297
City & District Savings Bank.....	295	Moon & Silvertown.....	299	Wright, P. Morton.....	303
Cleveland Br. & Eng. Co..... Cover Page	4	Morrison & Co., T. A.....	272	Young, C.R.....	301
Clement, E. E.....	302	Murphy & Underwood.....	301		
Cleveland & Cameron.....	298	Murray, T. Aird.....	301		
Dagger, F.....	302	Mussens, Limited... Cover Page	3		
Davidson Mfg. Co., Ltd., The.....	304				
Dietrich, W. N.....	300				
Dominion Bridge Co., Limited... Cover Page	4				
Dominion Securities Corporation.....	297				
Dominion Sewer Pipe Co., Limited.....	304				
Dominion Wood Pipe Co.....	242				

ADANAC RED CORE RUBBER COVERED WIRES AND CABLES



Are made according to the specifications of the National Board of Fire Underwriters. The conductors are drawn from copper of the highest conductivity and are covered with two thicknesses of thoroughly vulcanized rubber compound of high quality. The wires are braided over insulation and the smooth high finish they receive makes them specially desirable for conduit work.

IMPERIAL WIRE AND CABLE COMPANY

Limited
MONTREAL

THE Northern Electric AND MANUFACTURING CO. LIMITED
Sales Agents

TORONTO REGINA WINNIPEG
CALGARY EDMONTON VANCOUVER

TORONTO
85 Bay St.

CALGARY
Molsons Bank Chambers

WINNIPEG
173 Portage Ave. East

MACINTOSH & HYDE

Chartered Accountants

ESTABLISHED 1835

157 ST. JAMES ST., - MONTREAL

Municipal Accounts Organized, Reported Upon or Audited.



ARE YOUR RECORDS AT HAND IN A MOMENT?

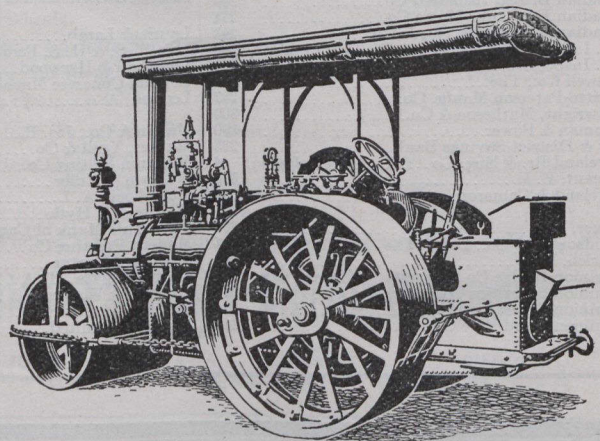
Having modern conveniences for the saving of time and needless effort in office routine, is the best means of increasing the value of the services of each one in the office.

In the selection of your office equipment, it is right that you should seek that which will give the maximum of service—in utility as well as wear. These are features which have given Office Specialty equipment a leading place in the office of Canada business men.

We would like to convince you of the value that Office Specialty Saving Systems would be to you. Write our nearest branch for complete information on any system in which you are interested.

Filing Equipment Stores in—Montreal, Ottawa, Halifax, Winnipeg, Calgary, Edmonton and Vancouver.

Head Office: TORONTO.
Factories: NEWMARKET, Ont.



... THE ...

WATEROUS STEAM ROLLER

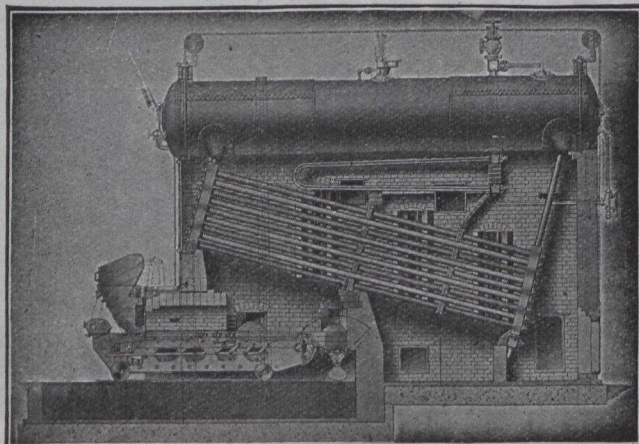
WILL CUT ROAD BUILDING COSTS IN HALF

- Because it can be used in every operation in road making, on every kind of road work, and can be kept busy every working day of the year, the Waterous Road Roller is the greatest cost cutter that can be used in road building.

Over 165 Users in Canada

Among them the largest municipalities and leading contractors in the Dominion—will answer your questions as to the Roller's ability to make good. Let us send you our list of users.

The Waterous Engine Works Co., Ltd.
BRANTFORD, - CANADA.



BABCOCK & WILCOX

LIMITED

PATENT WATER-TUBE STEAM BOILERS

OVER 10,000,000 H. P. IN USE

OUR BOOK "STEAM" SENT ON REQUEST

HEAD OFFICE FOR CANADA **ST. HENRY, MONTREAL**

Branch Office: TRADERS' BANK BUILDING, TORONTO

THE CANADIAN MUNICIPAL JOURNAL

AND REVIEW OF CIVIC IMPROVEMENT

HARRY BRAGG, EDITOR

Our Meeting Place

Everybody knows of Saskatoon, but some do not know of it beyond real estate advertising of a lurid type.

It is to be expected that a city chosen as the meeting place of the Union of Canadian Municipalities feels justly proud of having this important delegation of Mayors, Aldermen and Officials from all over Canada. But there are those delegates who do not sufficiently appreciate the points of interest to take a long or short journey to discuss and study in a sociable manner the points of interest. The reason of this is that very few of the delegates chosen by the city councils are permanent officials. This is a serious mistake, for these conventions are not a joy ride; there are papers and discussions by the foremost experts in the country, and it is reasonable to suppose that the permanent official will be the one to carry on a continuity of interest in bettering conditions in his city. He is not usually affected by elections, he is there for good behaviour, and every opportunity should be given him to apply the latest ideas to his work.

The article on our meeting place, Saskatoon, by the Commissioner of the Board of Trade, Mr. F. Maclure Sclanders will conclusively prove the stability of this City of Mushroom growth whose population has grown in ten years from 106 to 30,000.

Fine buildings, some ten stories in height and finished as no two other buildings in Canada are, will be seen on the well paved thoroughfares.

The advanced idea of municipal ownership is strong in "The Wonder City" almost equalling Glasgow where an entire life time may be spent in municipal institutions and a burial guaranteed by the corporation. Water, light, street cars, hospital are all well organized municipal undertakings, and a student opposing ownership of utilities would find little of interest to him in this progressive centre. He would find further that his argument that the capital involved was an unbearable burden refuted. In six years the total liabilities have increased from \$107,803 to \$6,894,890, and likewise the increase in assessment has been phenomenal from \$2,517,145 to \$59,000,000.

Tales rich in color are told of Western millionaires,—paupers today and capitalists tomorrow, and in Saskatoon there are examples that cannot be beaten. A notable case in present municipal life was three years ago a \$12 weekly wage earner in a saddlery store and he is today an alderman, whose business is loans and insurance, and roughly he is worth about half a million dollars or more. Another instance is Mr. Frank Cahill, the President of the Industrial League, who came to Saskatoon but a very few years ago with \$50 and now owns five business blocks, considerable real estate in Saskatoon, Fort William, and Ottawa.

Mr. J. F. Cairns is another of remarkable rapid development. About four years ago he was baking his own bread, and today he is owner of a very large departmental store, considerable real estate and is looked upon as one of the fathers of the town, who is always ready to lend or give to help a good cause along. A tale from the Arabian Nights is that of Mr. O. M. Helgerson, who

made an average profit of \$449 per day for four hundred days, in central real estate,

The most popular amusement in Saskatoon is motor-ing, it being estimated that there is one motor car to 35 people and with the proposed paved system it will be a great pleasure to motor enthusiasts.

The many examples of City Engineer Clark's foresight in the Engineering problems will be of special interest. The filtration plant which has been so much written up will be visited by the delegates and the method of laying pavements, and conduits and lighting will be first hand importance.

Socially Saskatoon will be able to entertain the delegates royally. Mayor Harrison realizing his position has, by assiduously following what he believes is his duty, is popular with every body. His genial manner and whole heartedness is the means of his making many friends rapidly.

Alderman Anderson, Chairman of the Entertainment Committee, and Mr. Andrew Leslie, the City Clerk, have in hand a programme of amusement which will occupy every spare moment very pleasantly.

Delegates are assured of a visit full of interest and one that offers many pleasures as well.

After the Convention in Saskatoon

The Convention this year offers the repetition of that pleasant side trip through to the Pacific Coast, for all the delegates but particularly for those from Central and Eastern Canada, who have been there before or have looked forward to such an opportunity for a long time.

After the Convention is over delegates will be entertained by the Cities of Edmonton and Calgary, whose hospitality is a guarantee for them to accept and see the wonderful transformation scenes that are taking place in these cities. The ideal itinerary would be to spend the Friday 18th in Edmonton, the 19th in Calgary and leaving there at night spend Sunday at Banff or Laggan, on the way through to the coast. The delegates who journeyed after the convention four years ago in Medicine Hat to the coast did not go through the wonderful cork screw tunnels near Field, and as this is of special interest, daylight is the time to pass through here. Two cork screw tunnels were constructed in the mountains along the Kickinghorse Pass, in order to reduce grade, and as there was no room to run the rails it was decided to make a track in the heart of the mountains. The engineering feat is the only one of its kind on the continent and is the means of reducing the grade from 4.5 to 2.5 per cent., which is the means of running a much heavier train with two engines instead of four at about three times the speed. The precision of the work of the engineers is remarkable, for the tunnels were commenced at either end and when the work met they were not a quarter of an inch out in their calculations.

Another change has been effected at Laggan where the delegates were driven up to the Chalet, this time they will be taken up in a motor railway car, that winds in and out of the valleys up 2,000 feet to the hotel, which commands an unequalled view of Lake Louise, the surrounding peaks and in the distance the shimmering Victoria Glacier.

THE CANADIAN MUNICIPAL JOURNAL

OFFICIAL ORGAN

UNION OF CANADIAN MUNICIPALITIES.

Provincial Unions of

MANITOBA, BRITISH COLUMBIA; ALBERTA, SASKATCHEWAN,
NOVA SCOTIA, NEW BRUNSWICK AND QUEBEC.

CANADIAN INDEPENDENT TELEPHONE
ASSOCIATION.

CHIEF CONSTABLES' ASSOCIATION OF CANADA.

MONTREAL, JULY 1913

CONTENTS

	PAGE
SASKATOON, Sask.	249
The Wonder City.	
A MUNICIPAL PARADISE.	286
Fred. Wright, Montreal.	
INTERNATIONAL MUNICIPAL LEAGUE.	247
INTERNATIONAL GARDEN CITIES' ASSOCIATION.	247
REVIEW OF CIVIC IMPROVEMENT.	284
UNION OF CANADIAN MUNICIPALITIES.	249
Programme of 13th Convention.	
Civic Notes.	292
Editorials.	247
Engineering News.	298
Equipment and Engineering.	288
Financial Notes.	297
Financial Echoes.	295
Telephone News.	289

Although the Canadian Municipal Journal is the Official Organ of the Union of Canadian Municipalities and other bodies named above, yet these are not responsible for any other matter published in it than what in each article or itself is stated to be authorized by either of these bodies.

PUBLISHED MONTHLY BY

The Canadian Municipal Journal Co., Limited.

G. S. WILSON Pres. and Mang. Director
H. BRAGG, M. J. I. Vice-Pres. and Mang. Editor
H. WISELY BRAGG, M. J. I. Assist. Editor and Secretary

CORISTINE BUILDING, MONTREAL

Telephone Main 4362—Cable address "Wilbrag".

WESTERN TRAVELLING REPRESENTATIVE: J. GRISDALE.

SUBSCRIPTION RATES

City of Montreal and United States \$1 25
Canada, Great Britain and Countries in Postal Union 1.00

NOTICE TO ADVERTISERS

Change of copy should reach this office on 18th of month preceeding date of issue, 10th if proof is wanted.

Entered according to Act of the Parliament of Canada, in the year 1913 by the CANADIAN MUNICIPAL JOURNAL COMPANY, LIMITED, at the Department of Agriculture.

A Summer School of Physical Education in connection with McGill University will be held at MacDonal College on Thursday, July 3rd, 1913. It is meant for teachers and others desiring to obtain diplomas and certificates in physical training. A special playground course planned to train supervisors and directors of playground is being offered.

Registration and applications for literature should be made to the Physical Director, Royal Victoria College.

One of the features of this school will be the practical teaching of Playground Supervision to the teachers by organized visits from Macdonald College to the playgrounds of Montreal, to spend some time there.

Some of the classes will also be conducted in the University Settlement of Montreal.

A Tooth for Pleasure

The overmastering desire of children for recreation is dramatically told in a sketch in "The Survey" called "Paying the Fiddler" by Louise Dekirven Bowen. Two little girls who work in a candy factory to aid in paying for the family home, are not only kept strictly at home, but not allowed to have visits from their little friends. A cousin, who come to see them on Sundays, describes her work in a dentist's office, and enlarges on the piles of glittering gold. The two heroines decide to steal some of this, in order to get money to go to moving picture shows, and invent a novel means of obtaining an entrance to the treasure house. They agree to go together and ask to have a tooth extracted, and while the patient monopolizes the dentist's attention, the other is to steal the gold. They draw lots as to which shall sacrifice a tooth and endure the pain; and carry out the plot successfully. But the pawnbroker to whom they try to sell the gold, happens to be an honest man. The theft is discovered, but the dentist is too kindhearted to prosecute, only the conscientious mother proving relentless, and it "required many visits to the mother before she was persuaded that she must permit her children to have some recreation, and must provide them with money to that end."

The position thus summed up:—"When a girl is willing to endure the torture of having a sound tooth extracted, in order to go to a theatre, does it not reveal once more youth's imperious claim to pleasure which will not be denied?"

Promotion for Editor

A very important change has taken place in the "The Public", Mr. Louis F. Post, who has been editor for the last 15 years having retired. Mr. Post has been invited by the President to become assistant secretary of the U. S. Department of Labor, and though at first he declined this flattering offer because of his loyalty to the paper which he has created, yet when arrangements for continuing "The Public" on its original lines were suggested, he agreed to the change.

Mr. Post's personality has been a strong feature of the paper, but he has arranged for a staff that will continue on the lines he has laid down, and we join with many others in wishing him great success in his new position, and we also wish success to the new managing editor, Mr. Samuel Danziger, and his associate Editors, Stoughton Cooley and Angeline Loesch Graves.

Fly Specks

The following aphorisms taken from a New York State Health Board Bulletin are very much to the point:

It is better to screen the cradle and wear a smile than scoff at the precaution and wear mourning.

Flies in the dining room usually precede nurses in the sick room.

Screens in the windows prevent crepe on the door.

Flies, as well as bad water, spread typhoid.

A fly in the milk may mean a member of a family in the grave.

A fly has natural enemies; the most persistent and most effective should be man.

It costs less to buy a screen door than to get sick and lie off for a month.

It's a short haul from the garbage can to the dining table via the fly route.

Union of Canadian Municipalities

13th Annual Convention, Saskatoon, Sask.

July 15th, 16th and 17th, 1913.

Programme

Council Chamber, Saskatoon, Sask., Tuesday, July 15th, 1913.—10.00 a. m.

Delegates will register name and address.—Introductions and Informal Reception.—Meeting of the Executive.

2.00 p. m.

Address of Welcome:—His Worship Mayor Harrison, Saskatoon.

Presidential Address:—His Worship Mayor Lavallee, Montreal.

Report of the Honorary Secretary-Treasurer:—W. D. Lighthall, Esq., K.C., Ex-Mayor of Westmount, Que.

Financial Report of the Assistant Secretary:—G. S. Wilson, Esq.

Report of the Official Organ, "The Canadian Municipal Journal."—Harry Bragg, M.J.I., Managing Editor.

Reports from the Affiliated Provincial Municipal Unions:—Manitoba, R. Forke, Esq., Secretary; British Columbia, H. Bose, Esq., Secretary; Alberta, G. J. Kinnaird, Esq., Secretary; Saskatchewan, W. F. Heal, Esq., Secretary; Nova Scotia, Arthur Roberts, Esq., Secretary; New Brunswick, J. W. McCreedy, Esq., Secretary.

Report on Resolutions passed at last Convention, and the Special Meeting of the Executive at Ottawa.

Papers

Subject to arrangement of time for presentation and discussion

1.—The Increasing Complexity of Municipal Government.—His Worship Mayor Hocken, Toronto, Ont.

2.—City Development.—His Worship Mayor Short, Edmonton, Sask.

3. Report of the Royal Commission of B. C. on Municipal Government.—His Worship Mayor Gray, New Westminster, B.C.

4. Under Representation of Cities.—W. D. Lighthall, Esq., K.C., Hon. Secretary, Union of Canadian Municipalities.

5. The wants of Rural Municipalities.—J. N. Bayne, Esq., Deputy Municipal Commissioner of Saskatchewan.

6. City Control of Water Front.—His Worship Mayor Oliver, Port Arthur, Ont.

7. Town Planning.—C. J. Yorath, Esq., City Commissioner, Saskatoon, Sask.

8. The Improvement and Preservation of our Great Inland Waterways.—T. L. Church, Esq., City Controller, Toronto, Ont.

9. Municipal Voting, by Wards and at Large.—His Worship Mayor Graham, London, Ont.

The following subjects will be brought forward, and presented by a leader, and followed by general discussion.

10. Inter-Provincial Highway.

11. Putting Watered Stock into Public Utility Corporations.

12. Treatment of Garbage.

13. Capital Cities in Relation to the Federal and Provincial Governments.

14. Results of Commission Government.

15. Municipal Publicity.

16. Experience of a General Manager.

17. Highways in Relation to City and Rural Municipalities.



MAYOR F. E. HARRISON



ALDERMAN J. H. ANDERSON
Chairman of the Entertainment Committee

18. Housing Conditions necessary for the Prosperity of a City.

19. Railway Crossings of City Streets.

20. Improved Systems of Water Filtration and Purification.

Unfinished business of the Convention.

Election of Officers—takes precedence the third day of the Convention.

Next Place of the Meeting.

Each day, Convention opens at 10 a.m., 2.30 and 8 p.m.

Each day, Committee on Resolutions meets at 9.30 a.m., 2.00 and 7.30 p.m., and reports to Convention at each session.

Delegates are requested to present their resolutions at an early hour.

THE CITY OF SASKATOON, Saskatchewan

The Convention City of The Union of Canadian Municipalities, July 15th, 16th and 17th

Commissioner F. Maclure Sclanders.

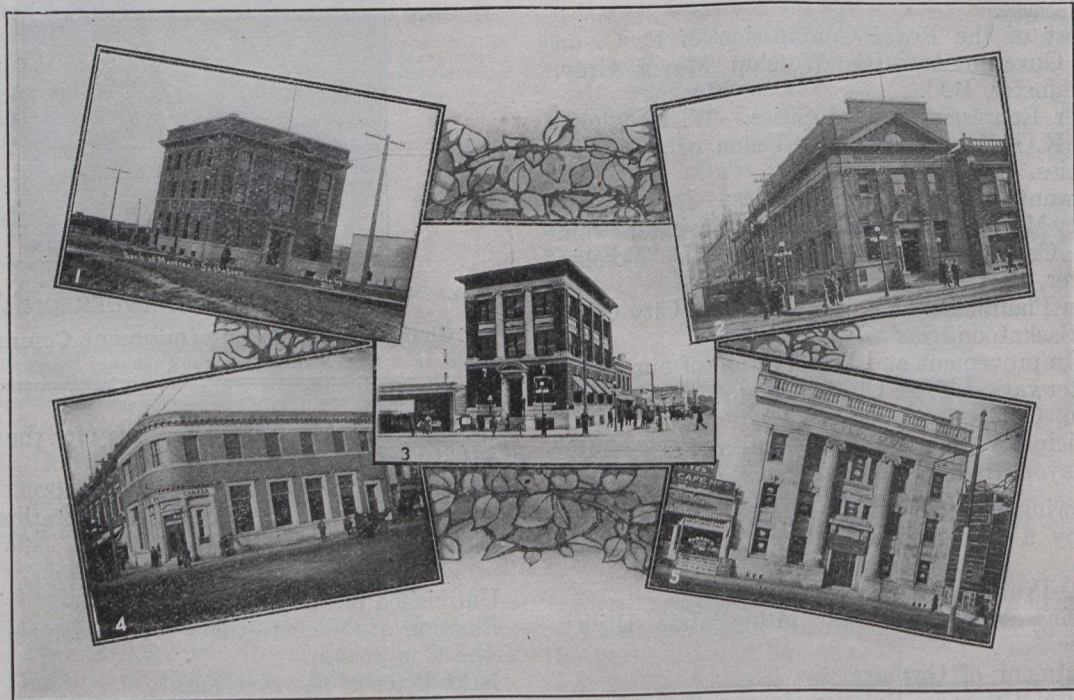
SASKATOON 1903,—a few rude shacks on a raw prairie, and 113 hopeful souls. Children born then are attending our junior schools now!—Now, in this stately and beautiful city of over 27,000 prosperous people,—a city of such outstanding commercial importance that her Bank Clearings for the year 1912 amounted to no less than \$115,898,477,—an average increase over 1911 just ONE MILLION DOLLARS PER WEEK.

It seems but yesterday since the wild pea vine and delicate prairie anemone flourished in extravagant luxuriance where mile upon mile of cement street and sidewalk now streak hither and thither by beautiful homes and imposing business blocks; along streets with their splendid stores and bustling throngs of busy, happy-looking people,—streets, where but yesterday, the cheeky little gopher peered from the grass at the

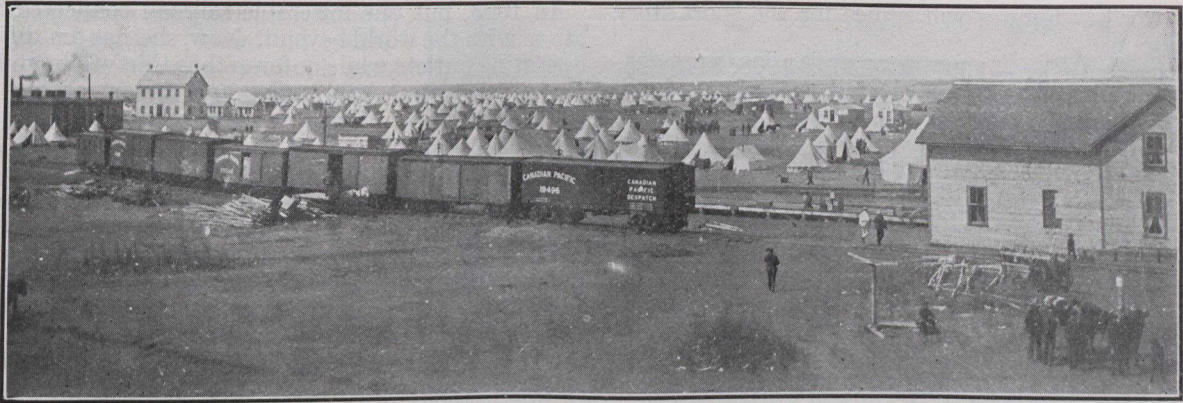
passing bullock waggon of the pioneer as it jolted along toward that gray ribbon of prairie trail that led,—God knew where,—some said to Battleford.

No noise had then been born upon these plains. The silence and the hush dwelt there as virgin as the land. But, the finger of solitude touched men's hearts, drew them together, and bound them in a bond of brotherhood which, in these easier and more affluent days, still holds the citizens of Saskatoon in unwavering unity. That will never change. Our people have tested its potent magic. All else has changed. Today, thirteen miles of electric street railway replace the uncouth trails of yesterday; and all lingering traces of a town have been lost for ever in the throbbing heart of a truly modern city.

The whole history of this marvellous unfolding needs

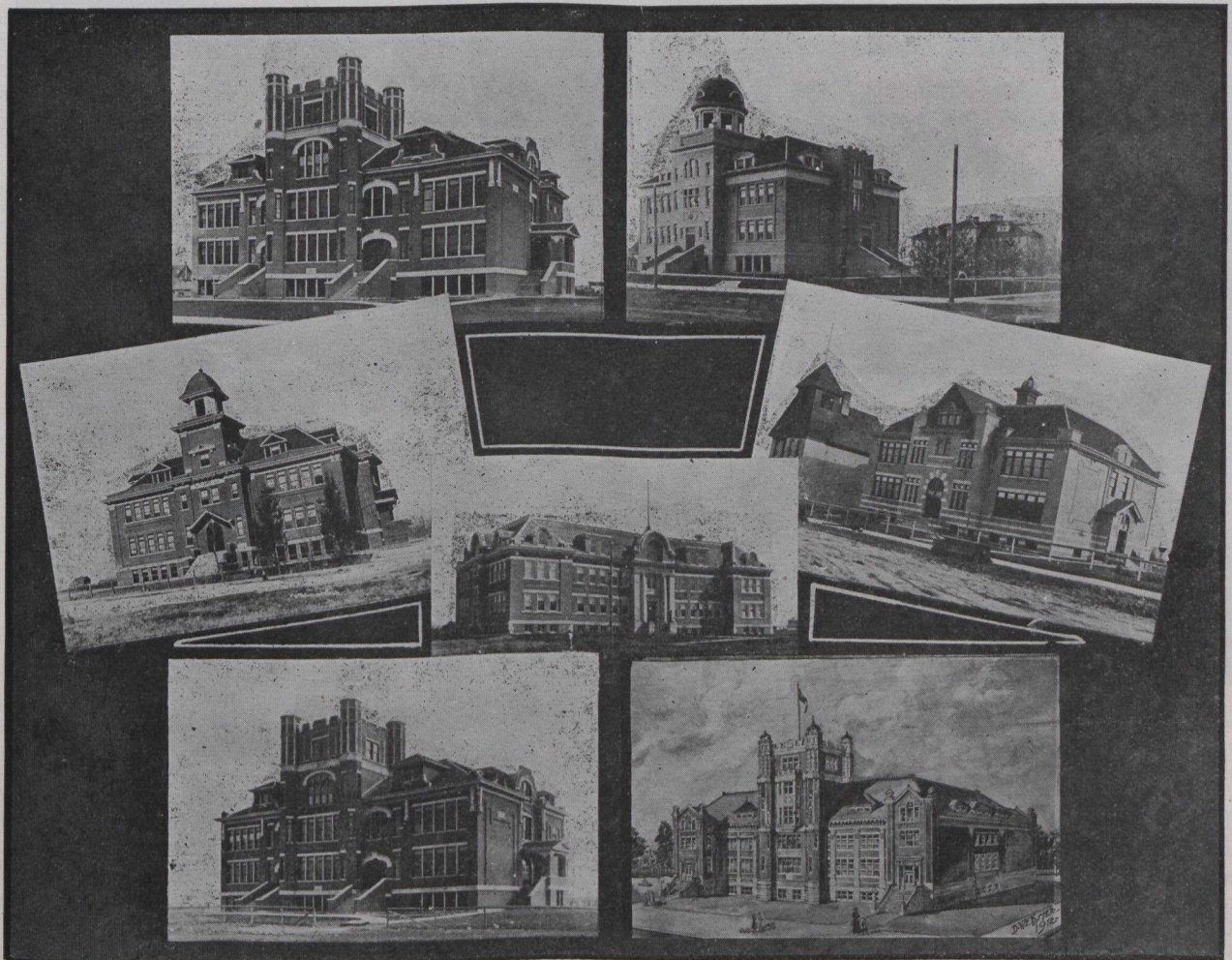


Five of Saskatoon's Sixteen Banks, which represent a total actual capital of \$132,719,232.



Saskatoon in the Spring of 1903, showing the village of tents of the Barr Colony.

The picture shows the famous Barr Colonists encamped on the present site of railway yards and fine buildings. The sojourn here was not very long, though many of them settled in Saskatoon and some are doing very well to-day.



A Group of School Buildings in Saskatoon

King Edward School

Alexandria-Princess Schools

Caswell School

Collegiate Institute

Victoria School

Albert School

Westmount School

but few words. Figures will suffice for the short story of Saskatoon.

Building Statistics.—1907, \$377,211; 1908, \$115,625; 1909, \$1,002,055; 1910, \$2,817,771; 1911, \$5,028,366; 1912, \$78,640,530.

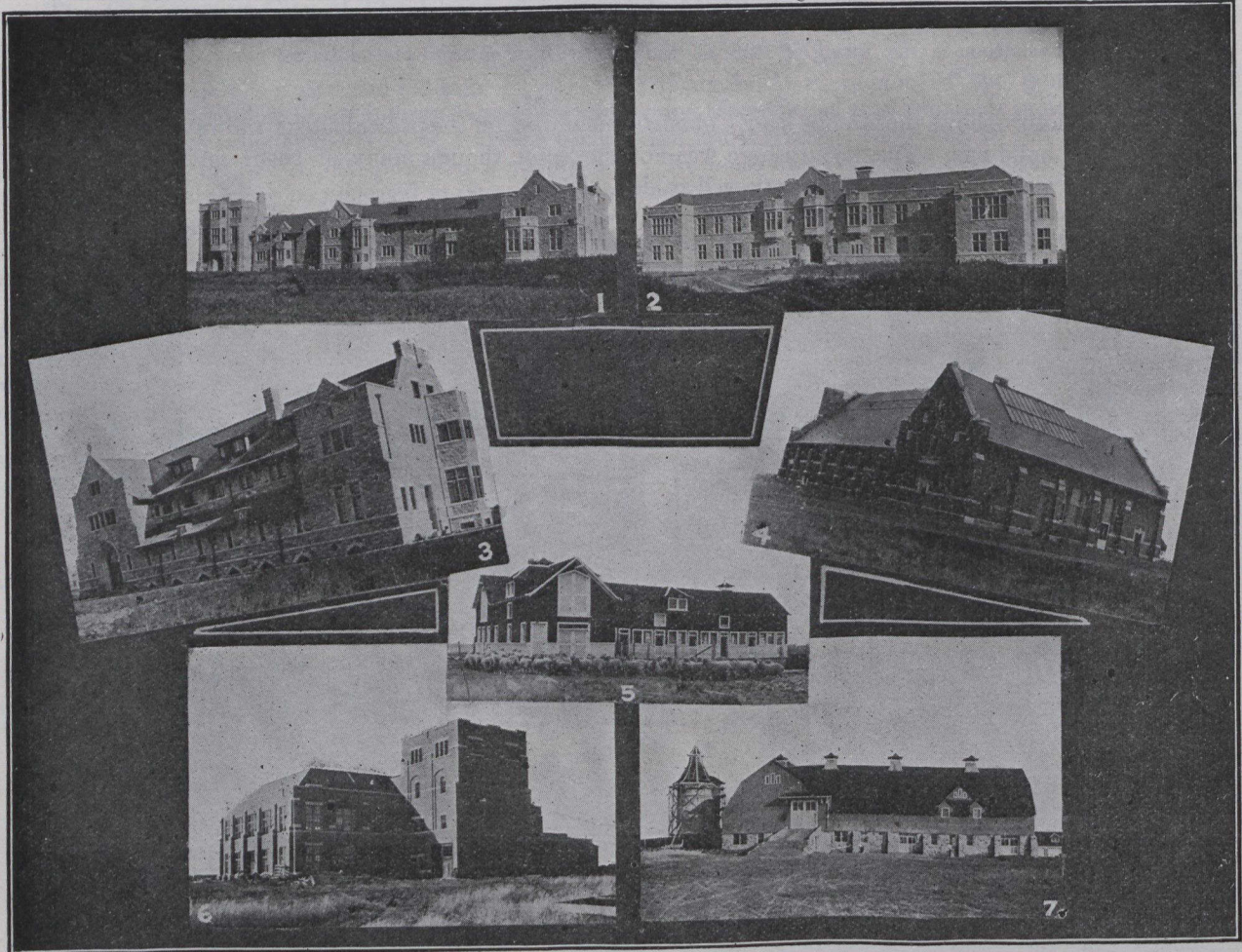
City Assessment.—1906, \$2,517,145; 1907, \$6,621,337; 1908, \$7,450,135; 1909, \$8,156,357; 1910, \$10,748,639; 1911, \$23,392,528; 1912, \$39,867,335; 1913, \$59,000,000.

Population.—1903, 113; 1906, 3,011; 25th Oct., 1911, 18,096; 25th Oct., 1912, about 27,527; 1st June 1913, over 30,000.

School Attendance.—1906, 296; 1907, 364; 1908, 651; 1909, 1113; 30th Nov., 1912, 2,956; 12th May, 1913, 3,397.

In 1903, but one miserable railroad connected Saskatoon with the world beyond. Now, she has ten different operating outlets, while no fewer than thirty fully equipped passenger trains daily arrive and depart at her three railway stations. Twenty-seven of these trains bring in mails.

Yesterday, few people knew where Saskatoon was. To-day, her name is everywhere familiar as a household word. And, should you desire to locate her, nothing is easier. Merely place your finger on the centre of any map of Western Canada,—just where all the railways meet. Note the city's central, strategic isolation: far removed from any other large point,—a feature which enables her over TWO HUNDRED WHOLESALERS



Saskatchewan University Buildings at Saskatoon

- 1—Students' Residential Building. 2—The College. 3—Emmanuel Anglican College. 4—Stock Pavilion.
5—Sheep Pens. 6—Machinery Hall. 7—The Barn.

Postal Revenue.—1905-06, \$9,985; 1909-10, \$37,204; 1910-11, \$58,376; 1912-13, \$117,946. Increase in seven years, 1081-23%. Increase 1911-12, \$28,500, or 48.6 per cent.

Customs Revenue.—1905-06, \$15,215; 1909-10, \$122,168; 1910-11, \$346,647; 1911-12, \$777,558; 1912-13, \$1,412,431. Increase in seven years 9183-14%.

The foregoing Customs and Postal statistics display a record of progress and development that has never yet been approached within the British Empire or throughout the entire world.

Bank Clearings.—1911, \$64,090,948; 1912, \$115,898,477. Increase 80.83%, or an average INCREASE OF JUST ONE MILLION DOLLARS PER WEEK.

to control beyond competition, a distributing territory extending to over 48,000 square miles, and even now embracing more than 200 thriving points on 1,800 miles of operating railways. (The distance from Winnipeg to Montreal, per C.P.R., is 1,423 miles.)

With a territory so extensive and valuable at their exclusive command, it is not remarkable that Saskatoon's wholesalers are handling a business second in volume to that of Winnipeg only,—which any of the railways will confirm.

Another interesting point is that the tiny shack hamlet of yesterday is ranked today among the important educational centres of the Dominion. Saskatoon's intelligent citizens have done all in their power to that

end. Their seven splendid schools and Collegiate Institute would do credit to the largest cities in the land, and there are over 3,300 children now in attendance.

In addition, Saskatoon is the seat of the Saskatchewan Provincial University, Agricultural College and College Farm, which institutions absorb 1,333 acres, and are planned for the eventual accommodation of five thousand students. Thus, the little Saskatonian can commence in kindergarten, then proceed through school and Collegiate Institute, finally emerging with his degree from the University,—and all without having to leave the city. What a comforting consideration to parents! However, this is merely one of many recommendations which render Saskatoon a delightful place to live in. People here do live. They enjoy life. Their general prosperity makes this possible. They are very happy folk. And, why not? Have they not everything that makes for happiness? Is not their city one the most healthful, beautiful and highly modern in the country? True, there is nothing lacking. If a man cannot find happiness here, there is none for him anywhere.



Young Men's Christian Association

The money for this and the Y.W.C.A. was raised in 4 days.

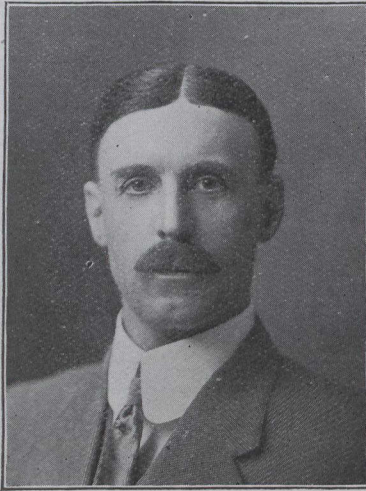
For all information, kindly communicate with the Commissioner, Board of Trade, Saskatoon.



The City Hospital

The first Municipally Owned and operated hospital in Western Canada, the second in the Dominion.

The Commissioners at Saskatoon, Sask.



COMMISSIONER RICHARDSON

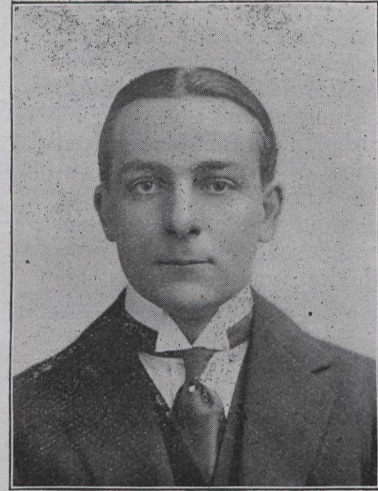
The appointment of Mr. E. A. Richardson last fall to the position of Commissioner as first choice, was the more remarkable on account of his comparatively short sojourn in the city. Like so many other residents he came from the Maritime Provinces—his home town being Sydney, where at the age of 25 he was elected a County Councillor.

In the early days, at the age of sixteen years, Commissioner Richardson started at the bottom of the ladder and without pull and with but an unfinished schooling, has worked his way up against great odds. He was first employed by the Dominion Coal Company, Sydney, but after two years he went to Boston and there learned the trade of carpenter for three years. At the age of twenty-two he was in charge of the construction of a number coke ovens for the United Coke & Gas Company of New York at Sydney for the Dominion Iron and Steel Company. After the completion of the work he went to Camden, N.J., for the same Company and worked there for three years and then on to Duluth for the same Company on a similar mission.

Commissioner Richardson then entered into a contract with the Curtin-Ruggles Company, New York, for whom he first erected a cement plant in Sydney, then a \$500,000 residence outside New York and immediately afterwards a cement plant in Monterey, Mexico.

He then came to Winnipeg for an old school friend, Mr. Geo. H. Archibald, for whom he constructed a flour mill at Kenora, which took three years to erect. He next enlarged the flour mill of the Western Canada Flour Mills in Winnipeg, making it an immense plant, combining both elevator and tanks; the Amphitheatre in Winnipeg, which is next in size to the Hippodrome in New York, was then erected. In 1910 he came to Saskatoon for the same Company, where he immediately commenced the erection of a flour mill for the Archibald Co., for Wilson Brothers; and he also built for the same Company the big departmental store for one of the fathers of Saskatoon, Mr. J. F. Cairns—a store that would be a credit to any of Canada's biggest cities (see further reference). He also erected the Central Chambers, the Barrie Hotel and the English church.

Last fall Commissioner Richardson was appointed by the Council and was the first choice out of the fifty applicants.



COMMISSIONER YORATH

The technical training of Commissioner Yorath, who has only recently been selected from a large number of applicants, is of interest to Canadians generally.

Mr. Christopher James Yorath gained his first experience in engineering in South Wales, where, after completing his education at the University College, Cardiff, he was articled to a big firm of engineering contractors, who, during his articles, carried out several large engineering contracts, including reservoirs, bridges, railways, main drainage schemes, etc.

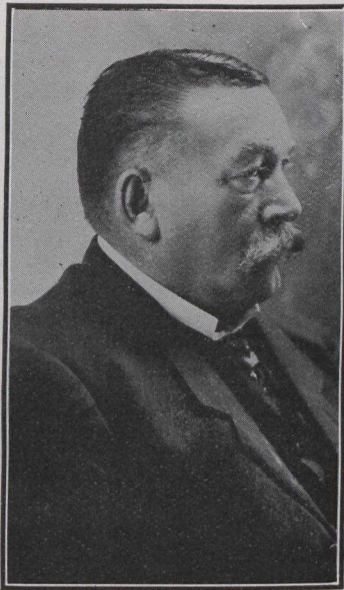
At the termination of his training in 1908, Mr. Yorath was engaged as an assistant resident engineer on the construction of a large dry dock at Cardiff. In 1899 he was appointed, from among several applicants, on the engineering staff of Mr. W. Harpur, M.I.C.E., City Engineer of Cardiff, and, for the next three years, (one of the busiest periods in the growth of that interesting city), he was engaged upon work in connection with the main drainage, road widenings, and improvements, the electrification of horse tramways, the extension of city boundaries, etc.

In 1902, Mr. Yorath was appointed chief engineering assistant to the Acton Council, and for the next few years was engaged upon the preparation of plans, etc., in connection with them any improvements and building works carried out by the Acton Council. Between 1905 and 1909 the new main drainage scheme was carried out by Sir Alex. Binnie and Sons, and Mr. Yorath was on several occasions employed in taking gaugings and preparing plans and particulars of the old system of sewers, etc.

In 1909 he was promoted to the position of deputy engineer and surveyor, and, with the consent of the Acton Council, he was in the same year appointed by the London County Council to deliver lectures on municipal engineering at the Westminster Technical Institute.

During last year, upon complaint from the Port of London Authority that the filtered storm water discharging into the Thames was not sufficiently purified, Mr. Yorath initiated a scheme which has since been completed, whereby the whole of the storm water, before being passed on to the filter beds, has to pass through a detritus chamber, so as to extract, as far as possible, the silt and solids. The filters have been re-arranged, and steps taken to secure the easier removal

THE BOARD OF TRADE, SASKATOON



MALCOLM S. ISBISTER, President of the Board of Trade

Postmaster for seven years and President of the Board of Trade, who has done so much to bring about the very rapid development.

The Hardware Firm of Isbister and Pretty located at 249 Second Avenue, South, are the successors of the old reliable and well known firm of M. Isbister & Son, who came to Saskatoon and opened a Retail Hardware Store in March, 1903.

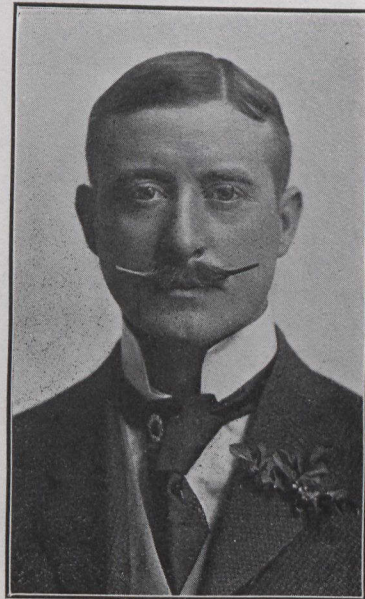
Mr. Malcolm Isbister has held the position of Postmaster for the past seven years and is also the President of the Board of Trade. He, with his son, Mr. John Isbister (deceased), conducted the business for five years during which time they were very successful, the business growing very rapidly. They confined their stock to strictly hardware lines and thus have always led, they being recognized as the best stocked and kept hardware establishment in the city.

In 1908, Mr. John Isbister was compelled to leave business owing to ill health and his brother, Mr. Jas. A. Isbister, who had been with the Firm from their inception, was left in charge. Two years later when John Isbister died, the business was sold by Mr. Malcolm Isbister to Messrs. Jas. A. Isbister and John A. Pretty, who have continued the business on the lines followed by their predecessors, and during the last two years have more than doubled the turnover.

Mr. J. A. Pretty is a son-in-law of Mr. Malcolm Isbister and was formerly in charge of steel bridge construction in the West for the Canadian Bridge Co. of Walkerville.

of silt. An analysis has been made of the filtered storm water after passing through one of the new filters, and it is found to be above the standard required by the Port of London Authority, so that in future all difficulty should be removed, and the life of the filters prolonged.

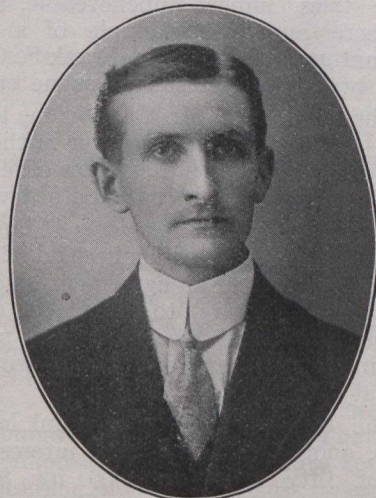
Mr. Yorath is the author of several brochures on engineering subjects, including, "The Housing and Town Planning Acts, 1909," "Housing for the Working Classes on Garden City Lines," "Design of a Main Drainage Scheme for a Seaside Town", "Water Supply to Public



Commissioner F. MACLURE SCLANDERS

Also President of St. Andrews Society.

The work that is being accomplished by the able Commissioner of the Board of Trade is appreciated all over the city. To him is due to a great extent the wide spread knowledge of this very modern city. His grain tests in this district have proved of great use to the farmer. The amount of literature he is turning out annually is enormous.



ANDREW LESLIE, City Clerk

Mr. Leslie's home was in the North of Ireland, where before coming to Canada he was in the lumber business. He was in the wholesale business in Winnipeg prior to coming to Saskatoon. The present position he holds is one to which he is particularly adapted, and the popularity in which he is held in municipal circles speaks highly for the work he accomplishes.

Baths," "How to Improve the Status of Engineers," "Up-to-date Methods of Road-making," "Acton Refuse Destructor," "The Design of a New City," etc. He has been awarded first and second premiums by eminent engineers for papers on "The Standardisation of Road Materials" and "A Report upon the Road Board's Trials at Sidcup."

Mr. Yorath is an associate member of the Institute of Civil Engineers and a member of the Royal Sanitary Institute.

Industrial League of Saskatoon



FRANK S. CAHILL

President of The Industrial League and Real Estate and Investment Broker

The present state of the wonderful development in Saskatoon today, is in the main due to the public spirit and co-operation of its citizens, led by those who have "made good" and are content to settle down here.

Fairy-like tales, almost unbelievable, are told the sojourner here and one example of a particularly interesting nature is that of Mr. Frank S. Cahill, from whose busy brain the Industrial League emanated.

During the fall of 1905 Mr. Cahill came to town with but \$50.00. Past experience however in the real estate business in many parts was the means of placing him in position that enabled him to anticipate development.

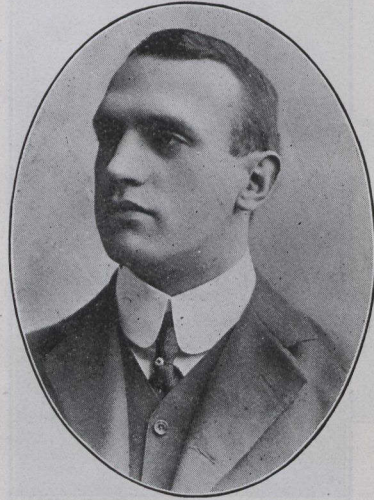
He secured an option on ten acres of land for thirty days at \$100 per acre, for which he paid \$25. In about three weeks time he had an agreement made with the farmer (Captain Andrews) to accept the option price of \$100 per acre and share in half profits. The understanding being that a subdivision would be made to be sold at \$50 per lot.

Mr. Cahill has had many successful land deals of this nature, another one of special interest, being the purchase of fifty acres in 1906 for \$38,000, the highest price ever paid per acre. To-day the property is worth \$2,000,000, being within the city limits.

The experience gained in other parts of Canada and the States is also of interest. In Montreal, during the spring of 1911, Mr. Cahill secured an option on 1,700 acres for from \$500 to \$1,000 per acre back of Montreal, directly in line with the Canadian Northern Tunnel now being pushed through Mount Royal, which he eventually sold out for a sum considerably over \$1,000,000 to the Mackenzie-Mann interests.

Mr. Cahill is primarily interested in the city of his adoption and has erected there fine business blocks. On the city limits he has a farm of considerable extent.

Mr. Cahill is one of the fathers of the city, always being ready to help along a cause that has in view the booming or developing of Saskatoon. Although in the real estate and contracting business he is a believer in the land tax, and he is also in favour of exemptions to religious and charitable institutions.



WM. D. COWIE

Secretary of The Industrial League and Managing Partner
The Royal Realty Company

In the rapid development of the "Wonder City" it is particularly interesting to see that a foundation for a sure future has been thought out. The Board of Trade, which has made its power felt through the able Commissioners, is now being assisted in a similar work, but along slightly different lines by The Industrial League, which was formed, as the name denotes, to promote manufacturing. One million dollars was raised for the purpose by the progressive citizens whose public spirit took this form of co-operation to carry on the work of building up the city.

As soon as the money had been raised, which was accomplished in four days, a site for factories was acquired on the border of the boundary of the city, between the three Transcontinental Railways, of eighty acres, upon which a spur line is being laid connecting the three railway lines and to which utilities are being extended. The advantages the League is able to offer are: free sites, comparatively cheap power and subscribing for stock. After any new company is installed and has operated for five years or less a transfer of property is handed over to it by the League. Although the Industrial League has been organized a little more than one year, the work carried on has been very great—no less than two hundred applications for sites having been received. Of this number about 75% were considered purely speculative and of such a nature as to be unsuitable. Arrangements have already been completed with several firms who will establish here, several are already in operation and there are others who are at present corresponding regarding settling in Saskatoon.

The money at their disposal, the natural advantages and the public spirit and co-operation of the citizens with the harmonious Board, should be the means of building up Saskatoon as nothing else could.

Saskatoon is already recognized as an unequalled distributing point for Saskatchewan, on account of its splendid railway connections, and there is every prospect of it becoming a considerable manufacturing centre.

SASKATOON PARK'S COMMISSION



J. F. CAIRNS

President of the Parks Commission

In the development of Saskatoon in Mr. Cairns we find one who is part of the City's own growth, and anyone being there for but short time will hear of some of his many business and public-spirited interests.

But a few years ago he was a baker in Saskatoon; it was then a small town, but as the city has developed rapidly, so has Mr. Cairns. Today he is one of the big men, owner of an enormous departmental store which also does a big mail order business.

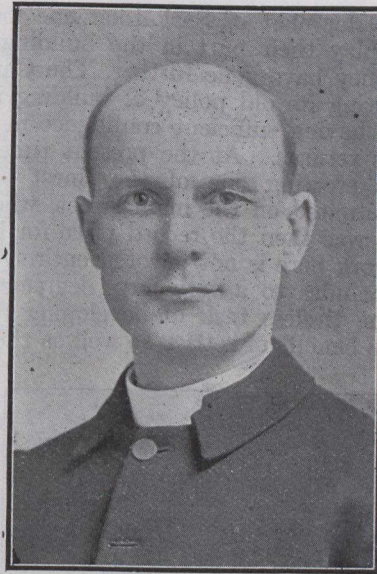
Mr. Cairns finds time from his many business calls for public service, one position that he is devoting a great deal of time to being the Parks' Commission, of which he is President. He is also a great supporter of the Local Baseball Club, which is a big factor in entertaining the crowds.

The University of Saskatoon

It is unusual good fortune which placed this great seat of learning in Saskatoon, the foundations of which are well laid for one of the foremost Universities in the Dominion. Already there are a number of buildings, completed, the College University Hall, Agricultural and Engineering Laboratory, Stock Pavilion, Power House, Barns, Implement sheds and a number of houses for the purposes of the staff. The Faculty has Professorships of Latin, Greek, Modern Languages, English History and Economics, Philosophy, with Political Science, Mathematics, Chemistry, Physics, Biology, etc.

During the term recently closed there were 150 students registered; 122 men and 28 women, 64 of which were from Great Britain and 68 from Canada, and 18 from elsewhere.

Overlooking the Banks of the South Saskatchewan River and Saskatoon the situation which the buildings command is superb and in the 1320 acres which they own expansion for all time to come on the very best lines is provided for.



REV. E. B. SMITH, R.D.

Secretary of the Parks Commission.

The system of managing the Parks and Boulevarding the streets is one that came into force three years ago. The Commission is constituted of three aldermen and three ratepayers and a secretary. It was thought that with such a system, it would be possible to maintain continuity in the same manner as by appointing a Park Commissioner.

The area of Parks is very large, being 400 acres, divided into sixteen parks, which are found in all parts of the City, half of which are already being or have been developed.

The policy has been to develop along the natural beauty lines and with this end in view a driveway is planned along the river for five miles on property owned by the City and controlled by the Parks Commission Board. Land on the East side of the river is being rapidly taken up, with the object of having a driveway along either side, meeting at one extreme on an island of one hundred acres, and the other driving through a beautiful subdivision.

The work of the Commission also includes Boulevarding the streets. Trees, shrubs and plants are all grown under the Commission's supervision. The plants are grown in greenhouses in close proximity to the municipal water pumping plant and exhaust steam is utilized in maintaining the temperature. At the present time there are 38,000 young trees and seedlings of different varieties on hand, altogether representing about \$10,000. This year in the propagating greenhouses 100,000 plants were raised.

The Parks Commission receive a grant from the City Council and have charge of the public parks, playgrounds, exhibition grounds, boulevarding and the general beautifying of the City.

During the time since the new government of this department was altered considerable good work has been accomplished, which is due in a large degree to a fixed policy being laid down and adhering to it.

When the landscape architects, Messrs. Morrell & Nicholls, were chosen, considerable time was taken up in formulating a scheme of development, which has been followed as closely as possible with very good results.

Saskatoon as a Farm Centre

H. Wisely Bragg

In the development of Saskatoon one looks to the railways to play their part in the building-up of the City. But they have gone further. The Canadian Pacific is following its old policy of building in advance of its needs, having sufficient confidence in the future to secure its returns. At the present time the great Company is erecting one of the finest buildings in Saskatoon, situated on the main street, where it had to pay what was then the record price for land in the city. The work here is not devoted entirely to railway work, but includes to a very large degree colonization work and the tireless task of developing the land as much for the benefit of settler as well as themselves.



WALTER GEROW

Canadian Pacific Land Agent, Saskatoon

Mr. Walter Gerow is the Agent for the Province of Saskatchewan, with headquarters at Saskatoon, and it is due to his persistent follow-up policy that the country particularly in the vicinity is seeking something besides the mere raising of wheat, a mis-nomer for farming. It is as a result of the very rapid settling of this district that the work of looking after the many branches of the Resources Department increased so greatly that the Company decided to erect the handsome building which will shortly be completed. It will also be the general railway offices of the Company, including Express, Telegraph, etc.

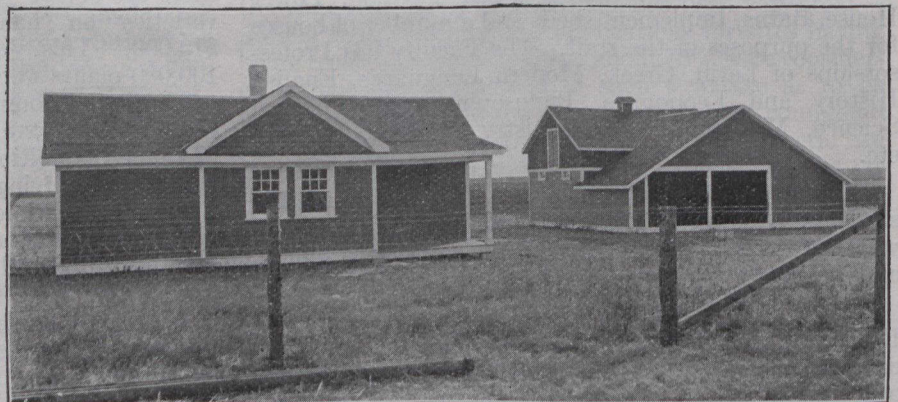
The work of the Resources Department includes many minor departments of development work, such as the Tie and Timber, Mines Departments, etc., but the greatest work is the settling or colonizing of the lands owned by the Company. Farms are sold "Ready Made" for ranching or mixed farming, where a settler may secure land to the extent of half a section, 320 acres, on the easiest possible terms, one twentieth cash and the balance in nineteen annual instalments with interest at 6%. The agreement which has been made much easier this year is based on what is acknowledged to pro-

duce the best for the country, insisting on a stipulated number of cows and horses, and also that a certain number of acres must be broken and seeded each year. The Resources Department of the Canadian Pacific together with the Universities in the Prairie Provinces are doing a great work in fostering mixed farming, in order that the greatest returns may come to the country, not for a few years, but for all time. Prominent men of experience like Mr. Adams of the Cockshutt Plow Company who tersely stated "That the Company should be commended for their policy" and also Mr. Frank Cahill, President of the Industrial League, and who is also a farm owner stated "That they were doing a great work."

It will be seen at once the effect the policy of the Company will have on the Prairie Provinces, when one realizes that at the present time they have 7,000,000 million acres suitable farm lands. Western Canada is at the present time largely dependent upon New Zealand for butter and dairy produce and Australia for meat which command very high prices. We have the lands and it is to the Resources Department of the Canadian Pacific and the Provincial Universities that our farmers are looking for information which will show them how to secure profits in these lines in addition to the more or less uncertain profit to be made in wheat raising. The farmer is at last appreciating the fact that he is paying exorbitant prices for his necessities, and in a very short time he will realize that with little more work he may have a mixed farm and keep enough stock to give him all the fresh milk and dairy produce he needs. The present situation is far from healthy, but the amount of publicity given out on mixed farming, and the numerous failures in wheat raising, and the low market price of the grain are doing much to develop economically managed farms, that will produce the greatest return to the owner.

The most extensively cultivated area in the Province of Saskatchewan owned by the Company is known as the Wolf Colony, where considerable progress is being accomplished in "Ready Made" and mixed farming. This territory is under the direction of Mr. Gerow, who frequently drives many miles superintending the work of cultivation on the lines layed down by the Company. At this point an experimental farm has been established by the Company, with the object of acquainting farmers on many important questions and furnishing a superior breed of stock, as well as trees and shrubs at a minimum cost. It is of interest here to remark that the Company grows made of these young trees along-side of the railway, furnishing three uses, their future value, a present wind break for snow storms, and a beauty spot.

(Continued on page 268.)



View of a C. P. R. "Ready Made Farm"



O. M. HELGERSON

To almost everybody Saskatoon's real estate offers are known, and to the visitor tales are told of poor men to-day who are millionaires to-morrow.

Mr. Helgerson came to Saskatoon from Iowa, where he had raised poultry and then sold milk, at which after assiduously working for two years and a half, he had saved \$1,600, the original investment in Saskatoon property.

After coming to Canada, a trip was made all through the West, seeking the best spot that would develop rapidly. Saskatoon proved to be his choice, and he immediately secured property by the lowest cash deposit.

In 1908 the start was made and finally, after some difficulties were encountered, the original property was disposed of at a good price.

Mr. Helgerson then went to Prince Rupert and during his two years there, he had many successful real estate transactions, finally disposing of the then finest building, known as the Helgerson Block which together with other property totalled \$41,000, to return to Saskatoon.

On his return, Mr. Helgerson concentrated his efforts on 3rd Avenue property, in the heart of the City and engineered a building scheme of many hundreds of thousand dollars. He believes that the foundations have now been laid for the making of a high class retail business street on 3rd Avenue, one that in the course of a few years will even eclipse 2nd Avenue.

Mr. Helgerson believes in first ascertaining the strategic point of travel or business, and then securing as much of the property as possible on the lowest cash payment. In his rapid increase in wealth, Mr. Helgerson has also been the means of adding to the incomes of several relatives in a very generous manner. The fact that his property holdings are at the present time almost exclusively in the very heart of Saskatoon, insures very little change in the market price, as is the case in outside subdivisions.

It will be of interest to know that in the seventeen months preceding the time his books were audited in November last, Mr. Helgerson made a clear average daily profit for 449 consecutive week days of \$530.95 per day, totalling the sum of \$238,402.87, which, in a limited time, is a record among the foremost real estate dealers in Saskatoon.

Mr. Helgerson has not confined his operations to Saskatoon as he holds large interests in Fort William, Ont.

Mr. Helgerson is one of the citizens of Saskatoon who works for the good, not merely of himself, but of the community, thus being held in high repute in all circles in the prosperous city.

W. A. Coulthard

President and Founder of the Coulthard, Harrison Company

Old timers in the true sense are unknown in "The Wonder City" but there are those who in ten years have seen a hamlet of two or three buildings and many tents spring into a modern city of well paved streets, ninety and one hundred feet wide, with great tall buildings on either side. Such is the growth of this booming Western Country.

Mr. Coulthard, the President of the Coulthard, Harrison Agencies, is a Canadian, and was born at Glencoe, Ont., but previous to landing in Saskatoon he spent many years in the States in the banking business. To-day the Company has the largest insurance business probably in the Prairie Provinces.

The history of Mr. Coulthard's coming to Saskatoon is interesting. He had come as far as Regina, but there was nothing much doing there at the time, so he decided to see what this much talked of place offered. On his arrival here the only place offered to sleep in was the floor in a parlor; and two nights later a cot, six inches too short, at the head of the stairs.

Mr. Coulthard, upon landing here, ran right into good fortune, meeting with a man, Mr. Geo. Hunt, who had three teams of horses, and desired to go into partnership in the real estate business.

A vacant office was secured, formerly belonging to one who had absconded with his gains, and was opened for business. The first sale netted \$320 for property near the present Exhibition grounds and just about prevented the firm from going smash. By the fall however, six months later, the profits for each were \$3,500. Mr. Hunt then went back to his farm in North Dakota, leaving Mr. Coulthard to run the business.

Mr. Coulthard's first dwelling was a shack 16 x 18 feet and for Christmas dinner special provision had to be made to get the eight guests in a room 8 ft x 8 ft. One of the other pioneers was there, Mr. J. F. Cairns, the owner of the departmental store described elsewhere.

In 1904 a partnership was formed with Mr. Geo. Alexander, later manager of the Union Bank here, and the partnership lasted until Mr. Alexander retired in 1907.

Mr. F. E. Harrison, the present mayor of Saskatoon, then entered into partnership and from that time the Company has remained the same, although Mayor Harrison takes no interest in the business owing to his civic duties.

Mr. Coulthard has made a specialty of selling farming lands and there is no doubt few, if any, know the district for one hundred miles around Saskatoon as he does, for his work for many years has necessitated close personal contact with conditions everywhere about the district.

Mr. Coulthard owns and farms on a large scale, using big tractors, on 4,000 acres at Elstow, thirty miles east of here.

The business carried on is that of loaning on farms and city property, and the issuing of bonds for solicitors and corporations. They represent several excellent insurance Companies—and they are agents for the Province for Lloyds Insurance Company and the General Animals Live Stock Insurance and agents for U. S. Fidelity and Guarantee, for the district.

The Company is the largest of its kind in the Prairie Provinces having agencies in all parts of the country.

W. Hopkins and Cameron

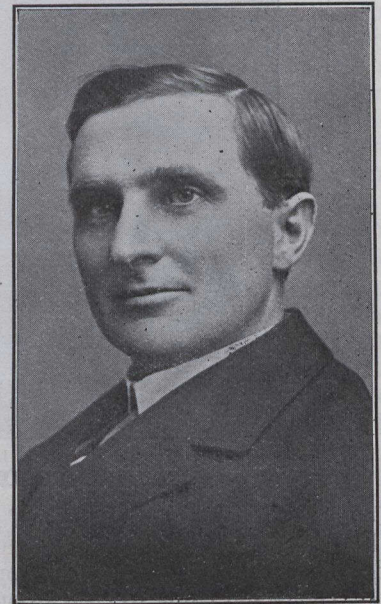


W. HOPKINS

For a period of many years the chief Magistrate of Saskatoon has been placed there through his influence either through real estate or finance.

Ex-Mayor W. Hopkins, who has spent twenty-eight years in the West, has been a prominent real estate dealer for about two years and he and his partner Mr. Cameron have carried out several very large deals. Ex-Mayor Hopkins is the owner and works one of the largest farms, amounting to 2,100 acres, in the Tessier district, and resides in Idwyld, in a palatial home.

Mr. W. D. Cameron, the Vice-President of the W. Hopkins and Cameron Company Limited has spent twenty three years in many different places in the West and is very popular in Saskatoon. The Company have recently moved into new offices in the Barrie Hotel Block, on the ground floor, when they will



W. D. CAMERON

have splendid quarters and be able to look after another growing branch of the business, that of Insurance, which is in charge of Mr. E. Bailey, the Secretary of the Company.

Jas. Clinskill

Ex-Mayor of Saskatoon

To the residents who have started with Saskatoon is due a great deal of credit for the splendid work that has been carried out on the solid foundation layed.

One of the Ex-Mayors, Mr. Jas. Clinskill, deserves considerable credit for the work accomplished for the terms 1906-1910-1911 spent in this trying position of chief Magistrate.

Ex-Mayor Clinskill spent about eighteen years in Battleford, finally coming to Saskatoon in 1899 when there was a talk of the Canadian Northern running through Saskatoon, but it was difficult to ship his supplies and clothing down to this point where he anticipated development.

In 1906 he built a block, which at that time appeared ridiculous, in the fields, but which is to-day surrounded by fine buildings. The business was then that of clothiers, boot and shoe and general store; to-day it is only boots and shoes and clothes.

For a period of fourteen years he was a member of the Territorial Legislature and in 1903 was chairman of the School Board. At this time a site was purchased for \$100 which was criticized by the ratepayers, but which is now almost invaluable, being the site occupied by the City Hall.

During Ex-Mayor Clinskill's term of office in 1910, a city charter was obtained and his work in connection with it was practically the means of laying down a model for the Provincial Government to adopt in the "General Cities Act" of to-day.

J. W. Hair

Among the successful real estate and investment companies in Saskatoon there are a great number whose stock is held in England or Scotland.

The Canadian Loan and Investment Company, of which Mr. Hair is Managing Director, is owned by stock holders almost entirely in Great Britain.

When he came to Saskatoon, he was manager of the North West Telephone Company which had a franchise with the city. They were later equipped with the Automatic System and were taken over by the Provincial Government.

Mr. Hair is interested in several concerns, one, the Great Western Furniture Company, of which Mr. Loveridge is manager, formerly known as the Great West Furniture Company. Before the Company's name was changed, he was manager and at the same time manager for J. C. Drinkle, real estate operator.

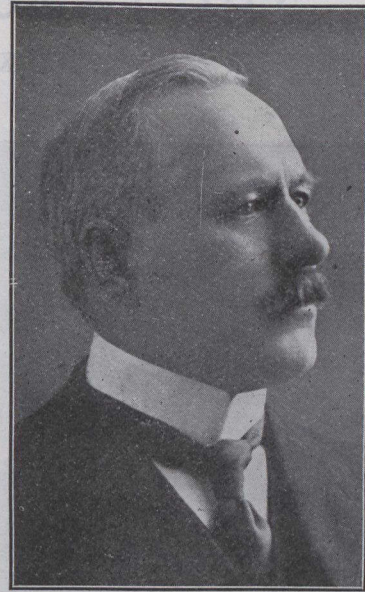
The two land companies of which he is managing director, the London and Western Land and Investment Company, and the Canadian Land and Investment Company, are owned by English and Scotch shareholders. Mr. Hair has for the past six years, or since 1907 when he settled here, been a large factor in developing the city, where he has achieved great success for his investors and for himself.

Ex-Mayor Clinskill has retired from public life, but still retains interest in many different concerns.

He is President of the Canadian Land and Investment Company; Director of the London and Western Land Company; President of Clinskill Limited, etc.

“Quality “Concrete””

A few years ago, a young man connected with a Street Paving Company in Western Canada conceived the idea that if contractors for Municipal work would make an effort to do their work to the best of their ability, using only the best grade of material and expert labor, that there would be little difficulty in securing prices which would bring reasonable profits. The result was the organization of a Company exclusively for the purpose of building concrete walks and curb and gutter in the Cities, Towns and Villages in the three Prairie Provinces. This Company was given the appropriate name of Western Pavers Limited. The Company was affiliated with the Nelson Bros. Paving and Construction Co., of Minneapolis, Minn., and secured, as required, the services of their skilled men and the benefit of their many years of experience. From the commencement it has been the policy of Western Pavers Limited to construct high-grade work ONLY, refusing contracts in various instances where the specifications would not allow good work to be done. Their efforts have been eminently successful, being recognized as the most reliable and up-to-date builders of concrete work in Western Canada. In Saskatoon alone this Company has built approximately \$400,000 worth of sidewalks, curbs and retaining walls, every foot of which is of “Quality Concrete.” This Company has offices in Winnipeg, Saskatoon, Regina, and Edmonton; and Chas. Curtis, their Secretary and Sales Manager, is the man responsible for the idea.



**J. P. O'LEARY, Managing Director,
The Standard Construction Co., Saskatoon.**

As the real estate boom turned into the tangible, so there was an opening for the builder and contractor, Saskatoon was fortunate in securing as its foremost builder, Mr. J. P. O'Leary, who had been for many years Superintendent of the Hotel Construction of the Canadian Pacific Railway, a position is now done away with. Mr. O'Leary is well known from far east to west, in connection with the many very important buildings he has erected in all parts of Canada.

The Standard Construction Company of Saskatoon was organized in 1911 to build the King George Hotel. The officers of the Company are N. G. Boggs, President, also President of the Saskatchewan Investment and Trust Company; J. P. O'Leary, Managing Director; A. J. Adamson, Director, also President of the Western Trust Company, Winnipeg; and J. S. Crabbe, Sec. Treas. They have built the King George Hotel, the King George Hotel Annex; the Cobbold Block; the Dominion Building; the Saskatoon Brewery; the Saskatoon Investment Company Co. office; the Rex Theatre and private residences for the following: Mssrs. N. G. Boggs, G. H. Martin, Dr. Holden Love and J. C. Bulton.

At present the Company have under contract with the City of Saskatoon three and one half miles of sewers and water piping. The principal section of which is the sewer and water to the Industrial site described elsewhere.

Mr. J. P. O'Leary, the managing director, was formerly Superintendent of Hotel Construction for the Canadian Pacific Railway, and during his many year connection with them he built the Chateau Frontenac, Quebec; Place Viger Hotel, Montreal; Royal Alexandra, Winnipeg; Empress Hotel, Vancouver; and remodelled and added to the numerous Mountain Hotels that form a link in the chain of C. P. R. Hotels from St. Andrews, N.B., to Victoria, B.C.

Saskatoon is extremely favoured by having a builder of such wide experience.

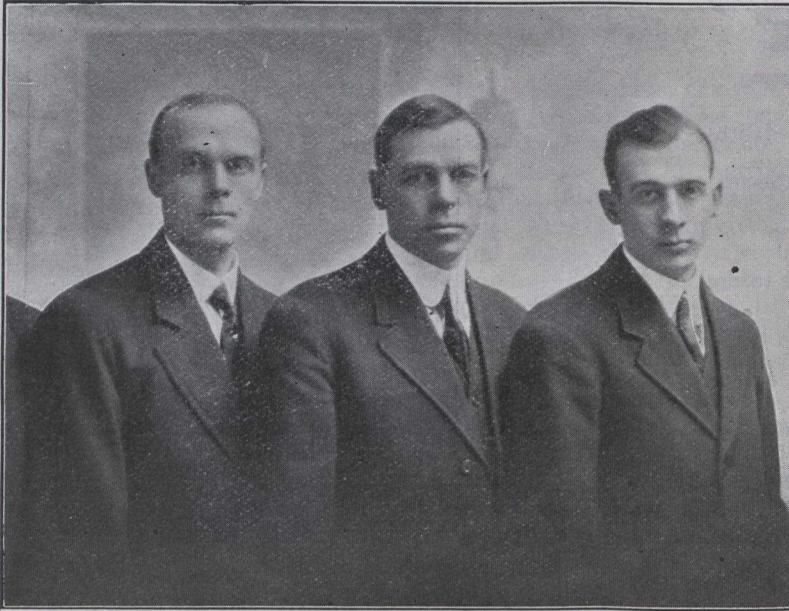
Mr. O'Leary also superintended the construction of the University of Saskatchewan buildings, Saskatoon, and the Emmanuel College in Saskatoon.

The University Buildings were designed by Brown & Vallance, Architects, Montreal, and erected by the Standard Construction Company, Saskatoon.

THE FAWCETT HARDWARE CO.

THE WELL KNOWN RETAIL HARDWARE STORE

SASKATOON



S. E. FAWCETT

Alderman T. W. FAWCETT

O. W. FAWCETT

No better example of the stability of Saskatoon is to be found than the many sound businesses that are seen, apart from the numerous real estate firms and partnerships that exist in this City of wondrous development.

As a result of the rapid development then came an opening for the dealer in household and builders' hardware. Just at this crucial date, The Fawcett Hardware through a change of hands, came into business and the business being run on sound lines it has developed until to-day it is the most prosperous in the city.

It is therefore to be expected that a representative of such a progressive firm as this would be represented on the Council.

Alderman Fawcett, the President of the firm, was elected to a position of great trust, a member of the Finance Committee, and as it is his first year's term of office, it is an especial honour.

The business has been running under the present name for a little over a year, from the time it was taken over from S. T. Kempthorne and formed into a limited company by Alderman Fawcett. When the Company was organized Alderman T. W. Fawcett was elected President, he having been a resident of Saskatoon for six years, and being highly esteemed by business men.

Associated with Alderman Fawcett are his brothers, Mr. S. E. Fawcett, who has had 12 years' experience in the hardware business with Wood Vallance & Co., Hamilton, Ont., and with Marshall, Wells & Company

of Winnipeg, Man., for whom he managed their retail store at Brandon; and Mr. O. W. Fawcett, the junior partner, who has also had six years' hardware training in the Soo.

The combination is of the best to promote the interests of the business as each director is trained specially for his position and there he is able to render most efficient service in building up this great business.

The arrangement of the store is excellent to expedite handling the stock carried, while particularly adapted to the requirements of the builder and Western needs, and would do credit to the bigger cities; in fact, it surpasses many in quality and completeness. The prices are but little higher than in the East of Canada and

the staple lines little different. The fixtures are of the very latest type and insuring quick and efficient handling. Being possibly the largest hardware concern in Saskatoon, it is possible to control the products of many of the very best manufactures. Exclusively carrying out an aggressive policy, a customer is treated with the same courtesy when purchasing big or small articles. It is also possible by buying in large quantities to sell at a price which smaller firms cannot, on account of being able to take advantage of discounts and other conveniences accruing to the bigger merchant.

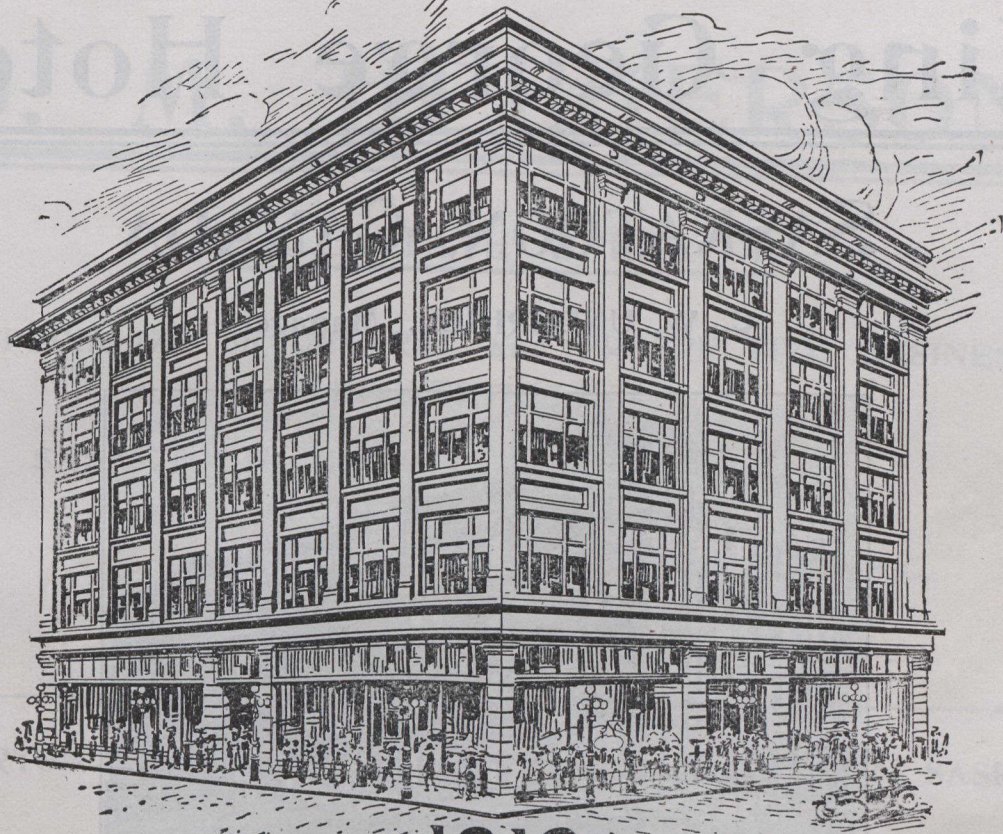
The extensive patronage which they have, has been built up on fair prices and fair treatment—carrying only the very best goods obtainable.

A stock of very great variety is carried of goods from Eastern and American factories and the arrangements for display are equal to anything to be found in the very largest cities.

Alderman Fawcett is a great believer in building up sound business as a back bone to a community, so that there may be fine stores where goods may be bought "at home."

He was master of the Saskatchewan Lodge of Masons for two years; chairman of the Finance Committee of the Third Avenue Methodist Church, whose building now being completed will cost \$190,000.

Alderman Fawcett was elected an alderman by a very large vote, thus showing the attention paid to the solid business man in the west.



1912

CAIRNS!

A Store that has won a certain high place in the people's estimation, not because it is ten years old or in a new building but because its **MERCHANDISE** is right, its **PRICES** are right, its **SERVICE** is right.

And Particularly Because

it is a Store to which people naturally look for the **NEW**, the **BETTER** SORT of merchandise.

Everything to Wear.

Everything for the Home.

Everything to Eat.

J.F. CAIRNS
SECOND AVE. AT 23RD. ST.

SASKATOON

King George Hotel

SASKATOON, CANADA

C. W. UNDERHILL, Manager



THE BEST EQUIPPED AND MOST MODERN HOTEL BETWEEN
WINNIPEG AND VANCOUVER.

Headquarters of the delegates to
the Union of Canadian Municipalities Convention.

Special rates for Convention delegates.

European plan.

250 Rooms. 200 with bath.

Local and long distance automatic telephone in each room.

Being built of reinforced steel and concrete, it is absolutely fire-proof.

THIS IS THE FIRST OF A SERIES OF HOTELS, TO BE BUILT BY THE
ANGLO-CANADIAN HOTEL COMPANY, LIMITED, OF LONDON, ENGLAND.

O. M. HELGERSON

REAL ESTATE OPERATOR

I SPECIALIZE on CENTRAL and PROSPECTIVE BUSINESS PROPERTIES IN—

SASKATOON, SASK.

FORT WILLIAM, ONT.

PRINCE RUPERT, B.C.

— Suite 12 —

MORTON BLOCK . . .

SASKATOON, SASK.

The Saskatoon Commission Co.

Real Estate and Investment Brokers

P. O. BOX 484

242 TWENTY-FIRST STREET

SASKATOON, SASK.

In order to invest conservatively and to the best advantage, you require more than a general knowledge of the various securities. Our facilities for securing the information you should have are at your disposal. ∴ ∴ ∴ ∴ ∴

The Saskatoon Commission Co.



THE STANDARD TRUST BUILDING, SASKATOON.

The Standard Trust Company

OFFICIAL ADMINISTRATORS

Head Office, WINNIPEG

Branches:

SASKATOON, EDMONTON, VANCOUVER.

President, J. L. GORDON.

Managing Director, Wm. Hawey, B.L.

CAPITAL SUBSCRIBED and PAID UP	- - -	\$750,000
RESERVE	- - - - -	325,000
TOTAL ASSETS OVER	- - - - -	\$10,000,000

Saskatoon Branch Office, J. F. CALDER, Provincial Manager.



National Trust Company's Building at Saskatoon

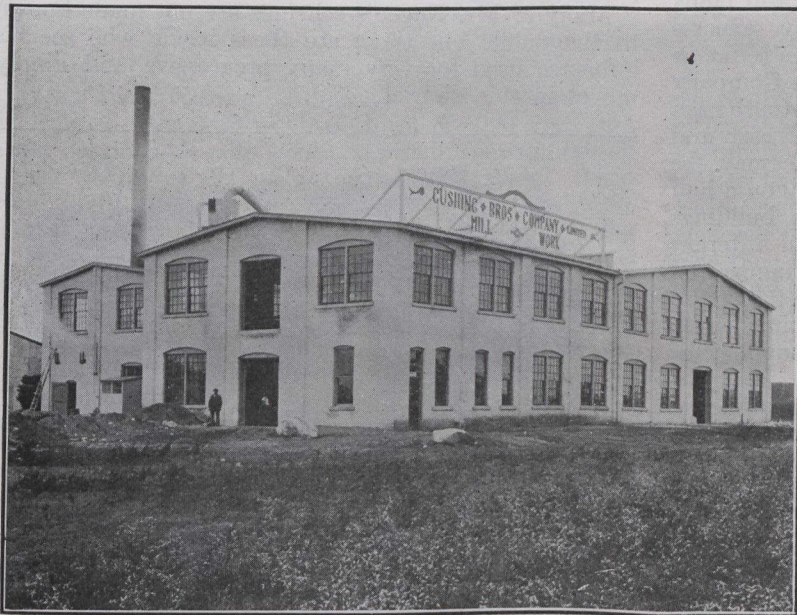
Head Office for Northern Saskatchewan, J. D. GUNN, Manager

Capital and Reserve - - - - \$2,800,000

Head Office, TORONTO, Branches at Montreal, Winnipeg, Regina, Saskatoon, and Edmonton.

ESTATES ADMINISTERED AND MANAGED, AND ALL BUSINESS OF A TRUST CHARACTER TRANSACTED. . . . MONEY LOANED ON FIRST MORTGAGE SECURITIES. FINANCIAL AGENTS, &c.

Cushing Bros., Limited



View showing a portion of the plant of Cushing Brothers.
An addition doubling this size just complete.

The local plant is under the management of Mr. Fred M. Beatty, who has been associated with the Company for a number of years, and it is due to his ability as a manager that such a big business has been created in Saskatoon.

Due to the spirit of co-operation there has sprung from the rapid development due to real estate a sound commercial status to the City of Saskatoon.

The illustration shows about one half of the mill of Cushing Brothers' plant at Saskatoon, one of the many scattered all over the West.

The Company is the largest manufacturers of sashes and doors in the West to-day, operating factories at Calgary, Edmonton, Regina and Saskatoon. During the year of 1912 business developed so rapidly that it was necessary to double the size of the plant. The plant is equipped with the most modern machinery for manufacturing interior fittings and mill work, besides sashes and doors. In addition they carry a complete line of glass and art glass, which they import direct from Liverpool.

The firm is in a position to furnish the very best materials found any where at a fair market value.

Metal Shingle and Siding Co.

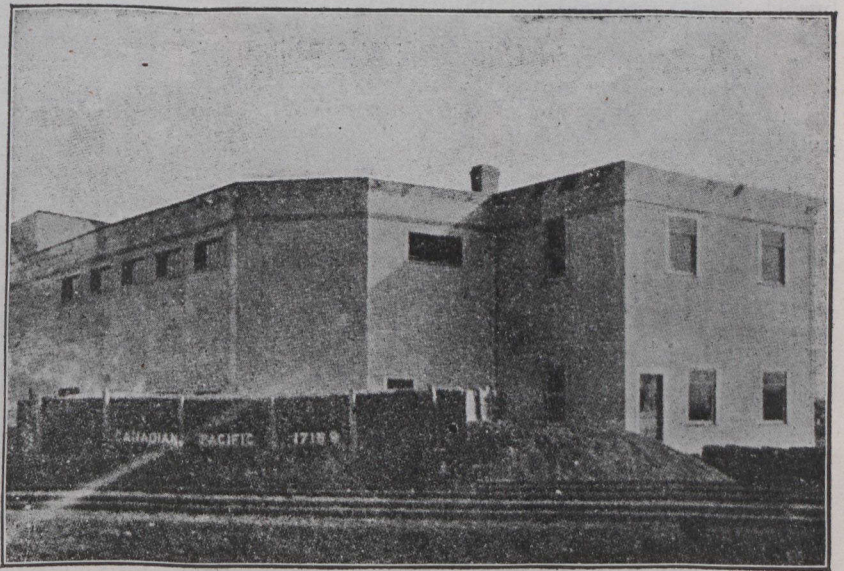
The industries springing up in Saskatoon are of the very best and most useful nature to agrowing community and it is apparent that they are both doing well and also assisting the community.

One of the most enterprising, considering the capital and weekly wages of fifty men, is that of the Metal Shingle and Siding Company, of which Mr. W. F. Moser is Secretary-Treasurer and business manager.

The plant is situated in an ideal location near the main line of Canadian Pacific Railway, to which a spur track one hundred feet is laid.

The Company manufacture under the most approved conditions, by the most modern machinery, cornices, sky lights, fireproof windows and doors, metal ceiling and siding, ornaments, and roofing in tin, iron, slate, pitch and gravel, asphalt, metal shingles, and corrugated iron.

They have furnished windows and doors for all the principal buildings in the West among which are the Emmanuel College, J. F. Cairns' new store, Cockshutt Plow Works, International Harvester Building, The John Deere Plow Company, Willoughly-Summer Building, The Ross Building, the Blain and McMillan Building, and the ventilation and cornices for all the buildings in Saskatoon, as well as the roofing and sheet metal work on the new Asylum at Battleford, Sask., and Battleford High School.



A portion of the plant and office of the Metal Shingle & Siding Company, Saskatoon.

Saskatoon and the district are certainly fortunate in having such a convenience in manufacturing at their very door.

The management, under Mr. Moser, is systematized and handled in such a way as to give the greatest satisfaction to their rapidly increasing customers. This is a branch of the well known firm with headquarters at Preston, Ont., whose good are shipped out all over the Dominion for this and their other factories.

(Continued from page 258)

The "Ready Made" Farms, which have been so widely discussed are the means of settling farm lands rapidly, on the very best lines, as dictated by experts of the Company. It is necessary to make the terms as easy as possible and with that end in view the Company has extended their term of payment from one tenth cash and nine annual instalments to one twentieth cash and nineteen annual instalments. Arrangements may be made with the Company to loan up to \$2,000 on a half section of land, for improvements. The buildings erected by the Company include a number of different types, all of which are finished in a superior manner and finally painted with three coats of paint, the barns also being painted with two coats. Fifty acres are broken and seeded. Stock valued at \$300 may be supplied by the Company on a year's term.

These farms are the means of helping the settler to immediately develop his land and the system of supplying practically everything excepting machinery is of the greatest assistance. The largest supplying and experimental farm is at Strathmore, near Calgary, where a very large portion of the Hotel and Dining Car Service of the Western Division of the Canadian Pacific Railway is also supplied.

Fred Engen, Saskatoon

One of the fathers of Saskatoon who has shared in probably more than his due responsibility in its development is Mr. Engen. His experiences in up-to-date farming are wonderfully successful and he has demonstrated the possibilities there are for the man with brains who will use them in this modern business.

In 1911 from an area of 2600 acres he produced 78,000 bushels of flax—a yield of approximately twenty-nine bushels to the acre, and selling that crop, valued at the then market price, netted Mr. Engen a sum in the neighborhood of one hundred and fifty-six thousand dollars. But that crop and those figures fade into insignificance before the magnitude, the immensity, of his undertakings last year. His cultivated area is nineteen sections, or in precise figures, 12,160 acres of land. Of this, eight sections alone, aggregating 5,120 acres, are under flax, the remainder being used for wheat, oats and barley. The scientific method introduced in soil culture, plowing, packing, discing, etc., and in seeding and seed-testing fertilization and the like are evidencing their results as never before. The average yield of the eight sections of land, situated near Rosetown, last year was thirty-five bushels per acre—or a total of 179,200 bushels of flax. In his flax fields last fall, several engines have been working, each gas tractor drawing six eight-foot binders, and cutting a swath of forty-eight feet. Those who have visited the farm while reaping has been in progress, have been impressed almost to awe with the magnitude of the scale upon which things are done, and with the unwonted magnificence of the crop. The other land owned by Saskatoon's leading agricultural authority is nearer Saskatoon, being only about seven miles away. Upon this land, abundance of wheat, oats, and a little barley have been produced last year; but it is the Rosetown farm which has attracted the greatest admiration, if indeed there is any choice between the two. As a progressive farmer, Mr. Engen seems to know no peer. He has tried almost all manner of experimentation upon his land, from grass to grain, and his entire cultivated acreage this year is seeded for the production of small grains.

Mr. Engen realizes the importance of mixed farming in utilizing his farm near Saskatoon for experimental purposes along this line.

Many of Mr. Engen's schemes are not made known to the public but there are those inside who see his influence used for very many progressive and kindly moves in this district.



The New Fairbank-Morse Building, Saskatoon

Memorial Fountain

The City Improvement League of Montreal has made a very nice gift to the City in the shape of a Drinking Fountain. Many of the members of the League were desirous of perpetuating the memory of the late Prof. L. E. Gregor, of McGill University, who gave valuable assistance to the work of the League, and acted as one of the secretaries. Accordingly a subscription list was opened, and the money thus raised has been expended on a Drinking Fountain which was entrusted to our Canadian sculptor, Philippe Hébert.

The League has just had the pleasure of asking Mayor Lavallée to accept the Fountain for the City, and while suggesting that Fletcher's Field, as the great playground of the children, would be a suitable site, has left this with the Civic authorities.

It is likely that the inscription on the pedestal will simply be

"L. E. Gregor"

"Un Bon Citoyen", "A Good Citizen".

The Use of the School House

The increasing use of schoolhouses as social centres is one of the signs of the times. In Chicago, during the past winter, not only were a greater number of schoolhouses opened for this purpose, but the attendance at each of them was also much larger than in the previous year. On two evening each week since December 1 thirteen of these schools have been filled with persons seeking wholesome amusement or educational advantages of which their circumstances or their occupations would otherwise deprive them. It is evident that the enthusiasm with which opportunities of this kind have been grasped in New York and in other cities which have adopted the idea has been reflected in Chicago. The plan has passed out of the experimental stage and become an established factor in the social work of the cities.—New York Post.

EDMONTON, Alta.

(Specially written for the Journal)

When the citizens of Edmonton twelve years ago determined to make their little town of 4000 souls into a city of which Canada would be proud, they undertook a task worthy of the virility of the great West. They even "built better than they knew." Today the city of Edmonton has a population of 57,000 domiciled in homes sweetened by the knowledge that they are the results of their motto "INDUSTRY, ENERGY, ENTERPRISE." The people have carried their sense

centre of a rich agricultural country, Edmonton boasts within the vicinity natural resources of no mean order. Natural gas, oil, coal, timber and clay are all being worked to build up the industries which include most trades, from meat packing to shoe-making. Over 50 wholesale houses, many of them Eastern and American, have their factories or warehouses in the city, for easy distribution over the Saskatchewan and Peace River valleys which cover an area of thousands of square



Spring Day Crowd on Jasper Avenue, Edmonton, which is one of the finest streets in the West.

of beauty into their public buildings, the laying of their streets, and open spaces; their idea of utilitarianism into the public ownership of everything that tended to the comfort of the people and the mitigation of taxation; and their common sense into the advertising of their handsome city. And the citizens of Edmonton have something to advertise.

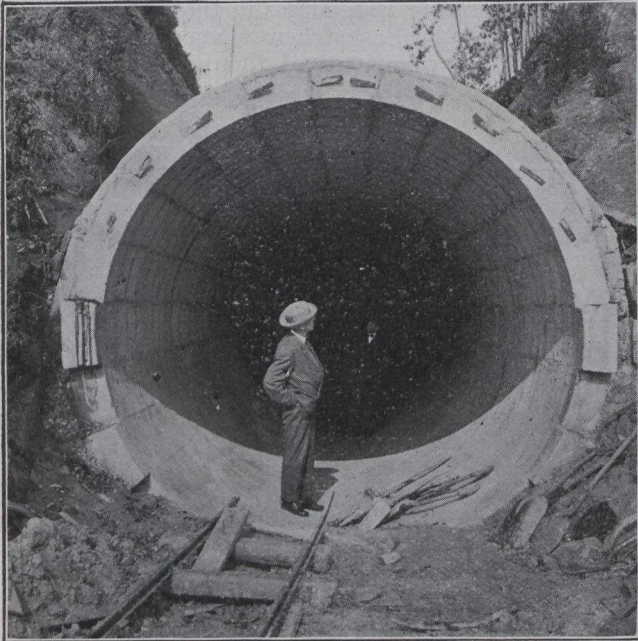
Situated 793 miles west of Winnipeg and on the beautiful Saskatchewan River, Edmonton is directly connected with the three great transcontinental lines and with five branch lines, and is the distributing centre for an immense district. Though she is the

miles. Quite a contrast to the Edmonton of yesterday when it was but a small trading post of the Hudson Bay Company!

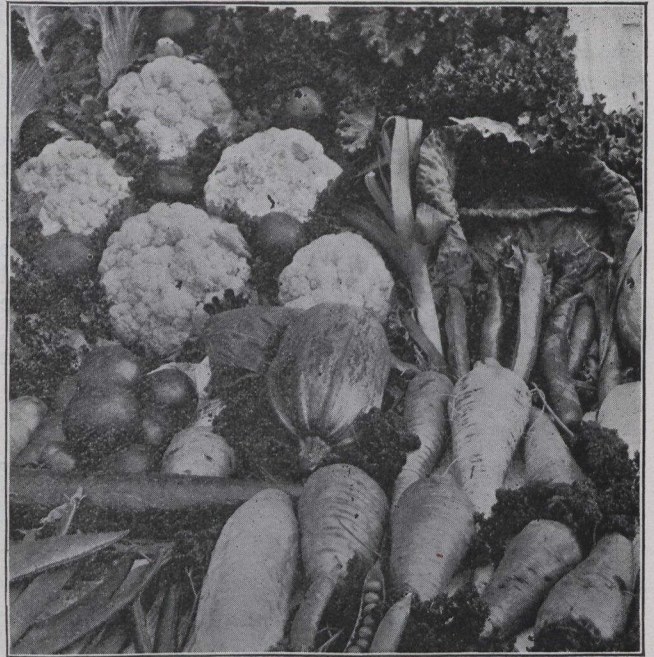
Edmonton is not only the Provincial capital, but the home of the University of Alberta, a fact borne home to the visitor to the city when this well known college is in session. There is no doubt but that Alberta University has been, and is, a large factor in the educational life of the Province, and has added much to the social life of Edmonton. In addition to the University, two colleges, two business colleges, one high school and twenty-two public schools, cater to the training of the young mind, and forty churches attend to the

religious teaching of both young and old. When the Legislature is in session, Edmonton is, as far as the social life is concerned, a miniature Ottawa, though even when the necessary long vacation is on, the City Council has provided, in the form of band concerts, etc., plenty of opportunities for the citizens to enjoy themselves, so those who say that life in the West is all work and no play libel the intelligence of the inhabitants.

There is one feature in Edmonton which could be profitably copied in the East—the providing of spacious



Twelve Foot Sewer being the discharge for the entire system, to which twelve miles were added last year.



Vegetables grown in the district around Edmonton, which is particularly well adapted for this purpose.

playgrounds for the children by the municipality; and as one sees the happy, laughing faces of the little ones, as they use the swings, play ball, and all manner of games, he can only come to one conclusion—that the authorities are wise in their generation. They want the child of today to be the clear minded man of to-morrow.

Two morning and two evening papers supply the news and gossip of the day, which in turn are supplied by four telegraph services, and the standard of the articles and editorials is considerably higher than many of the American sheets which find their way into Canada. A good theatre and many picture show houses cater to the gayety of the city, while the hotels are among the best in Canada. The public utilities include the street railway (which carries about 2,000,000 passengers monthly), light, power, water, and telephones which are of an automatic nature, and which only a man from the East who has to put up with the delays of the call 'phone can fully appreciate. It hardly seems possible that within a few miles of this clean city are thirty coal mines already working, but such is the fact, and it is only a question of capital before others will be



A view of one of Edmonton's beautiful Parks, which comprise 801 acres, scattered in many different parts of the City.



A view of of the wholesale district in Edmonton, Note the fine warehouse building.

say that the returns of practically every business, are sufficient to warrant good returns on his investment. What the cost of the larger public buildings of Edmonton is I don't know, but they are certainly a credit to any city, east or west. The Provincial Parliament Buildings, just completed, cost in the neighbourhood of three millions, and the G. T. P. Hotel about one million. The sewerage system is an up-to-date one, and the council believing, that sooner than later, every foot will soon be in full operation, has laid down sewers which will suffice for a population of 250,000. One cannot close without one or two words on the interest the citizens take in the public life of their City. Edmonton is fortunate in having in her midst men of large ideas; men who are determined that the city shall increase, not only in population and materially, but mentally, morally

and opened. And there is no doubt about Edmonton offering the best security and returns for the investment of capital. No man would make a mistake in opening out in this city in his own trade or business, and even to the capitalist, who might urge that labour is dear, I would

and socially. They have an idea that the "City Beautiful" means character, and no one who has seen Edmonton can doubt the success of the work of the citizens.



The New Provincial Parliament Buildings which were recently completed at a cost of \$3,000,000. Parliament was originally held in the Hudson's Bay Company's old fort.

Winnipeg's Exhibition

Since its inauguration 22 years ago the Canadian Industrial Exhibition of Winnipeg has developed from a comparatively small fair to an event of international importance, drawing exhibits from all over the world. From its inception in 1890 the Association has occupied



the present Selkirk Avenue site, but owing to the enormous growth of the institution and the consequent increase in space re-

quired, these grounds proved inadequate and application was made to the city council for a new site, the matter was placed before the people of Winnipeg in the form of a by-law and ratified by a large majority.

The new site on the banks of the Red River is an ideal location for an exhibition home. Beautifully treed, a wonderful natural park, well drained, high and dry, situated in the historically famous Red River valley near the spot where Lord Selkirk, whose centenary was celebrated last year, at the head of the first band of settlers, made his home. These beautiful grounds will give the Winnipeg Exhibition a magnificent home which will compare favorably with any on the continent, and plans are being drawn for the erection of suitable buildings and the proper laying out of the grounds to make this site the most up-to-date and attractive in America.

Probably there are few people aware of the large amount of money that the Exhibition Association has distributed through western Canada during the 22 years of its existence. Lucky prize winners have had no less than half a million dollars in hard coin. The premiums offered each year have been gradually increasing until this year the grand total of \$75,000 has been set aside for prizes and amusements.

An Educator

Not only from a financial standpoint, but as an educational factor, the Exhibition has done yeoman service for the west. It has carefully fostered the various industries by offering large monetary inducements not only for the farmer to produce bigger and better products and

for educating the city man to keener appreciation of these products, but also for the encouragement of practically every branch of human endeavor. The importance of live stock to western Canada can never be over-estimated and the Exhibition officials bearing this great fact constantly in mind have encouraged this particular department by every means in their power and their efforts have had far-reaching effects. Each succeeding year entries have been received in increasing numbers from east and south and a friendly spirit of rivalry has been promoted between the owners and breeders till at last Canadian bred cattle can successfully compete in the large fairs to the east and to the south.

Motor Tractors

Recognizing the importance of making a standard of quality for agricultural motor tractors the Association five years ago inaugurated its agricultural motor competition. From a very small beginning this contest has grown until it is the recognized competition for setting the world's standard for this class of machinery.

Entries Large

The entries in all sections for the Winnipeg Industrial Exhibition this year are well in excess of any previous year and

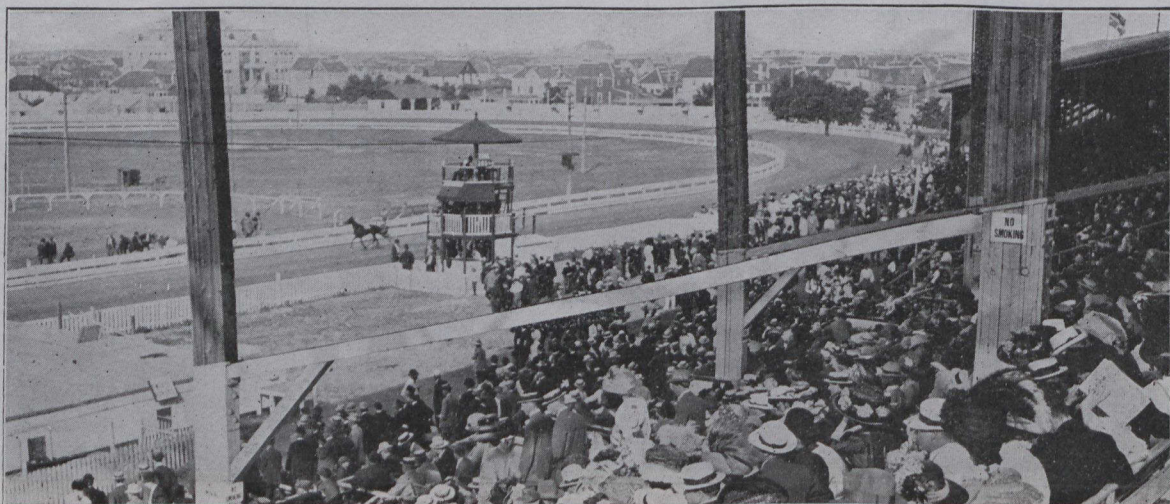
various exhibits of a highly educational nature have been procured. The exhibit of cotton plants in

various stages of growth in the horticultural section will be well worth seeing.



Good Roads

Another exhibit of educational value is that of good roads. This should prove of great service to the "good road" movement so repeatedly brought into prominence in municipal affairs. The exhibit will consist of several world renowned models of old roads among which will be the old Appian way and will end with a stretch of modern bituminous macadamized road, which will demonstrate how to construct and keep in repair a road built on any character of soil.



View from Grand Stand.

IN EDMONTON

THE OFFICIAL HEADQUARTERS

OF THE

Union of Canadian Municipalities' Delegates

WILL BE

The King Edward Hotel

J. B. McCULLA, Proprietor.

———— American Plan \$3.50 and up. ————
100 rooms, 60 with hot and cold water, 30 with bath.



CANADIAN INDUSTRIAL EXHIBITION

WINNIPEG, JULY 8-16, 1913

The Greatest and Most Authentic
Live Stock Show in the West

FRONTIER DAYS' EXPOSITION. The Best "Wild West" Show
ever seen, succeeded each night by Pain's Great Pyrotechnic Displays.

"FRONTIER DAYS"

CURZON SISTERS. THE BALLOON MAN. WORTHAM & ALLENS' Great Midway Attractions.

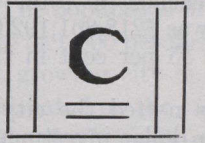
SIR Wm. WHYTE, President. F. J. C. COX, Vice-President. W. H. EVANSON, Treasurer. A. W. BELL, Secretary.



A BEAUTY SPOT IN CALGARY.

CALGARY

By BRUCE CAMERON, Publicity Commissioner.



ALGARY, which is the manufacturing metropolis of the vast Canadian West, was, only a few years ago, a small-sized town on the Canadian prairies. Like other towns and cities in Western Canada, it has progressed and developed in a most remarkable manner.

vegetables was much more profitable than the herding of cattle and other stock. From that time the real commercial progress of Calgary began. The agriculturists of Eastern Canada, the United States, and Europe then began to realise the fact that it would be much more profitable for them to locate and make their future homes in Alberta, the banner Province of Canada. And about the same time the shrewd business merchants realised the fact that there was an opportunity to extend their business in the prairie West, and as a result of these facts, Calgary is now the industrial, commercial, manufacturing and educational centre of a district extending over one thousand miles from Winnipeg on the east, Vancouver on the west, and from the forty-ninth parallel on the south to the Arctic Circle on the north.

During the year 1884, on the arrival of the Canadian Pacific Railway, in what was then termed the "Far West," Calgary was incorporated as a town, with a population of about 2,000 inhabitants. At that period of its career its prosperity depended almost entirely on the live stock or ranching interest in the districts surrounding it. Later it was found that the growing of grain, grasses, and

The city is, fortunately, ideally located. It is the meeting and passing point of the "Last Great West." The farmer, merchant, rancher, and business men of all descriptions who do business in Manitoba, Saskatchewan and British Columbia, and who transact their business with each other, must, of necessity pass through



8th Avenue looking West, Calgary.

Calgary. While in this city they naturally purchase their supplies for the ensuing year, thus making Calgary their commercial headquarters. In 1900, just a short decade ago, Calgary had a population of only 6,500. In the year 1905, five years later, the population had increased to 12,500. In the year 1910 this population was increased to, approximately, 50,000, and at the present time it can be conservatively estimated that there are at least 74,000 persons living in Calgary.

veness of a really live city can best be noted by the weekly and monthly reports issued by its Clearing House. The correct returns for the year 1908 are not available, but for 1909 they show a total amount of \$98,754,393.00. In 1910 they reached a total of \$150,677,031.00. In 1911 the total was \$218,861,192.00 and that amount was increased by 35 per cent in the year 1912.

The municipal street railway has netted the city a profit of 10 per cent upon a million dollar investment.



View of working men's residences from the north side of the Bow River, Calgary

In 1910 Customs, returns for the twelve months reached a total of \$916,639.92; just one year later the total returns for the twelve months were \$1,740,567.00, and for the year 1912 over two millions were derived from this source of revenue. In 1891 the assessed value of property and buildings in Calgary was only two millions. In 1898 it had increased to nearly three millions, and for the current year the assessment is one hundred and fifty-four millions. The prosperity and progressi-

This profit is estimated for after all contingent, debenture, syndicate, and maintenance funds have been provided for. Sixty miles of track and a like number of cars are in use. The electric light and power plant last year returned a surplus of \$22,000.00 after all necessary funds had been provided for. Calgary has 300 miles of graded streets, forty miles of improved boulevards, 200 miles of watermains, and 250 miles of trunk and lateral sewers. During the year 1912 over \$8,000,000.00 was



A residential Avenue in Calgary—6th Avenue looking West.

spent by the city on improvements of all kinds, and during the working period of the same year 3,000 employes were on the city pay rolls.

The population of the city is increasing at the average rate of 1,000 per month, thus making Calgary the greatest growing city on the American continent. Calgary is situated on the eastern slope of the Rocky Mountains and affords every opportunity to the tourist to spend an ideal holiday within the district. Easily accessible daily and week-end trips are at hand. One day suffices for a visit to Banff, Laggan, Field, or Glacier, and the sportsman can find big game in abundance anywhere in the mountains.

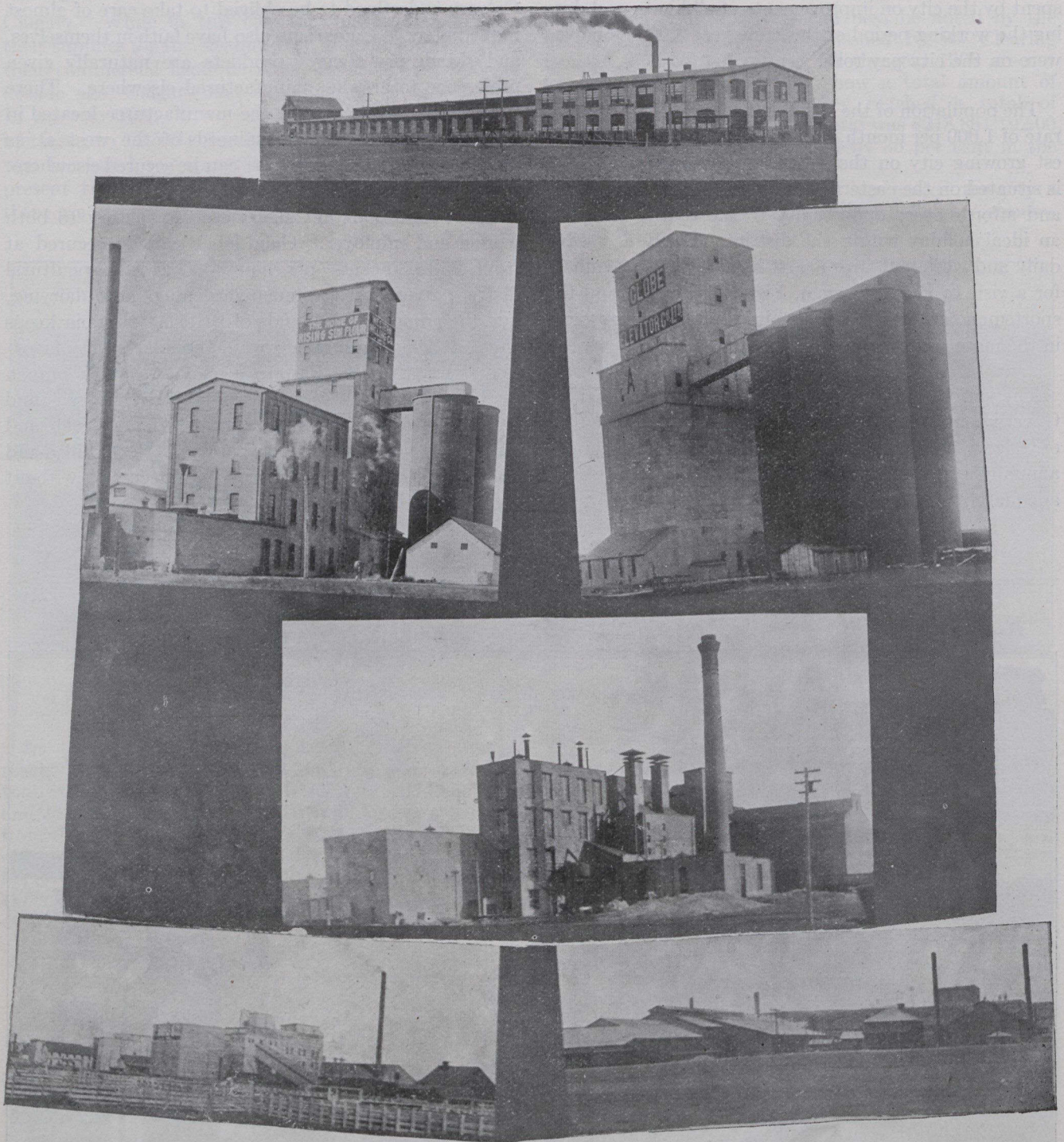
The various railways centering in Calgary, the Federal Government, the Provincial Government, and the City of Calgary itself, are showing their faith in its future by annually spending millions of dollars for the purpose of adequately taking care of the immense business which

Calgary is destined to be obliged to take care of almost immediately. Calgarians also have faith in themselves, and "Made in Calgary" products are naturally given preference to articles manufactured elsewhere. There is no reason whatever why the manufacturer located in Calgary cannot supply all the needs of the west at as low a cost to the consumer as can be secured elsewhere.

Labor conditions in Calgary are satisfactory to both worker and employer. Good labor can be secured at from 25 to 30 cents per hour. A good agricultural district, given over too much gardening, and dairying, and the adjacent fruit lands of British Columbia keeps the cost of living at a rate which compares very favorably with that of Eastern Canada. Every branch of the working trade is well organized, but employer and employee work to the mutual satisfaction of each and strikes are very few and far between. Both skilled and unskilled workmen can be secured without difficulty.



8th Avenue looking East — Calgary.



Group of factories — Calgary.

Manufacturing opportunities in Calgary.

The most marvellous growth of the vast Canadian West furnishes the manufacturer with a market for the disposal of his wares which is unequalled in all Canada. Thousands of immigrants and settlers are arriving in the three prairie provinces daily. Preferential freight rates granted Calgary by the different railways make it possible for the manufacturer and wholesaler located in Calgary to most favorably compete in their particular line of business with any other firm in Canada. The City of Calgary is growing at the rate of 10,000 persons

annually and the surrounding district in particular and the west in general is increasing in population in a corresponding manner.

Factory sites with railway trackage facilities can be purchased at prices paid for them by the city three years ago. The price paid was \$1,200 per acre. Sites can be secured varying in size from one-quarter of an acre to any larger size required. Water, light, power, sewers, and street and steam railway facilities are on the spot.

INCINERATOR PLANTS

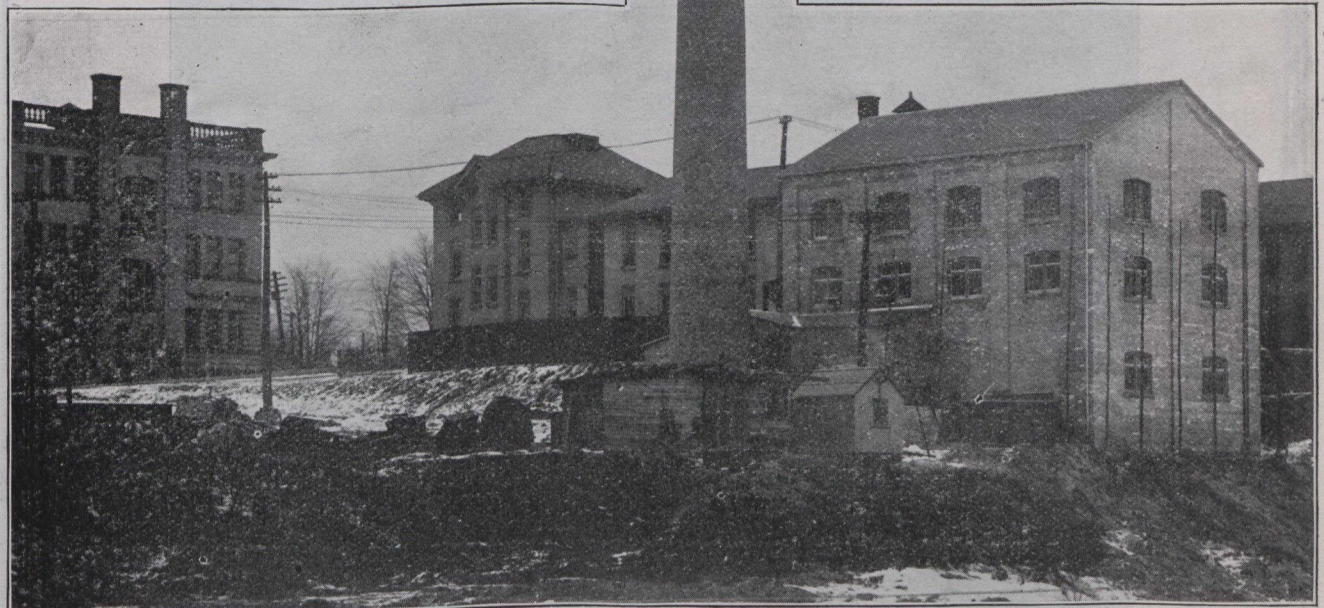
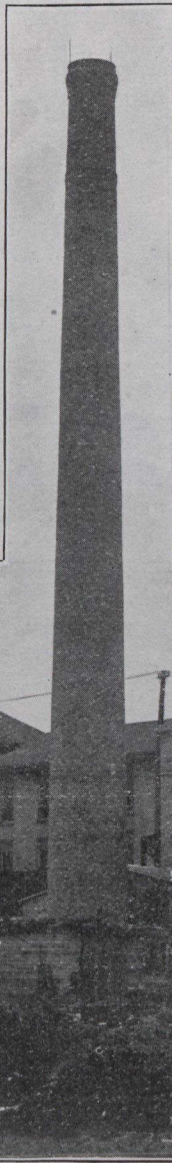
— OF THE —

“HEENAN” PATENT

WHY NOT BURN YOUR GARBAGE, REFUSE ETC., WITHOUT THE USE OF FUEL, OTHER THAN THE RUBBISH ITSELF, AND WITHOUT ODOUR OR NUISANCE.

UNDER THESE CONDITIONS YOU COULD INSTALL AN INCINERATOR IN THE HEART OF THE CITY AND CUT THE LONG HAULS.

WHY NOT GENERATE STEAM FOR YOUR SEWAGE OR WATER WORKS PUMPS WITH THE WASTE GASES.



View of City of London “HEENAN & FROUDE” Incinerator Buildings in background and to right and left are those of “VICTORIA HOSPITAL”. Incinerator Boiler Supplies Steam to Hospital.

PLANTS ERECTED BY

MESSRS. HEENAN & FROUDE OF CANADA L'T'D

LAURIE & LAMB, MANAGERS

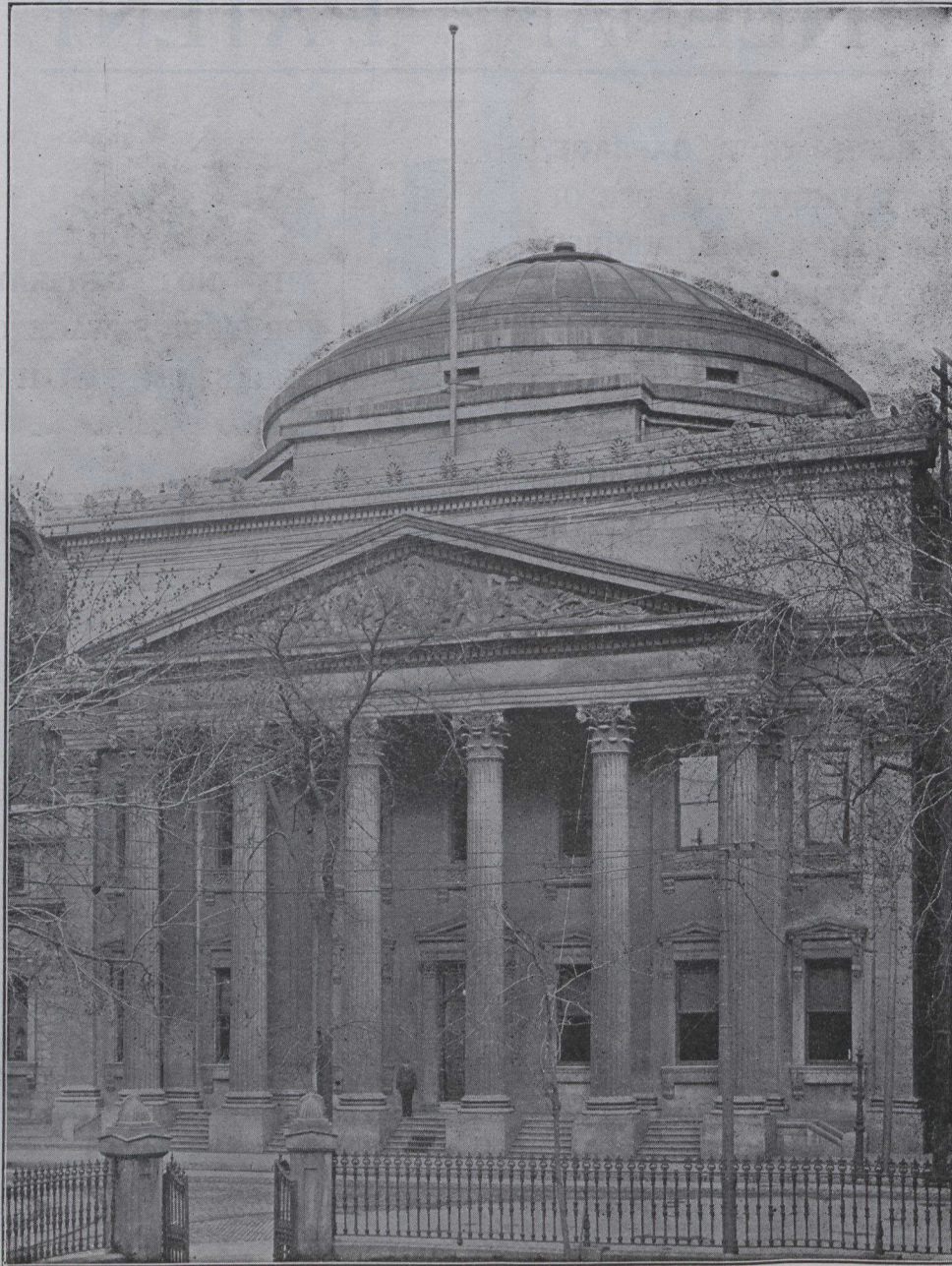
211-212 BOARD OF TRADE,

MONTREAL.

BANK of MONTREAL

ESTABLISHED, 1817

Capital authorized	\$25,000,000.00	-	-	Paid-up	\$16,000,000.00
Rest	-	-	-		16,000,000.00
Undivided Profits	-	-	-		892,461.36



HEAD OFFICE, MONTREAL

BOARD OF DIRECTORS

- | | | |
|---|---------------------------------|-----------------------|
| RT. HON. LORD STRATHCONA AND MOUNT ROYAL, G.C.M.G., G.C.V.O., Honorary President. | | |
| R. B. ANGUS, ESQ., President. | | |
| H. V. MEREDITH, ESQ., Vice-President. | | |
| E. B. GREENSHIELDS, ESQ. | SIR WILLIAM MACDONALD. | JAMES ROSS, ESQ. |
| HON. ROBT. MACKAY. | SIR THOS. SHAUGHNESSY, K.C.V.O. | DAVID MORRICE, ESQ. |
| C. R. HOSMER, ESQ. | A. BAUMGARTEN, ESQ. | C. B. GORDON, ESQ. |
| H. R. DRUMMOND, ESQ. | | D. FORBES ANGUS, ESQ. |
| H. V. MEREDITH, General Manager, | | |
| A. MACNIDER, Chief Inspector and Superintendent of Branches. | | |

The Royal Bank of Canada

INCORPORATED 1869

Capital Authorized	- - - - -	\$ 25,000,000
Capital Paid Up	- - - - -	11,560,000
Reserve Fund	- - - - -	13,000,000
Total Assets	- - - - -	185,000,000

HEAD OFFICE - - MONTREAL

H. S. HOLT, President.

E. L. PEASE, Vice-Pres. and Gen. Mgr.

BRANCHES IN SASKATOON

Saskatoon Branch	- -	J. P. McRAE, Mgr.
2nd Avenue Branch	- -	T. K. McCALLUM, Mgr.
Nutana Branch	- -	R. J. GREGSON, Mgr.

315 Branches throughout Canada and Newfoundland.
30 Branches in West Indies.

NEW YORK OFFICE

Cor. William and Cedar Sts.
S. H. VOORHEES, Agent.

LONDON OFFICE

Princes St., E. C.
W. M. BOTSFORD, Mgr.

COLLECTIONS on points in Canada, Cuba, British West Indies, etc., handled promptly and on favorable terms.

Travelers' Letters of Credit issued available in all parts of the World
Drafts, Money Orders and Travelers' Cheques Sold
Savings Department at all Branches.

The Merchants' Bank of Canada

ESTABLISHED 1864

Paid-Up Capital (30th April, 1913) - - **\$6,758,900**
Reserve Funds (do) - - **6,820,189**

BOARD OF DIRECTORS

- Sir H. MONTAGU ALLAN,
 President.
 K. W. BLACKWELL,
 Vice-President.
 THOMAS LONG
 ALEX. BARNET
 F. ORR LEWIS
 ANDREW A. ALLAN
 C. C. BALLANTYNE
 A. J. DAWES
 F. HOWARD WILSON
 FARQUHAR ROBERTSON
 GEO. L. CAINS
 ALFRED B. EVANS



HEAD OFFICE, MONTREAL.

E. F. HEBDEN, General Manager.
 T. E. MERRETT,
 Sup't of Branches and Chief Inspector.

**197 Branches and Agencies
 in Canada, extending from
 the Atlantic to the Pacific.**

A general Banking Business
 transacted. Savings Depart-
 ment at all Branches.
 Interest paid at best current
 rates.

Saskatoon Branch
R. R. RANDALL, Manager.

300 Read Bldg.

Montreal

Dietrich

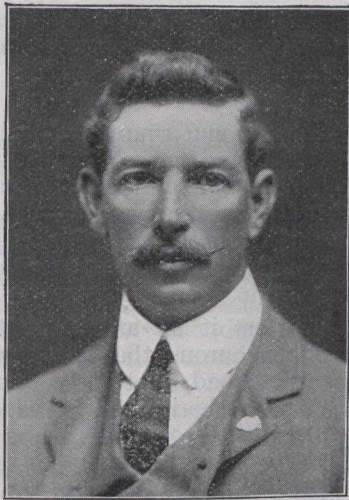
LIMITED

CONTRACTING ENGINEERS

HEATING.
 POWER PLANTS.

Underground Conduits. Transmission
 Lines. Pipe Work of all kinds.

Macadam Pavement—Water Proofed



E. DRINKWATER,
Town Engineer, St. Lambert, Que.

It is questionable to the mind of the writer, if, for all round advantages there is any more suitable road for suburban districts than water bound macadam thoroughly water proofed.

In the first place, the construction is economical, even if well built. Then it is not necessary to go to the expense of laying all underground work, such as water and drainage or conduits, before macadamizing the road, so that it can be carried through unsubdivided property and the road can still be replaced in former condition after improvements have been made, which is not possible with many higher priced methods of construction.

base, there is thus formed a camber arch that will carry a considerable weight itself and distribute the weight over a wide area.

The best illustration showing comparison of the two methods is a brick camber arch, one usually seen over a door or window, where if the bricks, instead of being laid on edge, were laid flat, the same result would occur as do in roads with bad foundations.

It is almost as difficult to remove a base laid in the proper way as described above, as to remove a concrete base, which is evidence of its stability.

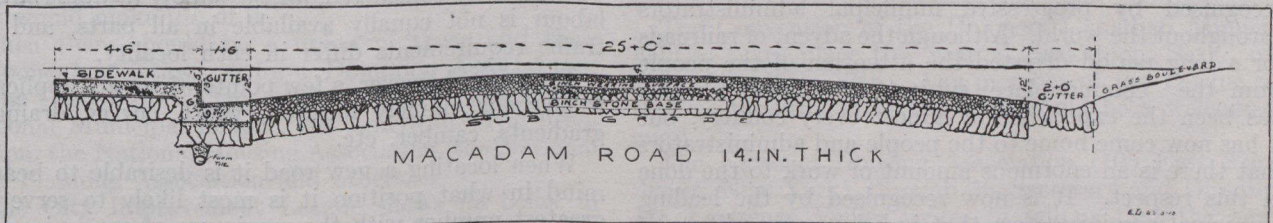
The base, which should at least be 8 inches thick, after being rolled, should receive 3 to 4 inches of 2" to 3" stone which, dressed with gravel and rolled and flushed, will not be sufficient to fill all voids, but just enough to pack the stone and prevent it rolling in front of roller.

The two inch stone, which should all pass a two inch ring, should be dressed with binder, and flushed and rolled until all the voids are filled. This will be seen when there remains, after the passage of the roller, a thick, creamy surface upon the road. If limestone dust, one quarter inch down, is procurable, a small layer of not less than one-half inch thick before the road is finished makes the best of binders for finishing.

It is advisable to allow the road to dry out 2 or 3 days before allowing traffic upon it.

After the road has dried out, which will take 7 to 14 days according to the weather, and when the season can be depended on for a fine warm day or two, and the traffic has loosened the skin of binder, the road should be swept with bass brooms to the gutter or channels. Immediately this is done, the road should be sprayed with as much Coal Tar as it will absorb. This tar must be distilled down to a specific gravity of 1210 and heated to a temperature of above 200° Fahr., when spraying.

"Tarvia B" is ideal for this purpose. As fast as this is laid and broomed in, it should be covered with about



It is my opinion that the proper construction of the macadam road has not had proper attention paid to it in the past. For the life and cost of maintenance depend to a great extent on the foundation base upon which the wearing surface rests.

During the last ten years I have seen roads built where no attention has been paid to the laying of the foundation. In the neighborhood of Montreal, where there is abundance of excellent material for the purpose, many miles of roads have been made by the foundation being just dumped in, levelled, and the broken stone bound and rolled.

The result of this method is that one slab of stone lies flat upon another, and when the traffic comes upon it with a heavy load, one piece rocks upon another, causing the breaking of bond, and allowing penetration of water to the cavity in the base, thus in heavy frost causing heaving. This creates an uneven surface which causes traffic to rock and there is a rapid erosion of surface. By the expenditure of a few cents per yard in labor in placing the packing in the foundation on edge upon a bed graded to the finished camber of the road, and filling the interstices with small scrap, which when rolled will be forced between the stones of the

one-quarter inch coarse sand, or better still, if procurable, granite screenings, one-quarter inch down; this should cover the whole of the surface.

The following day, the roller should be passed over the surface once, then the road would be ready for a second coat of the same weight of Tar or Tarvia B, which should be sprayed on cold, and followed with a course of sand or granite as before.

It is advisable to keep the road closed for 24 hour on account of the vehicles carrying the Tar on their wheels; or half the road may be done at a time, and traffic maintained.

The total Tar consumption will be about 3/4 gallon per yard for the first coat, and 1/2 gallon for the second coat, which will give a penetration of 1 1/2 inches. This will act as a binder as well as water proofing.

Afterwards, in about a week's time, the road will have the appearance of an Asphalt pavement. It can be broomed and flushed without any injury arising from the process, and it will be the most noiseless pavement procurable, and can be laid on any grade. I have laid this road on several streets having a grade from 8 to 12 per cent. and it has proved most satisfactory, particularly for horse traffic, it giving good foot hold.

At the end of a winter, during heavy thaw I have seen the water rushing down between the road surface and snow and ice without the slightest injury to the former.

After the second season it is desirable that the Tar coat should be renewed with one coat and dressed. If this is followed it will prolong the life of the surface indefinitely and the cost should not exceed 8 cents per yard which could be set against sprinkling. If the road be kept clean, there will be very little dust and will prevent travelling by automobile traffic.

The cut of a cross section shows the macadam road in combination with two kinds of gutters; the standard sidewalk and gutter for residential districts, and the rubble stone gutter. The combination sidewalk and gutter gives a great deal more satisfaction in the early spring when the snow is melting than Boulevarded walks, as there is a great difficulty in cleaning the Boulevarded sidewalk owing to the banking of snow between sidewalk and gutter. On the opposite side the combination with a rubble stone or boulder stone gutter is shown. This is a suggestion as a conductor of surface water from road surface, and retaining the natural strength of the earth to resist the pressure of spreading during the rolling in of the base; an important factor in the retaining of the camber of the road after construction.

Public Roads and Streets

R. O. WYNN-ROBERTS, M. Inst. C. E., F. R. San.

I gladly accept your invitation to write an article on the above subject, but must plead for some indulgence, because it is somewhat difficult to concentrate one's thoughts, when travelling from City to City, observing the marvellous developments which are taking place in Canada, and handicapped as a traveller must be when he is surrounded by others, who are vigorous in speech and action.

The importance of good roads and streets is now recognised by progressive municipal administrators throughout the world. Although the advent of railroads for a long period diverted the attention of the people from the commonplace subject of highways, this has been the experience of almost every country, but it has now come home to the people and administrators that there is an enormous amount of work to be done in this respect. It is now recognised by the leading municipal administrators that judicious expenditure of public money on streets and highways is a lucrative investment. Doubtless returns cannot be declared in the form of tangible dividends, yet the economy effected in the cost of transportation alone, will represent a valuable asset. Every economy effected in the cost of transportation has its influence on the cost of the specific material or goods and also on the cost of living.

The standard of efficiency of civic administration is reflected in the condition of the roads and streets, for these are surface indications of good or indifferent government, and can be seen by all; whereas huge expenditure of money on sewers and water mains, which are equally necessary, are not so evident to the eye. Well-paved and clean streets are good indications as to how the departments of civic activity are maintained. Nothing induces civic pride as much as good streets, because they are seen by all and constitute a measure of successful administration, foresight and judicious expenditure of ratepayers' money. The converse to this is equally true, for unsightly, dirty streets are powerful factors in the demoralization of the people; dirt begets dirt, and a once tidy housewife will drift into slovenly habits if her surroundings are not good. No one can

expect perfection immediately, for "Rome was not built in a day" still, true and wise economy consists in making progress at an early stage of the city's development. It has been a pleasure to observe what has been done in this respect in the larger Canadian cities, and to understand that money schemes are in hand or contemplated.

Canada is an enormous country, it is an empire or a continent of itself, and consequently the question of roads is involved in some difficulty, inasmuch as in the rural parts, the distances between centres of population are great, and the through road traffic is relatively small. But between villages and towns lying a few miles apart the same remarks do not apply.

In some quarters it is argued that the climatic conditions are so rigorous, that it is almost impossible to maintain a good road, that the cost of a good road would involve the authorities in an expenditure quite incommensurate with the benefits to be obtained.

If farmers can haul a heavy load to the nearest town or railroad with a pair of horses instead of with 4 or 6 horses, they derive a tangible benefit, but apart from this good roads induce traffic and business. What can be done by railroads to create a new commercial centre by providing improved facilities for transportation, will also take place if good roads are built. Indeed, even if excellent railroad facilities are afforded, bad roads will constitute an effective check on prosperity. The development of a new city is quickened by providing good roads, whilst the amenities and prosperity of a rural district are influenced in a marked degree by the presence or absence of such roads.

It therefore becomes a matter for consideration on the part of local administrators as to what can be done to give the public such facilities as they need. It cannot be stipulated as a universal rule that one type of construction is essential or desirable; each district must be separately considered, for the supply of material and labour is not equally available in all parts, and the traffic requirements differ in each locality.

There are, however, a few points which are applicable to all roads, namely location, width, curves, drainage, gradients, camber, etc.

When locating a new road it is desirable to bear in mind in what position it is most likely to serve the greatest number with the maximum of convenience to the users. Some roads have been so located that they are seldom used with advantage. It is essential, in hilly districts, that roads should be located where the excavations and filling are small, so that the cost of construction might be kept low, yet the gradients must be such as to enable reasonable loads being hauled up without causing undue stress on horses.

The width of rural roads should be sufficient for vehicles to pass each other in safety, a width of ten feet is ample for one wagon to travel on, but it is inadequate when provision must be made for others to pass, so the minimum width should be 15 ft. to 20 ft. There are of course thousands of miles of road only 12 feet wide, but in the light of future development the extra cost of the additional width is not excessive, whilst the advantages are great.

Curves on important roads should permit an automobilist seeing ahead a sufficient distance to enable him to pull up so as to avoid accidents; this means that the radius of road curves should not be less than about 300 feet. If curves of shorter radii are made then there should be no obstructions in the line of sight.

REVIEW OF CIVIC IMPROVEMENT

Conducted by

W. H. Atherton, Ph. D. (Sec. City Improvement League of Montreal) in conjunction with the Editor.

The New Section

The new venture of an official organ for Associational Co-operation in Civic work, is meeting with universal welcome.

It aims to fill a need in Canada, which is being felt and voiced more or less distinctly on all sides:

A correspondent sends us an editorial of the Toronto Globe, commenting on a communication of Mr. J. S. Woodford, of Winnipeg, to the Canadian and British news urging the formation of a Canadian Welfare League which would become a general clearing house for organizations engaged in welfare work of all kinds, throughout the Dominion. He urges co-operation among all existing associations and the correlation of activities. Referring to the social situation of Winnipeg, he says as follows (we quote the Toronto Globe): "Signs are not lacking in our large centres, at least, that there is a rapidly growing interest in the common good. Gradually organizations are being created, through which this new interest is finding expression. Already we have our Canadian Clubs, Town Planning Associations, Public Welfare Bureaus, Social Service Leagues, etc.

"There is need", he points out, "for the closest possible co-operation, so that social conditions may be so adjusted as to secure the common welfare through the personal services of the citizens."

In Montreal this has been seen for some years and this is the idea upon which its City Improvement League was founded and for which it mainly stands.

There should be a City Improvement League in every large centre which should be recognized as the official clearing house of activities—the servant of all that would make use of it.

Then there should be a union of these and their component societies to form Dominion Associations. In the United States this work is carried out by the National Municipal League, the American Civic Association, the National Housing Association, the National City Planning Association and others.

The City Improvement League shows its belief in "Civic Cooperation" by being members of these. We have no Dominion Associations quite the same at present. There is however the Canadian Public Health Association which is admirably suited for the public health view of life to become the Dominion recognized centre of correlating forces.

These columns will reflect thoughts on Canadian Civic Improvement along corresponding Canadian lines. Till our Associations form into Dominion Associations with their own official journals, we welcome them to make use of this as the common meeting ground of official and unofficial experts, individuals or associations, of those seeking literature on the city as a city and on the general Civic Improvement idea, and spirit of citizenship.

Let us get to know one another through one recognized journal.

Associations are desired through their Secretaries or other accredited representatives, to send in communications for these columns as early as possible, each month.

Those wishing to make arrangements for extended notices, such as annual reports should make special arrangements with the Secretary of the City Improvement League.

All communications should be addressed to 402, Coristine Building, Montreal. Tel. Main 4362 (the office of the Canadian Municipal Journal).

Gregor Memorial

The memorial to Prof. Leigh Richmond Gregor will be shortly erected. It takes the form of a children's drinking fountain and will be placed on the east side of Fletcher's field, opposite the inclined railway on Rachel Street, the little road abutting the children's playground on Fletcher's field. There is no carriage way on this so-called street and it is shaded by trees—a very suitable situation.

The City Council has accepted the recommendation of the Controllers to accept this as a gift to the city and to undertake the cost of installation.

Those wishing to have an opportunity of subscribing to the memorial are invited to apply to the Treasurer, Mr. Farquhar Robertson, 206 St. James St. Montreal.

Prof. Gregor was one of the first pioneers in the new City planning movement organized four years ago at Montreal.

He was a professor of the McGill University and a type of the men now coming more closely into civic life. He also strove to promote the "entente cordiale" between the English and French citizens of Montreal—an act of good citizenship. His premature death on January 1st, 1912, was a shock to his many English and French speaking friends.

Approaching Conventions

The Convention of the Union of Canadian Municipalities takes place this year at Saskatoon, Sask., on July 15th, 16th, 17th. Any member of the League in that neighbourhood at the time would be a welcomed guest.

The National Housing Association (105 East 22nd Street, New York) through its Secretary and Director Mr. Lawrence Veiller writes to tell us that the next conference will be held in Cincinnati some time between Oct. 15th and 31st.

The "American Civic Association" (Headquarters, Washington, D.C.) through its European Tour Department, Albert R. Green, Manager, 31 Trinity Place, Boston, writes to tell us that the Civic Tour of Europe is soon to start. Its itinerary is one specially designed for civic improvers and lovers of the City Beautiful.

Dr. E. E. Pratt writes that he has a few reservations left for the trips that he is directing under the auspices of New York University. For prompt reply address him, 192 Claremont Avenue, New York City. This tour is for the observation and study of Industrial and Commercial plants, business methods and conditions in Europe.

There is great value in our members keeping account of the conventions in view. Some of our members were present at the recent National Conference on City Planning at Chicago, May 5th to 7th, and studied the exhibit in the banquet room of the Hotel La Salle—by the way, a pioneer's name from Montreal. The Mayor of Montreal, Mr. L. A. Lavallée, was also there and the cause of the City Planning gained by his visit.

When members of the League and of other associations happen to be going for their holidays to a place where a Convention is being held along Civic improvement lines, letters of introduction as our representatives can be provided especially in the case of those associations with which we are formally affiliated, by communicating with the Secretary of the League, 402 Coristine Building, Montreal, office of this Journal.

A Hint for Canadians

Friends of Our Native Landscape

A band of ardent nature-lovers has recently organized a corporation, not for profit, under the name "Friends of Our Native Landscape." Its charter states its object to be:

Object

"To secure and preserve for the people of today and of all future generations typical examples of: Streams with their adjoining bluffs, and flood-plains with their native trees and flowers; woodlands of all types, including oaks of the various species; woods of white pine and woods of yellow pine; woods of beech and woods of maple; swamp woods of ash, elm, and alder, and kindred things; dunes with their rare and marvelous floral carpets, such as are found along Lake Michigan and the Illinois River; the fast-vanishing prairies, once the most characteristic feature of Illinois with their remarkable and beautiful flowers; ravines and canyons with their rare trees and ferns and their innumerable favorite flowers; ponds and swamps where the water birds make their haunts and many plants find their homes; tamarack swamps of the North and cypress swamps of the South, each with unique plant and animal life; rock outcroppings where geologists may study earth-history and where are found many peculiar plants; mounds with their mute testimony of races long since gone; native monuments of historical interest; and all spots and places of beauty and interest that will tie the present and future generations to the past and serve as playgrounds for the people and as a sanctuary of the wild plant and animal life of our native state."

Its by-laws provide that the annual meetings shall be held in June at some place "in the midst of some native landscape worthy of perpetual preservation."

It is proposed to make a survey or inventory of all the spots in Illinois and nearby of peculiar interest to nature-lovers for their beauty, geology, or history. These things are known to local nature-lovers, but to few others. By collecting and classifying this data and informing nature-lovers generally of it, the knowledge of these spots will be rapidly disseminated and go far toward creating a public sentiment for their preservation. The organization will also encourage the formation of special local organizations to interest local nature-lovers and will co-operate with local organizations already formed.

The Secretary is Sherman M. Booth, 18th floor, Borland Building, Chicago, Illinois.

Littering the Streets

While on a visit to Detroit, Mich., a Canadian Municipal officer got a very pointed lesson.

Coming out of the hotel in which he was staying, with his correspondence in his hand, he glanced through

the letters, and then, tearing the envelopes in two, threw them down.

A policeman approached him and said "Excuse me, sir, but that is against our laws; you will have to pick up all that waste paper."

"Indeed", said the Canadian, "have you a law against this?"

"Yes", said the officer, "and I am sorry that I must ask you to pick up the letter."

"I am glad to hear you have such a law," said the Canadian, "and I appreciate the courteous way in which you have told me of it," and he picked up the fragments, and carried a lesson home with him to his own Canadian City.

International City Planning

An International Garden Cities and Town Planning Association is being formed and the International Committee will meet very shortly. The City Improvement League of Montreal has been invited to be among the first members. It is hoped to establish a bureau for the interchange of literature and to organize periodical conferences in various countries of the world.

Mr. Ewart G. Culpin, 3 Gray's Inn Place, Gray's Inn, London, W. C., is the Secretary.

Bible Vocation School

A movement which started in New York in 1901, by which manual labour, organized play and Bible study went hand in hand, and which has had great success, will be started in Montreal this summer. Its aim and purpose is: (1) to instruct and amuse children; (2) to direct their play; (3) to teach them songs, loyalty and patriotism; (4) to fill long, hot summer days with interest; (5) to give children instruction in hammock making, basket weaving, etc., and (6) to tell them Bible stories.

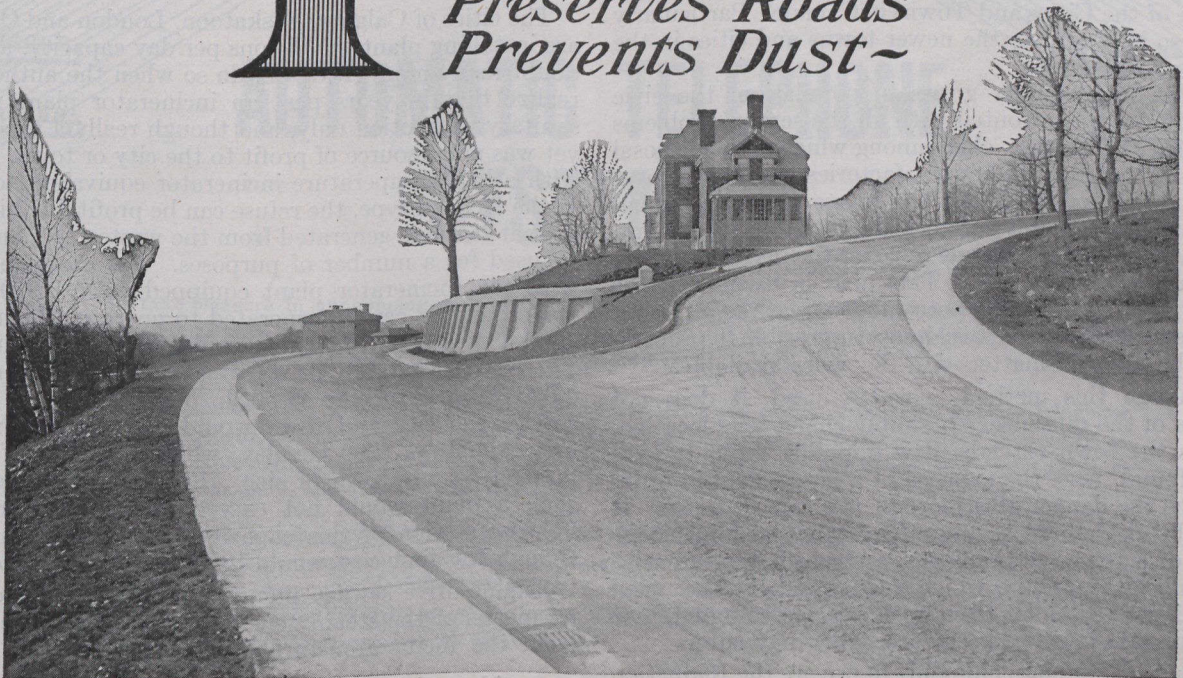
To accomplish this work: (1) Competent teachers, many of them College Students, will be engaged; (2) practical talks will be given on habits of cleanliness, etc.; (3) the services of volunteers will relieve and supplement the work of paid teachers; (4) the children's games will be directed and supervised by physical instructors (in conjunction with the Parks and Playgrounds Association); (5) cool, empty churches will be utilized, thus taking idle children off hot, dusty streets; (6) as many Bible stories will be told by teachers and retold or dramatized by scholars in six weeks as a Sunday school would cover in six months.

The Treasurer is Mr. Theodore G. Morgan (Colonial House, Phillips Square), Montreal.

Notice.—The "National Municipal League" will hold its annual convention this year on Canadian ground, at Toronto, in November. Mr. Clinton Rogers Woodruff, the Secretary, would like to see the League represented. His address is North American Building, Philadelphia, Pa.

Tarvia

*Preserves Roads
Prevents Dust~*



West Crescent Heights, Westmount, Montreal, Quebec. New macadam road treated with "Tarvia B."

An Ideal Roadway

THERE are various forms of Tarvia to satisfy varying road conditions. We do not try to make one compound do for all situations, but as a result of ten years' experience we have found that one or another of three kinds of Tarvia will solve every macadam road problem.

For road construction where heavy traffic is expected, we recommend "Tarvia X," a very dense and viscid grade which is capable of forming a matrix in the large voids of new broken stone.

For resurfacing work, where the voids are smaller, we recommend the less dense "Tarvia A."

For surface applications, to suppress dust and protect the surface, we recommend "Tarvia B."

The road illustrated above is a new macadam road treated with a double coat of "Tarvia B." In consequence, this roadway is protected against raveling and washing, caused by heavy rains, an important matter on a steep grade like this. It will resist automobile traffic and will be free of dust and mud, and will need no sprinkling with water. It makes a handsome, smooth, quick-draining surface with a very modest maintenance cost.

Booklets free on request.

THE PATERSON MANUFACTURING COMPANY, LIMITED
MONTREAL TORONTO WINNIPEG VANCOUVER

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

Equipment and Engineering

Interesting Notes on the latest Municipal and Telephone Appliances.

The use of Garbage as Fuel for Municipal Power Plants

Through the medium of the Engineering and Daily papers, we are continually learning of the wonderful growth of the Cities and Towns in Canada. Particularly is this so in regard to the newer towns and cities in the Western Provinces.

As the municipality grows in population, the civic authorities are confronted with all the serious problems of sanitary protection, chief among which is the disposal of garbage, etc., from houses, factories, etc. The most common method is to cart the refuse to some municipally owned ground, where it is dumped and spread out, usually in such a manner as to cover the decayed matter with ashes, cinders, etc. This plan is feasible in the winter months when the percentage of ash is high, but in the summer months it is almost impossible to properly bury the decayed matter with the ashes available.

Although this method is widely used, it does not dispose of the nuisance. It simply changes its location, and as the town extends, new dumping grounds have to be found, with the expense of a larger haul in order to place the danger at a more or less safe distance. It is doubtful if there is any safe distance within cartage limits of a town, certainly not as regards the offensive and unhealthy odours which are carried by the wind long distances. Flies from such a place cannot fail to carry disease into any residences they may enter.

The other systems commonly in use are the Reduction and Incineration methods. Of these the Reduction system comprises the passing of the garbage only through a digestive process and extracting its oils, greases, etc.

The high temperature Incineration method is the most successful yet adopted for cities and towns of any size for the reason that the garbage refuse, ashes, etc., is burned at a high temperature under forced draft without the use of fuel other than the refuse itself and the waste gases from the furnace are utilized to generate steam in a boiler, which is usually erected with the Incinerator plant. Also the resultant clinker is of value in that it can be used for road making and for concrete work.

From tests recently made on a Heenan and Froude Incinerator at Moose Jaw, Sask., an evaporation of 1,125 lb. water per pound of refuse burned was obtained by the incineration of a mixture, approximately as follows:

Garbage refuse, 50%
Mixed Ashes, 50%

from which was developed 157 H.P., roughly calculated, as no actual boiler capacity test was made. A copy of the test on the incinerator at Moose Jaw follows.

With the same percentage mixture at the Heenan Plant at Westmount City, Que., an evaporation of 125 lbs. was obtained and converted into 138 K. W. electrical energy, practically 195 Boiler horse power in steam per hour for 24 hours.

The equivalent cost of coal fuel to generate the same

power would be approximately \$28 per day, \$10,220 per year, taking a 24 hour day and coal at \$4 per ton.

Both the Moose Jaw and Westmount plants are of 50 tons per day of 24 hours capacity.

The cities of Calgary, Saskatoon, London and Ottawa are installing plants of 75 tons per day capacity, and no doubt many more cities will do so when the authorities realize that in years past an incinerator plant was a sanitary precaution only, and though really a necessity, yet was not a source of profit to the city or town. Now with a high temperature incinerator equivalent to that of the Heenan type, the refuse can be profitably burned, in that steam is generated from the waste gases and can be used for a number of purposes. For example, take a 75 ton incinerator plant equipped with a 200 H.P. Boiler; steam can be generated to operate a high class engine of 260 H.P., which could be used to drive a 175 K.W. generator, or direct connected to operate a 6,000,000 gal. turbine at 60 lb. pressure. From either service the city and town would derive a revenue of approximately \$200 per day, which would be of some interest to any town of size. Further the up-keep of such a plant would not exceed that of a municipal lighting station of this capacity with coal as fuel, although the first cost would be considerably higher.

Engine-drive sewage pumps are frequently operated by means of the steam generated from the waste gases from the incinerator furnaces.

An idea of what other cities are doing to attract manufacturers can be gathered from the concessions made by Moose Jaw to induce the Saskatchewan Flour Mills Company to re-build their mills which were recently destroyed by fire at that point. The city agrees to completely close Manitoba Street (which parallels the taxation, as far as allowable under the Act, for a period of twenty years; purchase at par the company's first mortgage six per cent bonds at a face value of \$140,000; furnish adequate fire protection with a pressure sufficient to throw five streams of water through 1¼ inch nozzles to the top of any building not exceeding 110 feet and instal a high pressure system not later than November, 1912.—Daily News, Medicine Hat, Alta.

STREET SIGNS AND NUMBERS

We have lately paid a visit of inspection to the plant of the Thos. Davidson Mfg. Co., Montreal, where they employ about 1400 employees in the manufacture of enamelware, etc., and we were greatly taken with the process of manufacturing enamel street names and house numbers, which has grown to be a very large department of their business. While there we were shown orders from some of the principal Cities in Canada, and they inform us the City of Montreal has been using their enamel street names and numbers for the past five years with great satisfaction. The City of Toronto have lately contracted for a large supply of numbers and many other cities and towns throughout the East and West are appreciating the fact that an enamel sign and number is really the only permanent and best manner of naming their streets and numbering their houses as they last for so many years. Mr. J. N. Warminton, 207 St. James St., Montreal, their selling agent for Canada for this department is well and favorably known throughout Canada and any enquiries addressed to him for samples or prices will receive prompt and careful attention



TELEPHONE NEWS



OFFICIAL INFORMATION
OF THE
CANADIAN INDEPENDENT TELEPHONE ASSOCIATION
& C, & C, & C,

AUTOMATIC TELEPHONE SYSTEMS

We take pleasure in announcing to all the municipalities throughout the Dominion that our automatic telephone systems have proved, and are proving to be, very successful, both from the standpoint of operation, and from the great satisfaction given to the telephone subscribers and users.

We are manufacturing in Canada, employing Canadian labor and capital, complete automatic telephone systems, switchboards, substations and supplies of a very superior type. We are prepared, and offer, to supply on reasonable notice, complete automatic telephone equipment for any size of exchange from 100 lines up to 10,000 lines or more, and at reasonable cost.

Our automatic telephone system lends itself to any desired subdivision desired for the purpose of saving in trunk line installation, cheapening of service and installation, and for flexibility, adaptation to conditions, economy in operation, durability, positive contacts and superior talking circuits, automatic party line telephone service where required, together with all of the other advantages and savings afforded by the superiority of automatic over manual telephone apparatus and operation.

We take this occasion to again inform the officers and all municipalities throughout the Dominion, as well as the general public, that the Canadian patents owned and controlled by our company, cover the essential principles of automatic telephony, and that it is our opinion and belief that no system of automatic telephones or semi-automatic telephones of any considerable size can be operated without infringing upon the claims of our Canadian patents, and that we are manufacturing in Canada under our patents and are selling and offering for sale automatic telephone equipment in accordance with the rules and practice and Patent Laws of Canada and that we will hold all infringers, both public and private, responsible.

The great saving in cost of installation and operation of automatic telephone systems over manual telephone systems is becoming generally recognized both by the public and by telephone engineers and experts generally. The superiority and general desirability of automatic telephone service over that of manual telephone service has been so thoroughly demonstrated that it is now recognized generally, and we will be pleased to correspond with any and all municipalities and individuals, corporations and associations desiring further information or contemplating the installation of telephone apparatus.

All of our telephones and telephone equipment, both manual and automatic, are fully guaranteed both as to quality and workmanship.

Canadian Independent Telephone Co.,
LIMITED

18-20 Duncan St., TORONTO, Ont.

TELEPHONE LOCK-OUT.—This is a lock-out scheme for automatic party line systems. Objects of the invention are the provision of a dial-locking arrangement which will prevent an intruding subscriber from operating his dial after the party line is in the possession of another subscriber thereon, and before the called subscriber answers; and the provision of a dial-locking arrangement for a local battery automatic party line system which will prevent interference between sub-stations on the same party line.

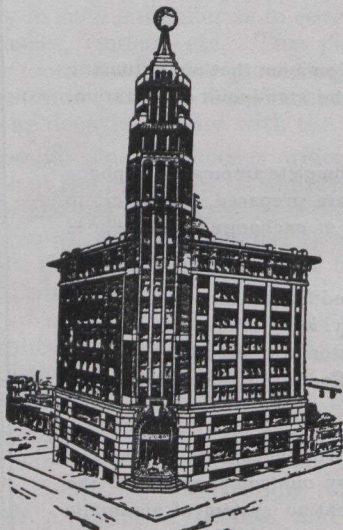
Wilson L. Campbell, Chicago, Ill., assignor, by Mesne assignments, to First Trust and Savings Bank, trustee, of Chicago, Ill. 1,061,898.

The oldest established firm of Chartered Accountants in British Columbia

W. T. STEIN & COMPANY

CHARTERED ACCOUNTANTS

Chartered Accountants, Edinburgh, 1889
 " " " " British Columbia, 1905
 " " " " Canada, 1909



MUNICIPAL AUDITING A SPECIALTY

With our staff of trained experts, we are prepared to handle any Municipal work, and submit complete and accurate Reports before the elections for the ensuing year.

319 Pender Street,
 P. O. BOX 816

Vancouver, B. C.
 PHONE 461

NAUGLE	POLE & TIE CO. 5 SO. WABASH AVE. CHICAGO, ILL.
	POLES

The Trinity in Poles
 "Service-Price-Quality"

High Class Building

construction requirements, as regards electric wires and cables, are fully met when you specify and use "STANDARD" Wires and Cables.

One proof of this statement is the repeated endorsement of our products by prominent architects, engineers and contractors when they have put "STANDARD" Wires and Cables into many of the most noted buildings of this continent.

Our folder No. 69-C gives in an attractive manner a list of such installations and other interesting information regarding electric wires and cables. A copy will be sent you on request.

Write our nearest office.

Standard Underground Cable Co. of Canada, Limited

Hamilton, Ont.

Montreal, Que. Winnipeg, Man.
 Boston, Mass. Seattle, Wash.

Hotel McAlpin, N.Y.
 Archt: F. M. Andrews Co.
 Cont.: Thompson-Starrett Co.
 One of the largest and most magnificent hotels in the world.
 "Standard" Wire used throughout.

MICHIGAN WESTERN

CEDAR POLES

SHIPPING FROM MAIN YARDS ASSURES OUR CUSTOMERS PROMPT DELIVERY AND SELECTED STOCK AT LOWEST PRICES CONSISTENT WITH QUALITY AND SERVICE

THE VALENTINE-CLARK CO.

MINNEAPOLIS MINNESOTA

PARTRIDGE-DYER LUMBER CO.

Dealers in White Cedar Products.

POSTS, POLES, PILING.

WRITE FOR PRICES

BEAUDETTE, Minneapolis

Head Office : PAID UP CAPITAL \$8,500,000.00 Works : PRESCOT, HELSBY and LIVERPOOL, England
 PRESCOT, England

British Insulated & Helsby Cables

LIMITED

ELECTRIC LIGHT AND POWER CABLES

Sole representatives for Canada
 CANADIAN BRITISH INSULATED COMPANY LIMITED

MONTREAL, QUE.

Abstract of Telephone Patents granted in the United States

Prepared for *The Canadian Municipal Journal* by

Edward E. Clement,
Telephone Patent Expert, Washington, D.C.

TELEPHONE REPEATER.—This invention relates to telephone repeaters, and provides a new and improved device of this description. It is particularly adapted to be used in connection with a charged line, central energy system. David H. Wilson, New York, N.Y., assignor, by Mesne Assignments, to David H. Wilson & Robert Bines, Trustees, New York, N.Y. 1,059,690.

TELEPHONE METERING SYSTEM.—The invention provides a telephone receiver having both metering mechanism and associated control means carried by the receiver shell and preferably mounted for the most part within it, only those parts protruding beyond the shell which are to be manipulated in the ordinary use of the receiver.

Edward H. Martin, Webster City, Iowa. 1,059,745.

RELAY FOR UNDULATORY CURRENTS.—This invention relates to relays for undulatory currents of that kind in which an exhausted discharge tube having a cathode and an anode is used, the proportional reproduction of the line currents being obtained by influencing the cathode rays emitted through an electromagnetic or electrostatic action of the line currents.

Eugen Reisz, Vienna, Austria-Hungary, assignor, by direct and Mesne assignments, to the firm of Relais-Gesellschaft M. B. H., Vienna, Austria-Hungary. 1,059,763.

CALLING DEVICE.—This invention relates to a device for controlling the actuating circuits of electrically controlled mechanism, such as that employed in a telephone exchange; and it is directed more particularly toward the provision of a calling device for controlling the operation of switching mechanism located at the distant end of a circuit with which the calling device is associated, for the purpose of causing the switching mechanism to act under the control of the calling device to connect the associated circuit with any one of a number of other telephone lines or circuits.

Frank R. McBerty, New Rochelle, N.Y., assignor to Western Electric Co., Chicago, Ill. 1,059,944.

DESK TELEPHONE.—This invention has for its object the provision of improved facilities within a portable telephone for effecting certain circuit changes by means of springs or similar circuit changing apparatus therein.

Alexander C. Reid, Genoa, Ill., assignor to Cracraft, Leigh Electric Co., Genoa, Ill. 1,060,211.

INTERCOMMUNICATING TELEPHONE SYSTEM.—This invention relates to intercommunicating telephone systems, and especially to those which are connected through a trunk line to a central station. It looks chiefly to the provision of such a system in which calls coming over a trunk may be readily transferred from one of the intercommunicating substations to another, without danger of causing a premature disconnect signal at the central station.

Leon D. Barrows, New York, N.Y., assignor to American Telephone & Telegraph Co. 1,060,308.

KEY CONSTRUCTION AND SUPPORT FOR TELEPHONIC APPARATUS.—This an escutcheon face key board with keys in a horizontal row or line across the face thereof, and spring blades supported by the same unitary part that constitutes the escutcheon front, this unitary part being formed in such a way as to adapt itself to the purpose of holding the spring blades, supporting the various pivot axes of the keys, serving the purposes of the escutcheon front, accommodating the requisite movement of the keys and properly separating the keys from one another and giving their support adequate rigidity in all directions.

Wallace Pfau Andrick, Edgar Lowe, and Howell W. Haff, Jamaica, N.Y., assignors to Kellye Monroe Turner, Jamaica, N.Y. 1,060,576.

PASSENGER DRIVER TELEPHONE SIGNAL SYSTEM FOR VEHICLES.—This invention relates to a speaking and signaling apparatus for closed body vehicles such as town cars, taxicabs, etc., whereby the occupant or passenger can signal

to the driver to attract his attention and then convey a message telephonically, and whereby the driver can respond by speaking through a direct audible device such as a tube or sound-amplifying horn.

Herman G. Pape, Buffalo, N.Y. 1,060,851.

TELEPHONE SIGNAL.—An object of this invention is to provide a mechanism to be used in connection with a telephone subscriber's set, in which the signal cannot be initiated until a coin is inserted, whereby a certain and variable number of predetermined emergency calls may be sent to the central station without the necessity of inserting a coin or other token, for each call as usual.

Arthur U. Gerber, Chicago, Ill. 1,061,238.

SELECTIVE SYSTEM OF TELEPHONY.—The primary object of the invention is the provision of a telephone system, employing an exchange and a series of subscribers' outfits, all being connected in series in a loop circuit, there being in the exchange a selecting apparatus, whereby the operator when called, operates the apparatus to connect the calling subscriber to a called subscriber, simultaneously locking out all other subscribers, and shunting their outfits, so that such locked out subscribers cannot interfere with the parties talking, and cannot themselves call the exchange until such parties have completed their conversation, and rung off, at which time the selecting apparatus at the exchange is automatically operated by the removal of the jack plug, and all subscribers' outfits placed again upon the line in condition for calling or being called.

Ruben C. M. Hastings, Columbus, O., assignor to The International Telephone Co., Columbus, O. 1,061,285.

SELECTING APPARATUS FOR TELEPHONE SYSTEMS.—The invention relates to an improved selecting apparatus to be mounted in the central or exchange of a telephone system, whereby the operator may select and signal a single or selected called subscriber and simultaneously shunt all other subscribers. This particular instrument is designed for use in connection with the system of selective telephone, as set forth in the preceding patent.

Ruben C. M. Hastings, Columbus, O., assignor to The International Telephone Co., Columbus, Ohio. 1,061,286.

TELEPHONE SYSTEMS.—The invention consists generally of a shunt and lock out device located at each sub-station and controlled from the exchange through the medium of a selecting apparatus, the primary object being the provision of a means whereby the transmitter and a receiver at the uncalled sub-stations are shunted from the line and the local battery circuits opened.

A further object is the provision of a signaling device in each sub-station to indicate the condition of the sub-stations relatively to the line or talking circuit.

Ruben C. M. Hastings, Columbus, O., assignor to The International Telephone Co., Columbus, Ohio. 1,061,287.

TELEPHONY.—This invention relates to semi-automatic telephone exchange systems of that type in which the calling subscriber is connected with an automatic selecting mechanism at the exchange through a cord and plug connection established by an operator.

Charles A. Bals, Chicago, Ill., assignor to Corwin Telephone Co. 1,061,515.

TELEPHONE EXCHANGE SYSTEM.—This invention has for its objects, first, the provision of improved means for governing the association of the operator's telephonic outfit with the line connectors that are employed to unite subscribers' lines in conversation, and second, the provision of means whereby an operator is prevented from listening to the conversation of both parties to an established connection.

Charles A. Bals, Chicago, Ill., assignor to Corwin Telephone Co. 1,061,516.

CONTROLLING APPARATUS.—This is a scheme for controlling automatic telephone switches by what are called "counting" devices consisting of a series of relays successively energized by impulses sent from the switch as it steps. The object of the present invention is to accomplish this method of control with a single set of "counting" devices instead of arranging them in pairs as heretofore practiced.

William G. Blauvelt, New York, N.Y., and Edward C. Molina, of East Orange, N.J., assignors to American Telephone & Telegraph Co. 1,061,519.

BUSY SIGNAL ATTACHMENT FOR TELEPHONES.—This invention relates to an improvement in attachments for telephones, and particularly for an attachment, the purpose of which is to show whether or not another telephone upon the same circuit is being used, thus avoiding the annoyance incident to breaking in upon a line which a telephone is being used.

Adam M. Beeler, Seattle, Wash. 1,061,589.



EASTERN PROVINCES

BERLIN, ONT. The Berlin Steam Heating Company has offered to sell its plant to the Light Commission at a reasonable figure; owing to the company not being permitted to sell electricity in the city, the enterprise has not proved a success.

EGLINTON, ONT. The Dominion Bank of Canada has opened a branch here.

FORT WILLIAM ONT. One hundred houses are to be built by a private concern, on a site between this city and Port Arthur, on the model city plan.

GODERICH, ONT. It is expected that the Hydro-Electric system will be installed and in operation by September.

GRAND'MERE, QUE. The new power plant which will be ready in a year will have a capacity of 70,000 horse power, which necessitates a twenty foot dam, although there is a drop of forty feet in the river at this point.

HAMILTON, ONT. The Dominion supplementary estimates provide \$150,000 for additions to the post-office.

KINGSTON, ONT. The by-law to give sites and railway sidings to the Kingston Floor and Wall Till Company and to the Reliance Moulding Company, passed.

MONCTON, N.B. The population is 18,000.—The natural gas field is being largely developed; the pressure is good and the cost of delivering is not great, being an attraction for manufacturers.

NEWMARKET, ONT. The by-law to authorize an agreement between the town and the York Radial Railway, was defeated; by this agreement the town was to obtain a supply of power from the company, and to enlarge the plant.—The library by-law was carried.

PORT ARTHUR, ONT. A huge steel plant is to be erected here, which will eventually advance the city to a great iron manufacturing centre.

TILLSONBURG, ONT. The by-law to aid the Tillsonburg Electric Car Co., Limited, was carried by a majority of 324.

TORONTO, ONT. The Dominion Government is calling for tenders for the Harbor Improvements here.—The Museum of Art, formerly Goldwin Smith's residence, has been formally opened.—A new agreement for the long delayed water front viaduct construction has been reached by a compromise plan for a six-track structure.—The tenders for the dredging of the harbour call for 31,230,000 yards of dredging and it will take eight years to complete the contract.

WELLAND, ONT. A \$20,000 subway is to be constructed under the M. C. R. tracks to permit the electric railway to reach the factory district.

FINANCIAL

TORONTO, ONT. The tax rate has been fixed at 19½ mills.—The sum of \$20,000 has been included in the estimates for civic playgrounds.—The civic estimates call for the expenditure of \$39,000,000 this year.—\$36,300 were added to the salaries above the increases recommended by the Board of Control.

VANCOUVER, B.C. The Board of Works has approved of the paving of the streets at a cost of \$1,197,119.

VICTORIA, B.C. The plans for local civic improvements call for an expenditure of \$2,000,000.

WATROUS, SASK., has sold \$83,000 debentures.

WOODSTOCK, ONT., has sold \$46,429 4½ and 5 per cent. 30-year debentures to Messrs. Wood, Gundy and Company.

YORK TOWNSHIP, ONT., has sold \$36,000 5 per cent. 25 annual instalment debentures, to Messrs. Wood, Gundy and Company.

PERSONAL

Mr. S. S. Armstrong has been appointed chief-of-police of Melfort, Sask., for the balance of the year.

Mr. Matthew White, assessor of Brockville, Ont., died recently.

Mr. Robert Davidson, chief-of-police, Sherbrooke, Que., for thirty-nine years, died recently.

Mr. William H. Dowsley, secretary-treasurer of the water and light commission, Brockville, Ont., died suddenly.

Mr. Ernest Atkins has been appointed publicity commissioner of Wilkie, Sask.

Mr. A. T. Lomer, M.D., has been appointed Medical Health Officer of Ottawa, with a salary of \$4,000 a year.

Mr. Edmond Roy, ex-mayor of Levis, Que., and joint archivist of the Dominion, died recently.

TENDERS FOR EQUIPMENT

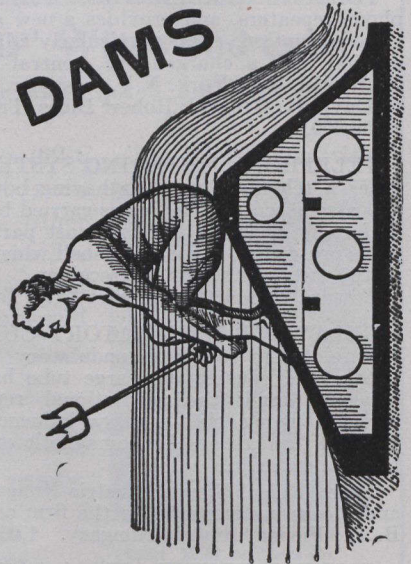
CITY OF REGINA, Sask.

Tenders will be received until July 9th for equipment required for street cleaning and road grading for the City of Regina. Particulars regarding same can be secured on application to the City Engineer.

R. MARTIN, Mayor.

J. A. REID,
C. A. THORNTON, } City Commissioners

**AMBURSEN
HYDRAULIC
CONSTRUCTION
COMPANY**
OF
**CANADA,
Limited.**
405 Dorchester St., West,
MONTREAL, Que.
**TIGHT, PERMANENT
and Inexpensive**



Cast Iron Water Pipe

SEND YOUR ENQUIRIES

TO

JOS. R. MARTIN & CO.

Board of Trade Bldg., Montreal

DALY'S CANADIAN CRIMINAL
PROCEDURE

1911

The model work for Magistrates
in every Province

HALF-CALF, \$6.50

The Carswell Company, Limited
TORONTO, CanadaThe Oldest Established Accountant Firm
in Saskatchewan

GLADWELL, WILSON & CO.

Successors to GAMBLE, GLADWELL & CO.

Chartered Accountants

Auditors, Liquidators and Trustees

MUNICIPAL AUDITING A SPECIALTY.

Dominion Trust Building, Regina.

CHAS. V. GLADWELL,
C. A. Auditors.
Offices at Weyburn and Swift Current

City of Regina.
Towns of Moosomin,
Arcola, Melville,
Lumsden, Estevan,
Swift Current,
Carlyle,
North Battleford.

F. J. WILSON,
C. A.

NEWS—NEWS

Boom your "Town".
 Advertise in the "Civic Notes."
 There is no charge.

ROMAN STONE

is specified by the most fastidious Architects and recommended by the most careful Engineers. Made from pure white marble and machine tooled after casting, Roman Stone has proven itself a building material worthy to be used in the finest structures.

Send your plans for an estimate and write for descriptive literature.

The ROMAN STONE CO. LIMITED

50-100 Marlborough Avenue. TORONTO

Montreal Representatives:
T. A. MORRISON & CO.
 204 St. James Street

H. J. Bowman, D.L.S., M. Can. Soc. C.E.
 A. W. Connor, B.A., C.E.,

BOWMAN & CONNOR

Consulting Municipal and Structural Engineers
 Concrete and Steel Bridges and Buildings
Cement Testing | 36 Toronto St., TORONTO
 Branch Office: BERLIN

A VENDRE
"TAMCO" Pierre Concassée,
 de toutes dimensions. Graves
 pour couvertures. Pierre arti-
 ficelle "Roman." Brique pressée
 "Milton." Concasseurs de pierre.
 Pompes à incendies, etc.
T. A. MORRISON & CIL.
 204 Rue St-Jacques,
 Tél. Main 4532. Montréal.



W. D. Lighthall, K. C., M. A., F. R. S. L., etc.
 C. A. Harwood, B. C. L.

CABLE ADDRESS: "LIGHTHALL"

LIGHTHALL & HARWOOD

BARRISTERS, SOLICITORS,
 ADVOCATES, ETC. . . .

CHAMBERS

New York Life Building,
 Place d'Armes, - Montreal

H. J. ROSS,

ACCOUNTANT TRUSTEE

(Member, Special Committee of the U.C.M. on
 Uniform Municipal Accounting)

Municipal Audits a Specialty.
Municipal Bonds Negotiated.
Estates Managed.

180 St. James St., Montreal

SEND
**TENDERS
 NEWS**
 SUBSCRIPTIONS
 TO
CANADIAN MUNICIPAL JOURNAL

CIVIC NOTES

WESTERN CIVIC NOTES

THE LATE JOHN A. LEE

BASSANO, ALTA. The Provincial Government has refused to allow the town to add to its limits.

BREDENBURY, SASK. Work on the new post office building is in full swing.

CARLYLE, SASK. Cement sidewalks are to be laid along the main street in the near future.—The recently completed waterworks system is proving a great boon to the town, and will meet the needs of the two railroads and the town, or even an adequate supply if it becomes a city.—The source is at Carlyle lake in the Moose Mountains.

ESQUIMAULT, B.C. The Bank of British North America has opened a branch here.

ESTEVAN, SASK. A company, capitalized at \$1,000,000, is establishing a plant here for the manufacture of electric motors.—Negotiations are under way for the establishment of a brick yard, with a capacity of seven million bricks a year.—The Bank of Ottawa is opening a branch here, making the fourth bank.

HUMBOLDT, SASK. A public library is to be opened here shortly, the Federal Government having kindly given its consent to the use of rooms in the post office building.

KAMSACK, SASK. A petition is to be sent to the Dominion Government for the early building of a post office and customs, and for the immediate surrender of Indian lands north of the town, amounting to about 10,000,000 acres.

KERROBERT, SASK. Building operations for the court house to be erected here, will commence at an early date.

MELFORD, SASK. Work on the waterworks system, now being installed is being rushed.—An electric light service is to be inaugurated very shortly.

MOOSE JAW, SASK. The Moose Jaw Street Railway Company has agreed to build a mile and a half more track in the northern portion of the city.

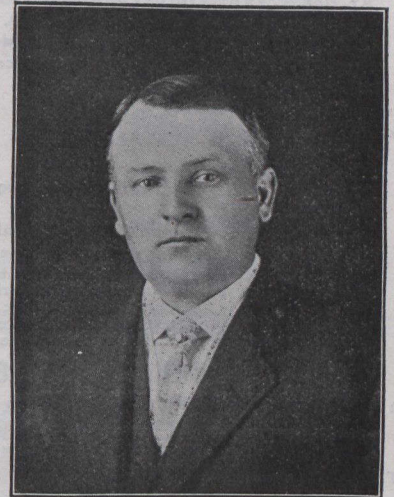
NORTLAKE, SASK. Arrangements are under way whereby an electric light plant will soon be installed.

NORTH BATTLEFORD, SASK. The contract for the new post office has been let, and the plans call for a \$150,000 building.

POINT GREY, B.C. The Council has decided to buy the sewers and waterworks on Shaughnessy Heights from the C. P. R.

PORT MOODY, B.C. Work has commenced on the foundations of the new wharf which the B. C. Electric Railway is building on the north shore here.

SWIFT CURRENT, ALTA. The Council has offered the Dominion Government 300 feet off the south side of the hospital property for an armory site.



The sudden death of Mr. John A. Lee, ex-Mayor of New Westminster, not only caused great grief in the Royal City and the neighbourhood but has left a gap that will be have to fill.

Born in Mount Forest, Ont., 45 years ago, and educated in Toronto, Mr. Lee came out to the Pacific, and after returning east for some time, again settled in New Westminster, and was elected Mayor, serving for three terms. He was President of the Union of B. C. Municipalities at the time of his death, and was a Vice-President of the Canadian Union.

At the time of his death, June 17th, he was President of the Board of Trade of New Westminster, and was actively engaged in religious and social work. His business interests were numerous and among others he was President of the "Daily News".

The funeral was a public one and was exceptionally large, being attended by representatives of the many public bodies with which he was connected, and of these who wished to show respect to a public spirited citizen.

CITY OF SASKATOON, Sask.

Tenders Wanted

Sealed tenders, addressed to the City Commissioners, Saskatoon, and endorsed "Tende for Boulevard Posts," will be received until 12 o'clock noon on **Monday the 21st day of July, 1913**, for sixty cutter's 5-light Boulevard Posts No. 1121.

Specifications and form of tender may be obtained on application to Mr. E. Hanson, City Electrical Engineer, Saskatoon.

The lowest or any tender not necessarily accepted.

F. E. HARRISON, Mayor,
 Chairman of Commissioners.

Saskatoon, Sask., June 25th, 1913.

BANK OF MONTREAL

(Established 1817)

INCORPORATED BY ACT OF PARLIAMENT.

CAPITAL Paid-up	\$16,000,000.00
REST	\$16,000,000.00
UNDIVIDED PROFITS	\$802,814.94

HEAD OFFICE— MONTREAL

BOARD OF DIRECTORS.

Rt. Hon. LORD STRATHCONA AND MOUNT ROYAL, G.C.M., G.C.V.O.
Honorary President.

R. B. ANGUS, Esq., President.

H. V. MEREDITH, Esq., Vice-President.

E. B. GREENSHIELDS, Esq.,	SIR WILLIAM MACDONALD
JAMES ROSS, Esq.,	HON. ROBERT MACKAY,
SIR THOMAS SHAUGHNESSY, K.C.V.O.	DAVID MORRICE, Esq.,
C. R. HOSMER, Esq.,	A. BAUMGARTEN, Esq.,
C. B. GORDON, Esq.,	H. R. DRUMMOND, Esq.

D. FORBES ANGUS, Esq.

H. V. MEREDITH, Esq., General Manager.

A. MACNEIDER, Chief Inspector and Superintendent of Branches.
C. SWEENEY, Supt. British Columbia Branches.
A. D. BRAITHWAITE, Supt. Ontario Branches.
F. J. COCKBURN, Supt. Quebec Branches.
E. P. WINSLOW, Supt. North West Branches.
D. R. CLARKE, Supt. Maritime Provs. and Nfld. Branches.

BRANCHES:

At all Important Cities and Towns in every Province in the Dominion of Canada.

IN NEWFOUNDLAND:

ST. JOHN'S BIRCHY COVE GRAND FALLS

IN GREAT BRITAIN:

LONDON, - - 47 Threadneedle St., E. C.,
SIR FREDERICK WILLIAMS-TAYLOR Manager.

IN THE UNITED STATES:

NEW YORK, R. Y. HEBDEN, W. A. BOG, and J. T. MOLINEUX,
Agents, 64 Wall Street.

CHICAGO, ILL. SPOKANE, WASH.

IN MEXICO:

MEXICO, D. F.

THE ROYAL BANK OF CANADA

Capital Authorized - - - - -	\$ 25,000,000
Capital Paid up - - - - -	11,560,000
Reserve and Undivided Profits - - - - -	13,000,000
Total Assets - - - - -	180,000,000

Head Office - MONTREAL.

BOARD OF DIRECTORS:

H. S. HOLT, *President.* E. L. PEASE, *Vice-President.*
E. F. B. JOHNSTON, K.C. *2nd Vice-President.*

Wiley Smith	D. K. Elliott	Wm. Robertson
Hon. D. MacKeen	W. H. Thorne	A. J. Brown, K. C.
Jas. Redmond	Hugh Paton	W. J. Sheppard
G. R. Crowe	T. J. Drummond	C. S. Wilcox
	A. E. Dymont	

OFFICERS

E. L. Pease, General Manager
C. E. Neill and F. J. Sherman, Asst. Gen-Managers
W. B. Torrance, Supt. of Branches

Branches in every Province of the DOMINION OF CANADA and in NEWFOUNDLAND; in HAVANA and throughout CUBA, Porto Rico and Dominican Republic; BAHAMAS, Nassau; BARBADOS, Bridgetown; JAMAICA, Kingston; TRINIDAD, Port of Spain and San Fernando; BRITISH HONDURAS, Belize.

LONDON, ENG., OFFICE — Princes St., E. C.

NEW YORK AGENCY — Corner William and Cedar Sts.

SAVINGS DEPARTMENT AT ALL BRANCHES

The Canadian Bank of Commerce

PAID-UP CAPITAL - \$15,000,000
REST - - - - - 12,500,000

HEAD OFFICE - TORONTO

BOARD OF DIRECTORS:

Sir Edmund Walker, C.V.O., LL.D., D.C.L., President.

Z. A. Lash, Esq., K.C., LL.D., Vice-President.

Hon. George A. Cox.	William McMaster, Esq.
John Hoskin, Esq., K.C., LL.D.	Robert Stuart, Esq.
J. W. Flavelle, Esq., LL.D.	G. P. Galt, Esq.
A. Kingman, Esq.	Alexander Laird, Esq.
Sir Lyman M. Jones.	William Farwell, Esq., D.C.L.
Hon. W. C. Edwards.	Gardner Stevens, Esq.
E. R. Wood, Esq.	G. G. Foster, Esq., K.C.
Sir John M. Gibson, K.C.M.G.,	Charles Colby, Esq. M.A., Ph.D.
K.C., LL.D.	A. C. Flumerfelt, Esq.

ALEXANDER LAIRD - - General Manager
JOHN AIRD, Asst. General Manager

BRANCHES IN EVERY PROVINCE OF CANADA AND IN THE UNITED STATES, MEXICO AND ENGLAND

Montreal Office, H. B. WALKER, Manager

London (England) Office, 3 Lombard Street, E. C.
H. V. F. JONES, Manager

New York Agency, 16 Exchange Place,
WM. GRAY and H. P. SCHELL, Agents

This Bank transacts every description of Banking Business including the issue of Travellers' Cheques, Letters of Credit and Drafts on Foreign Countries, and will negotiate or receive for collection bills on any place where there is a bank or banker.

THE MERCHANTS' BANK OF CANADA

HEAD OFFICE - - - - - MONTREAL

Capital paid-up \$6,758,900. Reserve Fund and Undivided Profits \$6,820,189

Pres.: Sir H. MONTAGU ALLAN; V.-P.: K. W. BLACKWELL.
E. F. HEBDEN, General Manager.

LIST OF BRANCHES AND AGENCIES:

Quebec—Montreal (Head Office St. James St.), 1255 St. Catherine St. E., 320 St. Catherine St. W., 1330 St. Lawrence Boul., 1366 St. Lawrence Boul., 672 Centre St., Beauharnois, Huntingdon, Lachine, Quebec, Rigaud, Shawville, Sherbrooke, St. Agathe, St. Jerome, St. Johns, St. Jovite, St. Sauveur, Three Rivers.

Ontario—Acton, Alviston, Athens, Belleville, Berlin, Bothwell, Brampton, Brantford, Chatham, Chatsworth, Chesley, Creemore, Delta, Eganville, Elgin, Elora, Finch, Ford City, Fort William, Galt, Gananoque, Georgetown, Glencoe, Gore Bay, Granton, Guelph, Hamilton, Hanover, Hespeler, Ingersoll, Kincardine, Kingston, Lancaster, Lansdowne, Leamington, Little Current, London, Lucan, Markdale, Meaford, Mildmay, Mitchell, Napanee, Oakville, Orillia, Ottawa, Owen Sound, Perth, Prescott, Preston, Renfrew, Sandwich, Stratford, St. Eugene, St. George, St. Thomas, Tara, Thamesville, Tilbury, Toronto, (Wellington St., Dundas St., Parliament St., Parkdale), Walkerton, Walkerville, Wallaceburg, Watford, West Lorne, Westport, Wheatley, Yarker.

Manitoba—Brandon, Carberry, Gladstone, Hartney, Macgregor, Morris, Napinka, Neepawa, Oak Lake, Portage la Prairie, Russell, Souris, Winnipeg, (ditto, Bannerman Avenue.)

Alberta—Acme, Brooks, Calgary, (do. 2nd Street E), Carstairs, Castor, Coronation, Chauvin, Daysland, Delburne, Donald, Edgerton, Edmonton, (do. Mayo Ave. Alberta Ave., Athabaska Ave.), Edson, Hanna, Hughenden, Islay, Killam, Lacombe, Leduc, Lethbridge, Mannville, Medicine Hat, Munson, New Norway, Okotoks, Olds, Pincher Station, Redcliff, Red Deer, Sedgewick, Strome, Stettler, Tofield, Trochu, Vegreville, Viking, Wainright, Wetaskiwin.

Saskatchewan—Antler, Arcola, Battleford, Carnduff, Frobisher, Gainsborough, Gull Lake, Kisbey, Maple Creek, Melville, Moose Jaw, Oxbow, Regina, Saskatoon, Unity, Whitewood.

Nova Scotia—Halifax.

New Brunswick—St. John.

British Columbia—Elko, Chilliwack, Nanaimo, Sidney, New Westminster, Victoria, (do. North End.) Vancouver (do. Hastings St.)

SUB-AGENCIES—Quebec—Bury, Napierville, Quyon; **Ontario**—Addison, Calabogie, Frankville, London South, Lyndhurst, Muirkirk, Newbury, Newington, Pelea Island, Williamstown; **Manitoba**—Austin, Griswood, Oakville, Sidney; **Alberta**—Botha, Czar, Rumsey; **Saskatchewan**—Forbes.

A general Banking Business transacted. Savings Department at all Branches. Interest paid at best current rates.

New York Agency: 63 and 65 Wall St.

The accounts of Municipalities kept and advances made in anticipation of the collection of taxes; also, loans for improvement purpose in anticipation of the issue of debentures.

ECHOES FROM MUNICIPAL FINANCE

WE BUY
AND SELL

MUNICIPAL DEBENTURES

If YOU wish to dis-
pose of this class of
bonds do not fail to
write us.

Brent Noxon & Co.

Canada Life Building,
TORONTO, Ont.

WINDSOR, ONT. The tax rate has
been fixed at 22½ mills, the same rate as
last year.

WALLACEBURG, ONT. The by-law
to provide for the expenditure of \$130,000
in the construction of a waterworks and
sewerage system, was carried by a good
majority.

WATROUS, SASK. Four money were
recently passed:—\$8,800 for sidewalks;
\$11,000, re agreement with Farm Machi-
nery Company; \$70,000 for sewerage and
waterworks systems.

WEYBURN, SASK. The municipal
programme for the year includes a new
city hall and fire hall, some miles of
sewers and sidewalks, and a new concrete
bridge over the river.—Final arrange-
ments are being made for the establish-
ment of a soap factory, and a steam
laundry.—A large new hotel will be built
shortly by local capital.

WILLNER, SASK. The by-law to
raise \$5,500 to help build and equip a
joint hospital with the town of Davidson,
was defeated.

WINGHAM, ONT. The two by-laws,
the one for raising \$6,500 for the purchase
of a stone crusher and road roller, the
other for \$5,000 for the improvement and
extension of the waterworks system, were
carried.

WOODSTOCK, ONT. The by-law to
raise \$12,000 for extension of the water
mains, was passed.—The by-law to raise
\$10,000 for new police quarters, was
defeated.

LOANS MADE TO:
BONDS BOUGHT FROM:

Municipalities

A. P. LESPERANCE

MANAGER

City and District Savings Bank

MONTREAL

Advertise Your

BONDS and DEBENTURES

IN

The CANADIAN
MUNICIPAL JOURNAL



CONCRETE

ARE HERE

PAVEMENTS

TO STAY.



Kahn Steel Expansion Joints

INCREASE THE LIFE OF CONCRETE PAVEMENTS.

WRITE FOR INFORMATION.

Concrete Bridges, Retaining Walls, Silos and Buildings are strongest and most economical when
reinforced **ACCORDING TO THE KAHN SYSTEM.**

OTHER PRODUCTS. Hy-Rib—for Concrete Walls, Partitions, Floor and Roof slabs. Rib Metal—for Concrete
Sewers, Floors, etc. Trus-Con Chemical Products—for Waterproofing and finishing concrete. Kahn
System Sash—for Strength, Fireproofness and Maximum Light. All Sizes of Lights and Ventilators.

LET US QUOTE YOU

TRUSSED CONCRETE STEEL Co.

OF CANADA, LIMITED

HEAD OFFICE AND WORKS, - WALKERVILLE, Ont.

BRANCHES: 23 Jordan St., Toronto. Cristine Building, Montreal. Union Bank Building, Winnipeg.
Hutchinson Bldg., Vancouver. Chronicle Bldg., Halifax.

THE BANK OF OTTAWA

ESTABLISHED 1874

HEAD OFFICE, - OTTAWA

Capital Authorized - \$5,000,000
 Capital Paid Up - - 3,500,000
 Rest - - - - - 3,900,000

The Bank transacts every description of banking business and gives the most careful attention to any business entrusted to it.

BRANCHES AND AGENTS
 THROUGHOUT THE DOMINION

IMPERIAL BANK OF CANADA

Capital Authorized - - - - - \$10,000,000.00
 Capital, paid-up - - - - - 6,800,000.00
 Reserve Fund - - - - - 7,000,000.00

DIRECTORS:

D. R. WILKIE, President, Hon. R. JAFFRAY, Vice-President,
 Wm. Ramsay of Bowland, Elias Rogers, J. Kerr Osborne, Peleg
 Howland, Sir Wm. Whyte, Winnipeg; Cawthra Mulock, Hon.
 Richard Turner, Quebec; Wm. Hamilton Merritt, M. D.,
 St. Catharines; W. J. Gage.

HEAD OFFICE, - - - - TORONTO.

BRANCHES:

Ontario	Nashville New Liskeard Niagara Falls Niagara on the Lake North Bay Ottawa Palgrave Port Arthur Porcupine Port Colborne Port Robinson Ridgeway Sault Ste. Marie South Porcupine South Woodlee St. Catharines St. Thomas St. Davids Thessalon Timming Toronto Welland Woodstock	Quebec	Montreal Quebec	Manitoba	Brandon Portage la Prairie Winnipeg	Saskatchewan	Balgonie Broadview Fort Qu'Appelle Hague Moosejaw North Battleford Prince Albert Regina Rosthern Saskatoon Wilkie Wynyard	Alberta	Athabaska Landing Banff Calgary Edmonton Red Cliff Rocky Mountain House Lethbridge Red Deer Strathcona Wetaskiwin	British Columbia	Arrowhead Chase Cranbrook Fernie Golden Kamloops Michel Nelson New Michel Revelstoke Vancouver Victoria Wilmer
----------------	---	---------------	--------------------	-----------------	---	---------------------	--	----------------	--	-------------------------	--

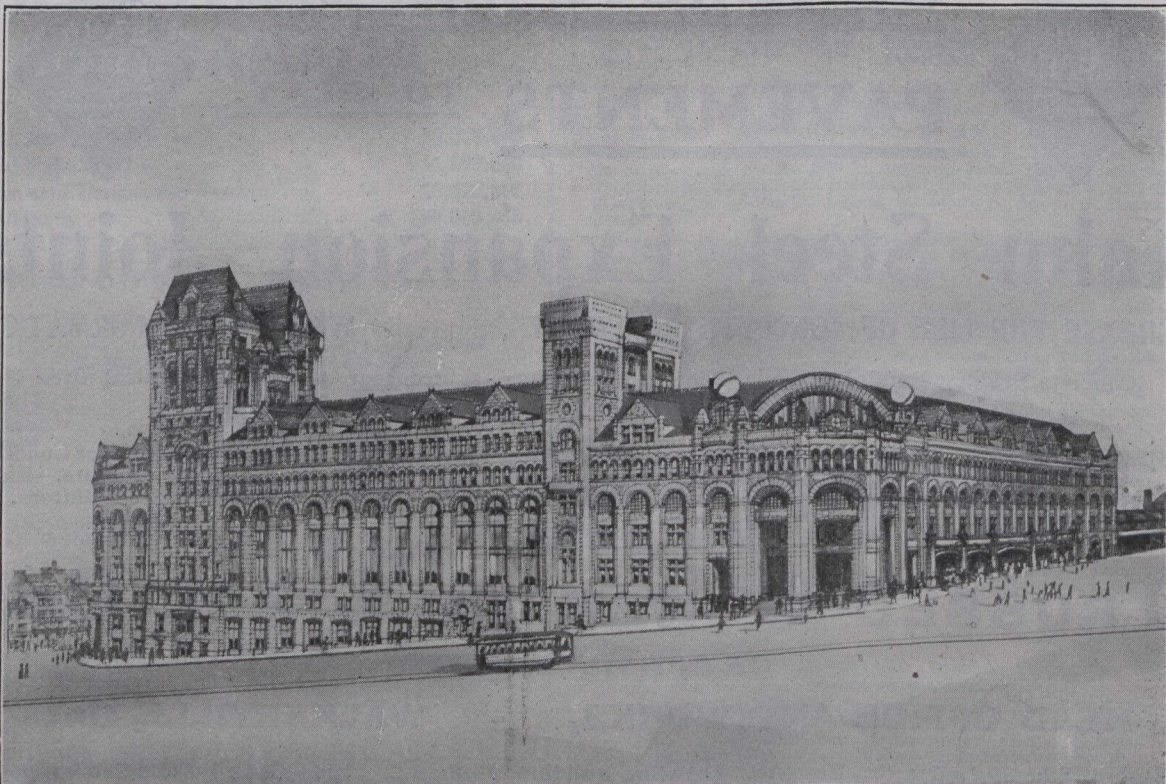
SAVINGS DEPARTMENT.

Interest allowed on Deposits at all Branches of the Bank throughout the DOMINION OF CANADA.
 Drafts, Money Orders and Letters of Credit Issued Available in Any Part of the World.

Agents in England and Scotland.—Lloyds Bank Limited, and the Commercial Bank of Scotland, Limited, and Branches with whom money may be deposited for transfer by letter or cable to any part of Canada.

Agents in United States. — New York, Bank of the Manhattan Company; Chicago; First National Bank; San Francisco; Wells, Fargo Nevada National Bank.

Agents in France. — Credit Lyonnais.
 Agents in Germany. — Deutsche Bank.



WINDSOR STREET STATION, MONTREAL.

The Headquarters of the Canadian Pacific Railway, from which the Eastern Delegates will leave for the Convention.

FINANCIAL NOTES

DEALERS IN
HIGH GRADE
BONDS &
DEBENTURES

CORRESPONDENCE
SOLICITED

DOMINION
SECURITIES
CORPORATION, LIMITED

MONTREAL, LONDON, TORONTO
P.Q. ENG. ONT.

ACTON, ONT. The by-law to authorize \$6,500 debentures for the erection of an addition to the local public school was carried.

BRANDON, MAN. The following by-laws were recently passed:—to raise \$100,000 for waterworks extensions; \$13,000 for meters; \$7,000 for the repairing of bridges; \$13,000 for a site for the free library; \$150,000 for street railway construction; \$100,000 re hospital extension; \$15,000 grant to the Western Arts and Agricultural Association; and to guarantee the bonds of the Winter Fair Association to the extent of \$35,000.

CALGARY, ALTA. Three of the four money by-laws aggregating an expenditure of \$600,000 were recently carried; they were as follows:—extensions to the city's electric light and power system, \$320,000; for a civic garbage and refuse incinerator, \$30,000; for a municipal testing laboratory, \$12,000; the by-law for a municipal factory building to house and encourage small industries, was defeated under the two-thirds clause; this will be brought up again later.

DRYDEN, ONT. The following by-laws were recently passed.—to raise \$2,500 for the purchase of certain lands; \$2,500 for the establishment of a telephone system; \$5,000 for the construction of a lock-up; and \$6,000 for acquiring the electric light and power system from the Dryden Timber and Power Company.

DUCK LAKE, SASK. The by-law to raise \$11,000 for the construction of a town hall, was passed.

EAST GARAFRAXA, ONT. The by-law to raise \$13,000 to rebuild bridges was carried by the ratepayers.

EDMONDS, B.C. The tax rate was struck at 20 mills on improved land and 40 mills on wild lands.—The estimates for 1913 show a net increase of \$112,646.91 over 1912.

GRIMSBY, ONT. The by-law to raise \$10,000 as a loan to the Gravenhurst Iron Specialty Company, was passed.

HAMILTON, ONT. The Council recently passed the following by-laws:—to raise \$50,000 for park extensions; \$25,000 for City Hall; and \$25,000 for Sick Children's Hospital.

HULL, QUE. The by-law to raise \$12,000 to provide for the construction of sewers, was passed.

INGERSOLL, ONT. The by-law to raise \$20,000, as a loan to the Standish Manufacturing Company, was carried.

KAMSACK, SASK. The following by-laws were passed recently:—to raise \$60,000 for waterworks; \$1,500 for the sewerage system; \$23,000 for electric light.—The by-law to raise \$7,000 for park purposes was defeated.

KINGSTON, ONT. The by-laws to raise \$34,000 for constructing conduits, and for a heating system for the city hall, were passed.

LINDSAY, ONT. The by-law to grant \$10,000 as a bonus to the Boving Manufacturing Company, was carried.

LONDON, ONT. The County Council recently passed by-laws to raise \$90,911 to meet current expenses; \$34,400.21 to meet debenture interest and sinking fund of the consolidated debt; and \$80,000 to meet current expenses of county until such time as rates for current year shall be collected.

MIMICO, ONT. The Town Council recently gave approval of the following issues of debentures, shortly to be made:—\$3,400.40 walks and \$1,770 for new for roads, the bond will cover a period of ten years with interest at 5½ per cent.

MONTREAL, QUE. The Council has voted \$10,000 for playgrounds for the children.

NEUSTADT, ONT. The by-law granting a loan of \$6,000 to the Neustadt Furniture Company for the erection of a new factory, was carried.

NEWMARKET, ONT. The by-law to raise \$5,000 for the proposed library was carried.

NEW WESTMINSTER, B.C. The following by-laws were recently passed:—to raise \$200,000 for street purposes; \$40,000 for light extensions; \$45,000 for waterworks extensions; \$55,000 for schools; \$150,000 for sewers; \$25,000 for firehalls; \$15,000 re civic stables; and \$25,000 for exhibition.

NORTH BATTLEFORD, SASK., has become a city, making the fifth in Saskatchewan; the population is 6,000 as compared with 12 in 1905.

NORTH VANCOUVER, B.C. The by-law to raise \$150,000, to be invested in shares in the Burrard Inlet Bridge and Tunnel Company, was passed.

OAK BAY, B.C. The following by-laws were passed:—to raise \$10,000 for new Jubilee Hospital; \$50,000 to buy a park, and to confirm the agreement of the city and the Gold Club.

PORT ARTHUR, ONT. The tax rate was struck at 23 mills.—The Board of Works received an appropriation of \$48,000; The Fire, Water and Light Department received \$52,000.

PORT MOODY, B.C. The city has no debt to pay and there is a substantial balance in the treasury.

WOOD, GUNDY & CO.

6 KING ST. WEST, TORONTO

Purchasers of

MUNICIPAL
DEBENTURES

We especially invite correspondence.

PREECEVILLE, SASK. The by-laws to raise \$1,600 for sidewalks and \$1,000 for fire protection, were carried.

REVELSTOKE, B.C. The by-laws to raise \$20,000 for water purposes and \$15,000 for schools, were passed recently.

RICHMOND HILL, ONT. The by-law to grant \$5,000 as a loan for the rebuilding of some green houses, was defeated.

ROULEAU, SASK. The by-law to raise \$5,000 for municipal improvements, was passed.

SOUTH VANCOUVER, B.C. The Council has appropriated \$64,651 for new sidewalks and streets this year.

ST. CATHARINES, ONT. The by-law to raise \$5,000 to extend the mains of the civic-owned gas manufacturing plant, was carried.

STRATFORD, ONT. The by-law granting a loan of \$30,000 to the Stratford Mill Building Company, was passed.

ST. JAMES, MAN. The by-law to raise \$125,000 for the purpose of erecting a new school, was defeated.

TILBURY, ONT. The by-laws to raise \$10,000 as a loan to the Canadian Forging Company, and \$5,000 for a fire hall, were passed.

TORONTO, ONT. The City Council decided to guarantee the bonds of the Toronto Housing Company to the extent of \$850,000.

TRENTON, ONT. The by-laws to extend the sewerage system and to raise \$75,000 for paving streets, were carried.

TURNBERRY, ONT. The by-law to raise \$12,000 for the building of bridges within the township, was passed.

VANCOUVER, B.C. Expropriation proceedings will be taken for the Federal Government to erect a fine concrete pier, with ample warehouse accommodation and tracks.

BUSINESS FOUNDED 1795

American Bank Note Company

ENGRAVERS and PRINTERS

Municipal Debentures and Cheques

A SPECIALTY

Head Office, 224 WELLINGTON STREET, OTTAWA.

Branches: HALIFAX, MONTREAL, TORONTO, WINNIPEG.

Engineers—And

Murphy and Underwood

R. A. ROSS & CO.
 CONSULTING ENGINEERS
 MECHANICAL STEAM ELECTRIC HYDRAULIC
 EXAMINATIONS REPORTS VALUATIONS
 80 ST. FRANCOIS XAVIER STREET, - - MONTREAL

211 BOARD OF TRADE BUILDING
Laurie & Lamb
 CONSULTING & CONTRACTING ENGINEERS
 STEAM & GAS POWER INSTALLATIONS
 FILTERING & WATER SOFTENING PLANTS
 REFUSE DESTRUCTORS & BOILER INSTALLATIONS
 REPORTS, TESTS & APPRAISALS
 MONTREAL

A. L. McCulloch, M. Can. Soc. C. E.
 CONSULTING ENGINEER
 Hydro-Electric Power Installation.
 Water-Works. Sewerage and Sewage Disposal.
 Examinations. Plans. Estimates and Reports.
 NELSON, B. C.

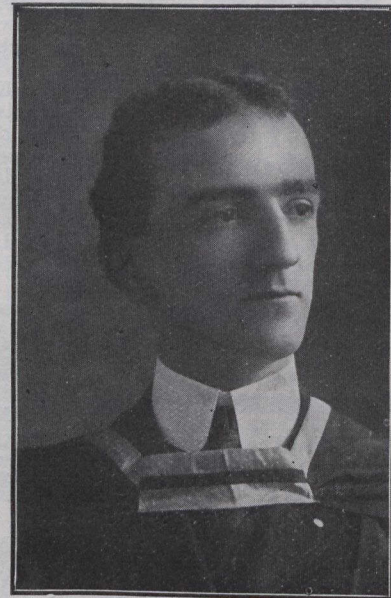
BAYFIELD & ARCHIBALD
 Consulting & Constructing Engineers
 Plans, Reports, Estimates for Machinery.
 Plants for Electric Light, Water Works, Road Making, Etc.
 MOLSONS' BANK BUILDING, VANCOUVER, B. C.

Tel. Uptown 6771 Room 41 Merchants Bank
J. B. SAINT CYR
 Quebec and Dominion Land Surveyor
 GENERAL LAND SURVEYING
 Subdivision, Staking of Lots, Public Highways, Mining Claims, Timber Limits, Etc.
 364 University Street, Corner St. Catherine, Montreal

E. A. CLEVELAND DONALD CAMERON
CLEVELAND & CAMERON
 CIVIL, HYDRAULIC AND MUNICIPAL ENGINEERS AND SURVEYORS
 1001 TO 1010 ROGERS BUILDING VANCOUVER, B. C.

GORE & MCGREGOR LAND SURVEYORS AND ENGINEERS WATERWORKS AND SEWERAGE EXAMINATIONS AND REPORTS MUNICIPAL WORK A SPECIALTY
CHARLES H. TOPP
 M. CAN. SOC. C. E. M. PAC. N. SOC. E.
 CONSULTING ENGINEER
 P. O. Box 152 Phone L 504 Chancery Chambers, Langley Street, VICTORIA, B. C.

TELEPHONE: BELL UPTOWN 3808
SURVEYER & FRIGON
 CONSULTING ENGINEERS
 EXAMINATIONS SURVEYS ESTIMATES AND DESIGNS
 TECHNICAL AND FINANCIAL REPORTS
 56 BEAVER HALL HILL MONTREAL.



A. A. MURPHY, B. Sc.
 (Queens and McGill)

One of the most enterprising Engineering firms in Saskatchewan, and the West is that of Messrs. Murphy and Underwood, Ross Building, Saskatoon. The firm, through the partnership, is able to consult on questions referring to civil, electrical, and mechanical engineering. At the present time they have on hand many contracts dealing with municipalities all over the West, for all kinds of engineering work, involving many hundreds of thousands of dollars.



J. E. UNDERWOOD, C. E., D. L. S.

Mr. Murphy is a graduate of Queen's University, Kingston, Ont., and McGill University, Montreal;

what they are doing

while Mr. Underwood is a graduate of Toronto University and is an associate member of the Canadian Society of Civil Engineers,

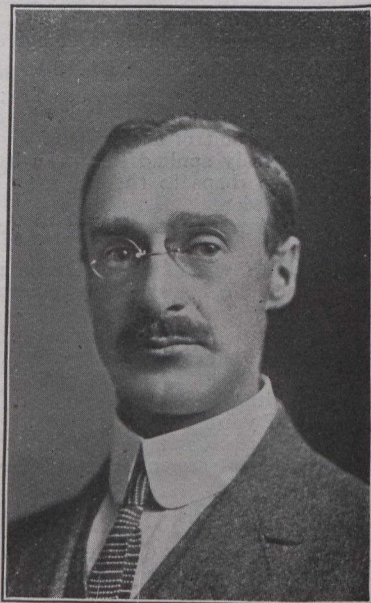
Their headquarters are in the new Ross Building on 3rd Avenue.

Through their successful work they are thought of very highly throughout the West and have undertaken work for both Governments and municipalities.

The firm have installed waterworks and electric light systems for the towns of Scott and Wilkie, Sask., and have already prepared plans for complete sewer systems there. In the town of Melfort, Sask., the construction of waterworks, sewerage and electric light systems involving an expenditure of \$125,000 is now under construction and nearly completed. At Battleford, Sask., the firm prepared plans and specifications for the waterworks, sewerage and electric light systems. At Sutherland, Sask., the firm have already awarded contracts for over \$200,000 of municipal improvements including waterworks, sewerage, electric light system and street grading and sidewalks.

At The Pas, Man., the firm have prepared plans and specifications for municipal work amounting to \$200,000. and the work is under construction at the present time. At the present time the firm is getting out plans, specifications and a report on a Hydro-Electric Power scheme in British Columbia. The firm is composed of A. A. Murphy, B.Sc., and J. E. Underwood, C.E., D.L.S.

Thompson and Crockart



R. M. THOMPSON

In engineering and architectural circles in Saskatoon, the firm of Thompson and Crockart, is well known, from the class of work they accomplish. The name of R. M. Thompson is the better known possibly on account of his having practiced longer in Saskatoon, but since the partnership was formed in March, 1912, much important work has been successfully carried through.

Like many of the residents of Saskatoon both Mr. Thompson and Mr. Crockart were trained in Scotland, Mr. Thompson in the office of Mr. G. P. Young, A.R.I. B.A., and afterwards on the staff of Mr. Donald Ma-

CHARLES H. KEEFER, C.E.,
Consulting Engineer

THOS. C. KEEFER, JR.,
Late Lieut. Royal Engineers

KEEFER & KEEFER
CIVIL ENGINEERS

Reports and Construction Water Powers, Waterworks, Sewerage, Bridges and Railways

METROPOLITAN BUILDING, OTTAWA, ONT.

CHARLES BRANDEIS, C. E.
A.M. CAN. SOC. C.E.

CONSULTING ENGINEER
TO PROVINCIAL GOVERNMENT, MUNICIPALITIES, ETC.

Estimates, Plans and Supervision of Hydraulic and Steam Electric Light, Power and Railroad Plants, Waterworks and Sewers. Arbitrations, Reports and Specifications.

4 PHILLIPS PLACE - - - - MONTREAL

SMITH, KERRY & CHACE
ENGINEERS

HYDRAULIC, STEAM, ELECTRIC, RAILWAY, MUNICIPAL, INDUSTRIAL
W. U. Code used. Cable Address "Smithco".

TORONTO VANCOUVER BOISE (IDAHO) PORTLAND (OREGON)

Cecil B. Smith. J. G. G. Kerry. W. G. Chace.

DE GASPÉ BEAUBIEN
B. Sc. McGill, Ass. M.C.S.C.E., Ass. M.A.I.E.E.

CONSULTING ENGINEER

ELECTRICAL, HYDRAULIC, MECHANICAL AND CIVIL

28 ROYAL INSURANCE BLDG., MONTREAL.

J. F. FREW
A. M. INST. C. E.

CIVIL AND MECHANICAL ENGINEER

PHONE 4698 19 FAIRFIELD BLDG.
445 GRANVILLE STREET, VANCOUVER, B. C.

A. LEOFRED, CONSULTING ENGINEER
AND LAND SURVEYOR

PRESIDENT AQUEDUCTS LIMITED

REPORTS, PLANS, CONSTRUCTION
WATERWORKS, SEWERS, WATER POWERS, ETC.

QUEBEC, 39 ST. JOHN. PHONE 545

E. O. FUCE, A. M. Can. Soc. C. E.
Hon. Grad. Univ. Toronto S. P. S.

W. A. SCOTT, B. A. Sc
A.L.S., D.L.S., S.L.S.

FUCE & SCOTT
CONSULTING ENGINEERS

Sewers, Sewage Disposal, Waterworks, Roadways, Reinforced
Concrete Bridges and Buildings.

115 Seventh Ave. W., - - - Calgary, Alta.

C. G. MOON FRANCIS SILVERTON

MOON & SILVERTON
MUNICIPAL ENGINEERS

518 HASTINGS ST. WEST VANCOUVER, B. C.

WINNIPEG CALGARY VANCOUVER
THE JOHN GALT ENGINEERING COMPANY, LTD.
 CONSULTING CIVIL ENGINEERS
 SPECIALISTS IN ALL KINDS OF MUNICIPAL
 ENGINEERING WORK
 WaterWorks, Sewerage, Electric Lighting, Steam and Water Power,
 Concrete Construction.
 JOHN HADDIN E. L. MILES

MATHER, YUILL & CO., LIMITED
 CONSULTING AND CONTRACTING
 ENGINEERS
 Design and Construction of Complete Power, Lighting
 and Pumping Plants for all Municipal and Industrial
 Purposes
 810 London Building, VANCOUVER, B.C.

CHARLES M. JACOBS, J. V. DAVIES, JAMES FORGIE
 Members Inst. C. E., Can. Soc. C. E., Am. Soc. C. E.
JACOBS & DAVIES, INC.
 CONSULTING ENGINEERS
 MONTREAL. LONDON, NEW-YORK
 Foundations, Subaqueous and Land Tunnels, Subways, Railways, Harbours, Water-
 power Development, Examinations, Reports Montreal Office: Eastern Township Bank Bldg.

FAIRCHILD, JONES & TAYLOR
 CONSULTING ENGINEERS
 AND LAND SURVEYORS.
 STEAM AND ELECTRIC RAILWAYS. ELECTRIC AND WATER POWER
 SEWERAGE AND WATERWORKS.
 LAND, TIMBER AND MINE SURVEYS. TOWNSITE SUBDIVISIONS.
 ROOM: 608-609 TEGLER BLOCK, EDMONTON, ALTA.

DOMINION AND SASKATCHEWAN LAND SURVEYORS
PHILLIPS, STEWART & LEE
 CIVIL ENGINEERS
 Waterworks, Sewers, Roads and General Municipal Engineering' --- Subdivisions
 25-28 CENTRAL CHAMBERS SASKATOON, SASK.

TELEPHONE ENGINEERS

SAMUEL G. McMEEN KEMPSTER B. MILLER
McMEEN & MILLER
 ELECTRICAL ENGINEERS
 PLANS ESTIMATES REPORTS
 Investigations of Public Service Systems of Telephones,
 Electric Light, Power and Gas.
 1454 Monadnock Block, CHICAGO. 333 Grant Avenue, SAN FRANCISCO

FRANCIS DAGGER
 TELEPHONE ENGINEER & EXPERT
 1905 Technical Adviser to Select Committee on Telephone Systems, Ottawa
 1906-7. Expert to Government of Manitoba.
 1907-8. Expert to Government of Saskatchewan.
 21 Richmond Street W. TORONTO

EDWARD E. CLEMENT
 ATTORNEY AND COUNSELLOR AT LAW
 Solicitor of Patents.
 ELECTRICAL EXPERT
 MCGILL BUILDING WASHINGTON, D. C.

Engineers And

theson, then Chief Engineer of the Caledonian Railway. Afterwards he was resident in India, for Burn and Co. on the waterworks at Moulmein, and finally, before coming to Saskatoon, he was with the Transcontinental at Quebec in architectural work.

Mr. Crockart received his Architectural training in Stirling and at Glasgow School of Architecture, and then with Mr. C. R. Ashbee, F.R.I.B.A., of London, England. On reaching Canada, Mr. Crockart was with the well known architectural firm of Mrssrs. Saxe and Archibald, Montreal.

The firm have acted as Supervising Architects on the Saskatoon Mill, Emmanuel College, Cockshutt Warehouse and the Dominion, Royal, Hamilton, Union and Montreal Banks. They were designing Architects and Engineers on the Municipal Power House, Saskatoon, amongst other contracts they are now engaged upon are the Drinkle and Wilson blocks on Third Avenue, the North West Mounted Police Barracks and a number of Warehouses, Clubhouses, Residences, etc.

CEMENT-MAKING MATERIAL

A barrel of Portland cement will consume, in its manufacture, about 450 pounds of limestone and 150 pounds of clay or shale. A plant making 1,000 barrels a day will therefore use, in the course of an ordinary year, about 66,000 tons of limestone and 22,000 of clay or shale. Assuming average density for these materials, a 1,000-barrel plant will use up almost 1,000,000 cubic feet of limestone a year, together with 250,000 cubic feet of shale.

As the investment in plant is heavy, it would be folly to locate a cement plant, under ordinary circumstances, at a point where less than 20 years' supply of raw materials is in sight. A thousand-barrel plant, therefore, should have 20,000,000 cubic feet of limestone and 5,000,000 cubic feet of clay or shale on its properties.—From a Bulletin of the U. S. Geological Survey.

WHAT AN ACRE MEANS

One occasionally hears such an expression as this: "The barn stood about two acres in from the road." This, of course, is incorrect, for an acre is a unit of area, not of distance. The term is often very carelessly applied too, even by those who know its meaning; and perhaps to the majority of people it conveys no very definite idea.

The following data, therefore, regarding an acre, may be found helpful on occasion:

An acre contains 4,840 sq. yds.; so that a square piece of land measuring 70 yds. on each side is just a little more than an acre.

Or,
 10 yards wide by 484 yards long is one acre.
 20 yards wide by 242 yards long is one acre.
 40 yards wide by 121 yards long is one acre.
 80 yards wide by 60½ yards long is one acre.
 70 yards wide by 69 1-7 yards long is one acre.
 60 yards wide by 80¾ yards long is one acre.
 Putting it another way, an acre contains 43,560 sq. ft. Or,
 440 feet by 99 feet—one acre.
 240 feet by 181½ feet—one acre.
 220 feet by 198 feet—one acre.
 110 feet by 396 feet—one acre.—"Concrete World."

HEIGHT OF BUILDINGS

Toronto is discussing the high building question; it had a speaker from New York the other day, Lawson Purdy, to give his advice. He was strongly against skyscrapers, not as a matter of esthetics, but for business reasons. None of the later ones in New York, he said, are paying; they are "monuments, advertisements, or failures." Also by limiting the number of buildings, they reduce the value of adjacent properties. New York, he said, is behind European cities in adopting protective measures. "We have ruined the appearance of the city and impaired the health of its citizens, only to reduce the number of its suitable office buildings." And in some streets the congestion has become so great that employers are considering the advisability of arranging different hours for their employees to take luncheon. Manhattan he thought beyond remedy, though there might be a chance for outlying boroughs. Such plain speaking should encourage other cities in a firm resistance to the insidious encroachments of the skyscrapers.—Citizens' Bulletin.

what they are doing

Harold Cooper, A. R. I. B. A.
(Soane Medalist)

Architect, Saskatoon

When Mr. Harold Cooper, a few months ago, chose Saskatoon as the ideal location for his profession, he not only made a wise choice but, in doing so he paid a compliment to the artistic intelligence of the citizens. How his decision has been justified is best exemplified in the commissions Mr. Cooper is already undertaking in Saskatoon and the vicinity. Mr. Cooper before coming to Canada had already a splendid reputation for good work in the Old Country—a reputation begotten of a large experience in designing many important public works and buildings and in town planning. Before settling down to routine work, the subject of this sketch won the Soane premier prize which is open to all British subjects. The winning of this great prize entitled him to a six months' tour for the purpose of studying the masters of Europe. Mr. Cooper's first work was to act as assistant to the architect of the Mersey Docks and Harbour Board Offices, Liverpool, which is practically the first building of any note that meets the eye of the visitor to England. He was next engaged in H. M. Office of Works, where he designed many Government buildings, including some of the largest Post Offices in the country. After gaining a good experience Mr. Cooper commenced, in partnership with Mr. W. H. Slater, in private practise in Lancashire. The firm of Cooper and Slater soon secured a large practice principally in open competition. For instance the firm was one of six selected out of over 200 to compete finally for the beautiful Library and Art Gallery in Manchester, which was erected at a cost of over one million dollars. Mr. Cooper built the Council Schools, Blackburn, St. Anne's Golf Club House, and won the Town Planning competition of the Blackeley Estate, Manchester. He also won the second prize for Cardiff Technical College, second prize Blackpool Public Library and many others. These successes in a country where competition is of the keenest show something of the calibre of Mr. Cooper, particularly when one considers that the best architects enter for every public contract that is given out.

When Mr. Cooper was asked his opinion on Canadian architecture, he considered that though the general standard of architectural design was somewhat low, in every city he has visited he came across buildings which any country would be proud of. He had every confidence that in the near future Saskatoon would not only be one of the prosperous cities of the great West, but one of the best designed and beautiful.

J. M. ROBERTSON, LIMITED
CONSULTING ENGINEERS
Mechanical, Electrical, Hydraulic, Steam Gas.
Plans, Specifications, Estimates, Tests, Reports, and Supervision.
SUITE 101 BOARD OF TRADE BUILDING, - MONTREAL, QUE.

ALEXANDER POTTER, C.E.
SPECIALIST IN
HYDRAULIC AND SANITARY ENGINEERING
WATER SUPPLY AND PURIFICATION. SEWERAGE AND SEWAGE DISPOSAL.
WATER AND ELECTRIC POWER.
Special Facilities for the Sanitary Investigation and Analysis of Water Supplies for Municipal and Manufacturing Plants.—Plans, Estimates and Specifications.
50 CHURCH STREET, - NEW YORK CITY

C. R. YOUNG
B. A. SC., A. M., CAN. SOC. C. E.
CONSULTING STRUCTURAL ENGINEER
Steel and Reinforced Concrete Bridges and Buildings, Foundations,
Tanks, Towers and other Structures.
318 CONTINENTAL LIFE BUILDING
TELEPHONE, MAIN 3476 TORONTO

PHONE 5488
DUTCHER, MAXWELL & CO.
ENGINEERS AND SURVEYORS
319 Pender Street W., VANCOUVER, B. C.
BRANCH OFFICE: CALGARY, ALTA.

Telephone Main 2560
T. AIRD MURRAY
M. CAN. SOC. C. E.
Consulting Engineer to the Saskatchewan Government, and Municipal Consulting Engineer for Sewerage—Sewage Disposal—Water Supply and Purification.
303 LUMSDEN BLDG., TORONTO, CAN.

BOWRING & LOGAN
CONSULTING ENGINEERS
MUNICIPAL POWER PLANTS
332 DONALD ST WINNIPEG, MAN.

R. G. Austen E. M. Chapdelaine, P.L.S.
AUSTEN & CHAPDELAINÉ
ENGINEERS, CONTRACTORS & LAND SURVEYORS
Dams, Waterworks, Sewers, Roads, Surveys
—Subdivisions, Timber Limits, Etc.—
New Birks' Building, MONTREAL

MURPHY & UNDERWOOD
CONSULTING ENGINEERS
SASKATOON, SASK.
"SPECIALISTS IN ALL MUNICIPAL WORK"
A. A. MURPHY, B. SC. ELECTRICAL AND MECHANICAL ENGINEER
J. E. UNDERWOOD, D.L.S. A. M. CAN. SOC. C. E. SASK. LAND SURVEYOR AND CIVIL ENGINEER

R. S. LEA, M. Can. Soc. C. E.; M. Inst. C. E.
M. Am. Soc. C. E.; Hydraulic & Sanitary
Engineer

H. S. FERGUSON, M. Can. Soc. C. E.
M. Am. Soc. M. E., M. Am. Soc. C. E.
Engineer, Pulp, and Paper Mills,
Power Plants

R. S. LEA and H. S. FERGUSON
ENGINEERS

Specialties: Water Supply, Sewerage, Water Power Development and Transmission
Steam Power Plants, Pulp and Paper Mills. Examinations and Reports
Birks Bldg. Long Distance Tel. Up. 751. MONTREAL

WALTER J. FRANCIS, C. E.,
M. Can. Soc. C. E.,
M. Am. Soc. C. E.,
M. Inst. C. E.

FREDERICK B. BROWN, M. S. C.
Mem. Am. Soc. M. E.,
Mem. A. I. E. E.

WALTER J. FRANCIS & COMPANY
CONSULTING ENGINEERS

HEAD OFFICE—232 ST. JAMES ST., MONTREAL,
LONG DISTANCE TELEPHONE—MAIN 5643
CABLE ADDRESS—WALFRAN, MONTREAL.—WESTERN UNION CODE

WILLIS CHIPMAN

GEO. H. POWER

CHIPMAN & POWER
CIVIL ENGINEERS

TORONTO

WINNIPEG

CANADIAN INSPECTION & TESTING
LABORATORIES, LIMITED

INSPECTING AND CONSULTING ENGINEERS AND CHEMISTS

Inspection and Tests of Waterworks and Municipal Supplies.

TORONTO WINNIPEG VANCOUVER Head Office: MONTREAL

DIETRICH LIMITED
CONTRACTING ENGINEERS

REPORTS, ESTIMATES, PLANS, SUPERVISION, ETC.
CONSULTING CONTRACTING.

300 READ BLDG.,

MONTREAL.

Telephone 5256

P. O. Box 1695

JOHN S. ISDALE

ELECTRICAL ENGINEER AND SCIENTIFIC
INSTRUMENT MAKER

Engineers and Surveyors Instruments. Nautical Instruments,
Electrical Instruments. Electro-Medical Work. Fine Electrical
Work and special Apparatus for Scientific Work. :: :: ::

527 Dunsmuir Street,

VANCOUVER, B. C.

CARTWRIGHT, MATHESON & CO.
CONSULTING ENGINEERS

PLANS, SURVEYS, REPORTS,

Superintendence of Construction for Railways, Wharves, Foundations,
Bridges, Buildings, Water Supply, Power Plants and Irrigation.

601 ROGERS BUILDING

VANCOUVER, B. C.

ORMOND HIGMAN, Jr. B.Sc.

WILLIAM A. DOCTOR, A.I.A.

HIGMAN & DOCTOR
ENGINEERS, SURVEYORS AND ARCHITECTS

Hydraulic, Electrical, Mechanical and Municipal Engineering. Steel and Reinforced
Concrete Construction. Arbitrations, Estimates and Reports.

31, 32, 33, 34 WILLIAMS BUILDING,

VANCOUVER, B. C.

Engineers—And

A WELL KNOWN ENGINEERING FIRM IN SASKATOON

Phillips, Stewart & Lee

The surveying and engineering firm of Phillips, Stewart & Lee, is composed of Edward H. Phillips, Will M. Stewart and Roger M. Lee.

Mr. Phillips graduated from Toronto University in applied Science in 1900, and has since been engaged in work of various kinds along Engineering lines including drainage work in Eastern Ontario, Photo-Topographical work in the Rocky and Selkirk Mountains, and Dominion Land Survey work in Alberta. In 1904 he was appointed Inspector of Surveys for the Dominion Government for Saskatchewan, and in 1907 became District Engineer and Surveyor for the Saskatchewan Government with Headquarters at Saskatoon, with a territory of about 25,000 square miles, which position he held until May, 1913.

Mr. Stewart graduated from the Toronto University in Applied Science in 1905, and in 1907 completed his Post-Graduate Course, obtaining the degree of Bachelor of Applied Science. He has had long experience in the Survey of Dominion Lands in Ontario, Manitoba and Northern Saskatchewan.

Mr. Lee is an Ontario Land Surveyor and for four years was engaged in Survey and Engineering work in Ontario and Dominion Survey work in Northern Manitoba, under the direction of Mr. J. W. Tyrrell, the well known Surveyor and Explorer.

In addition to the above, all the members of the firm are Dominion and Saskatchewan Land Surveyors, the present firm being established in 1910. During the last few years, this firm have been intimately connected with the tremendous expansion that has been taking place in the West. A considerable portion of the City of Saskatoon and surrounding subdivisions having been surveyed by them, as well as many small town-sites throughout the Province.

Their work includes the investigation of water-power schemes, industrial propositions and drainage. At the present time they are Engineers for three large drainage schemes under the Drainage Act of the Province of Saskatchewan. This Act was passed recently by the Legislature of the Province of Saskatchewan and provides for the investigation and construction of drainage works for the improvement of Agricultural Lands. The Act provides for the formation of a Drainage District upon the petition of the Resident Owners, of at least half the area of the lands which would be affected by the construction of a drain within the area described in the petition.

Upon receipt of such a petition by the Minister of Public Works, he appoints an Engineer to make a report, prepare plans and estimates of the proposed work, together with a schedule of assessments according to the amount of benefit which it is estimated, will be derived by the different lands affected. If the scheme is found to be practicable, tenders are called for by the Minister of Public Works and the work let by contract.

The amount of the cost of such work is paid by the Department of Public Works, in the first instance, and debentures are issued, which are a lien on the lands affected and which may run from 20 to 35 years. This arrangement makes it possible for a district to construct a drain and reclaim and improve the lands situated therein and secure the benefits of such work at once, and spread the payment over a term of years, in such a way that the annual payment is comparatively small in proportion to the benefits received.

There are large areas of land in the Northern and Eastern parts of the Province which when drained would make the choicest of farm lands.

In addition to drainage work, the firm undertakes all classes of Municipal work, plans and specifications and estimates for Municipal Councils. As a Municipality becomes settled up and prosperous, it has been found desirable to expend more work on Public Improvements, than can be provided by Statute Labor, and many Municipalities are constructing extensive improvements by contract. There is perhaps no class of construction where more benefit can be directly derived than from money spent on improving the highways of a Community if it is properly applied and there is no way in which money can be more easily wasted than by applying it injudiciously to Roads.

what they are doing

GOOD ROADS

"I am a cabbage grower," said Frank Terrace, addressing a good roads convention at Tacoma, Wash. "I haul my produce to the sauer kraut factory at South Seattle. Before the road over which I travel was built I had to get up at 4 o'clock in the morning to start on my journey. The limit of the load I could haul with a team of 1,800-pound horses was 2,500 pounds, and after visiting the factory I would arrive back at my home late in the evening. But look at the difference now that a permanent hard surface has been laid down! I start on my trip about 8 o'clock and need only a team weighing 1,400 pounds to haul a load of 5,000 pounds of cabbage, which is double my previous capacity. And, best of all, I find on my return to the house early in the afternoon that I have finished the day's work without the horses having turned a hair.

"Look at the matter from an economic standpoint, and let that standpoint be a personal one. Suppose you are a farmer and have wheat to haul to market. Maybe you usually market your wheat when the roads are good and think the improvement will do you no good here; but there will be a time when you will have to travel these roads with a load when they are bad. Perhaps you can haul thirty bushels with one team, where, with the roads in the condition they might have been at that very time, with proper work you could have hauled sixty. Estimate what extra expense in time and labor you expend in just that way in one year and see how much you might have afforded to put into road improvement in that way and still be winner.

"Then again, it is an established fact that the condition of the roads in the grain-growing districts or the hog-raising districts or any districts which have marketable products have a direct and very decided bearing on the fluctuation of the markets. Good roads mean low prices, and bad roads will cause prices to soar. Now, it is not any very deep deduction to make that if the farmers in one section will put their roads in condition so they can market their products when the other farmers can not, they will be in a position to command the high prices regularly. Again, in just so much as they can lower the cost of transporting products from farm to market will they be increasing profits on all products they sell. It seems to us the farmer who can not see a direct and immediate certain return from putting roads in the best possible condition is not entitled to be called an economist, nor even a shrewd business man." The News, Trinidad, Colo.

DONATIONS FOR GOOD ROADS

The Association of American Portland Cement Manufacturers has passed a resolution to donate, for the next three years, one per cent of their entire gross output of cement towards the ocean-to-ocean highway project. This pledge, it is stated, will amount to 2,700,000 barrels of cement.

Another notable subscription to the project is that of the Indiana automobile manufacturers and motorists, who have promised nearly \$4,000,000 in cash toward the building fund.—American Contractor.

HOW TO ATTACH PLASTER TO CONCRETE

The Aberthaw Construction Co., Boston, Mass., recommend the following method of attaching plaster to concrete: Make the concrete as porous as possible by omitting sand from the mix and by not spading the concrete next to the forms. Where plaster is required underneath a floor or roof, if the forms are sprinkled with ½-inch stone before the concrete is placed a rough surface will be obtained to which plaster will key nicely.

To attach Portland cement plaster to smooth concrete, hack the surface with a point, brush the surface thoroughly to get the dust out, wash it and in every case make sure that the under concrete is thoroughly wet before the plaster is applied. Otherwise the water will be soaked out of the plaster and the plaster will not adhere. Wash the surface with grout just ahead of the plaster, and make sure that the plaster is applied before the grout has time to set.

It is the experience of the Aberthaw Construction Co. that lime plaster is very unsatisfactory for placing on concrete surfaces. The only way they have been sure of a satisfactory result is to use a plaster which is principally composed of plaster of Paris.—California Architect and Engineer.



FREDERICK G. TODD
LANDSCAPE ARCHITECT
 MUNICIPAL PARK SYSTEMS AND TOWN PLANNING
 Birks Building, MONTREAL.

RICKSON A. OUTHET
LANDSCAPE ARCHITECT
 Fel. Am. Soc. Landscape Architects
 PLANS FOR CITY DEVELOPMENT AND LAND SUBDIVISIONS.
 Beaver Hall Hill, MONTREAL.

DUNINGTON-GRUBB & HARRIES
LANDSCAPE ARCHITECTS
 Consultants on all matters relating to Park and Garden Design,
 Real Estate and Suburban Development, Civic Art and Town Planning.
 24 Adelaide St., East - - TORONTO.

LEONARD E. SCHLEMM
LANDSCAPE ENGINEER
 Consultant on Landscape Engineering in connection with
 all matters relating to Town Planning
 43 ST. FRANCOIS XAVIER ST. MONTREAL

GUY WILFRID HAYLER
Landscape Architect, Town Planner and Municipal Engineer
 Member, Institution of Municipal Engineers Member, Royal Sanitary Institute
 Exhibitor, Royal Academy International Town Planning Exhibition.
 Town Planning in all its branches, Real Estate, Civic and Suburban Development
 384 Notre Dame Avenue, WINNIPEG, MANITOBA

GEOFFREY K. BURNETT
 (Successor to HILL & BURNETT)
 CIVIL ENGINEER AND B.C. LAND SURVEYOR
 PLANS, SURVEYS, REPORTS.
 NEW WESTMINSTER,
 P. O. BOX 886 BRITISH COLUMBIA

LIGHTING ENGINEERS

P. MORTON-WRIGHT
ILLUMINATING ENGINEER
 16 University Street, MONTREAL.

The Canada Iron Corporation, Limited



SUCCESSORS TO:

Canadian Iron & Foundry Co., Limited
 Canada Iron Furnace Co., Limited
 Annapolis Iron Co., Limited
 John McDougall & Co., Drummondville

Head Office : Montreal, P. Q.

Iron Ore, Pig Iron, Car Wheels, Cast Iron Water and Gas Pipe, Specials,
 Valves, Hydrants, Etc. Castings of All Kinds.

The Canadian Bridge Co., Limited

WALKERVILLE, ONT.

Manufacturers of **Railway and Highway Bridges**

Locomotive Turn Tables, Roofs, Steel Buildings, and Structural Iron Work of all descriptions.

SEWER PIPES

CHIMNEY TOPS
 FLUE LININGS
 WALL COPINGS

Ask for Price Lists
 and Discounts



SALT-GLAZED and VITRIFIED
 True to size
 Impervious to water
 Will never disintegrate

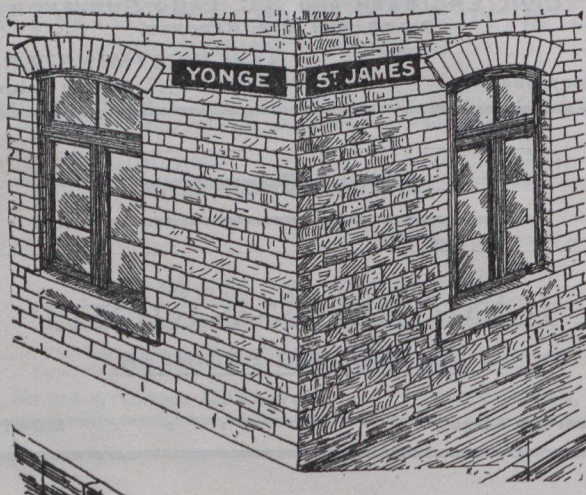
Sizes manufactured and always
 in stock, 4 in. to 24 in.

TELEPHONE (Toronto connection) **PARK 1809**
 Post Office: **SWANSEA**

Works and Office:
SWANSEA, near Toronto

THE DOMINION SEWER PIPE CO., Limited

The **INDEPENDENT**
 COMPANY



The Principal Cities in Canada
 are using our
**ENAMEL STEEL STREET NAMES
 AND HOUSE NUMBERS**

THEY LAST A LIFETIME

MADE IN CANADA BY

The **THOS. DAVIDSON MFG. Co., Limited**

Selling Agent, **J. N. WARMINTON,**

207 St. James St., Montreal, Que.
 Write for prices and samples

Can a Stranger find his way around your City or Town
 without difficulty?
 Are all Streets named and houses numbered up to date?