

CANADIAN CONTRACT RECORD

*A Weekly Journal of Engineering, Public Works,
Tenders, Advance Information and Municipal Progress*

This Paper Reaches Every Week the Town and City Clerks, Town and City Engineers, County Clerks and County Engineers, Leading Civil Engineers and Contractors throughout Canada, and Purchasers of Municipal Debentures.

VOL. 17.

TORONTO, M

WINNIPEG, VANCOUVER

No. 43

THE CANADIAN CONTRACT RECORD PUBLISHED EVERY WEDNESDAY

As an intermediate Edition of the Canadian Architect and Builder.

THE C. H. MORTIMER PUBLISHING COMPANY
of Toronto, Limited,

Subscription Price, \$2 per annum, payable in advance.

CONFEDERATION LIFE BUILDING, TORONTO
Telephone Main 3262.

Branch Offices:
Room B34, Board of Trade Building, Montreal,
Telephone Main 3299.
780-781 Union Bank Building, Winnipeg,
Telephone 1274

Davis Chambers, 615 Hastings St., Vancouver,
B. C. Telephone 2248

Subscribers who may change their address should give prompt notice of same. In doing so give both old and new address. Notify the publishers of any irregularity in delivery of papers.

WANTED

First-class Architectural Draughtsman, capable of taking charge of office work. Full particulars, apply to

HERBERT H. GATES, Architect,
Ray Bldg., Halifax, N.S.

For Sale

Two Canadian patents, covering Labor-Saving Device. Information given on application.

Box 512, St. Catharines, Ont.



OTTAWA, ONT.

Architectural Competition for Departmental and Justice Buildings.

Competitive drawings are invited for Departmental and Justice Buildings to be erected for the Dominion Government at Ottawa, Ont.

The author of the best design will be awarded a premium of \$3,000, the second best \$4,000, the third best \$2,000 and the fourth best \$1,000. Drawings will be received not later than April 15th, 1907, and are to be addressed to the Secretary of the Department of Public Works, Ottawa.

This competition is open to Canadian Architects who have been resident in Canada for one year or more.

Conditions of competition stating requirements of buildings and maps showing site &c. may be had on application to the undersigned.

By order,
FRED. GELINAS,
Secretary.

Department of Public Works,
Ottawa, December 12, 1906.

Newspapers will not be paid for this advertisement if they insert it without authority from this Department.

TENDERS FOR SUPPLY OF 30 MILES OF WATER PIPE

Sealed tenders addressed to the Chairman of the Fire, Water and Light Committee for the supply of thirty miles of assorted water pipe and quantity of specials for the City Water Works, will be received at the office of the undersigned up to 2.30 p.m. on

FRIDAY, MARCH 1, 1907.

Specifications and forms of tender may be obtained at the office of H. N. Ruttan, City Engineer, Winnipeg, Man.

Each tender must be accompanied by an accepted cheque or draft payable to the order of the City Treasurer, or cash deposit for the sum called for in the form of tender supplied, which will be subject to forfeiture in case of failure on the part of the contractor to enter into a written contract with approved sureties if called upon to do so.

The city reserves the right to reject any or all tenders or to accept any bid which appears advantageous to the City of Winnipeg.

C. J. BROWN,
City Clerk.

City Clerk's Office, Winnipeg, December 8, 1906.

CONTRACTS OPEN.

OSHAWA, ONT.—Debentures will be issued for \$2,400 for the purchase of a park.

CHATHAM, ONT.—Plans are being prepared for a new waterworks station to cost \$10,000.

PORTAGE LA PRAIRIE, MAN.—The Bank of Montreal will erect a new building here, next year.

ESTEVAN, SASK.—It is rumored that the Roman Catholics of this town will erect a new hospital.

HAMILTON, ONT.—Trebles, Limited have decided to make large additions to their present premises.

PORT ARTHUR, ONT.—G. F. Clarkson is completing arrangements for the establishment of a large lime producing plant in this town.

LETHBRIDGE, ALTA.—George Taylor is about to erect a large greenhouse on Second street.

OWEN SOUND, ONT.—The City Council are considering the question of purchasing a fire engine.

LACOMBE, ALTA.—The Presbyterians of this town have decided to build a new church to cost \$12,000.

ST. CATHARINES, ONT.—Debentures will be issued for \$3,000 with which to purchase a school site.

MAPLE CREEK, SASK.—The Town Council have decided to expend \$2,000 for extension of waterworks system.

FORT FRANCIS, ONT.—Russell Bros., of Winnipeg, Man., have decided to establish a foundry and machine shop here.

ST. LOUIS, QUE.—The Town Council have decided to purchase a fire engine with a capacity of 800 gallons per minute.

NEW WESTMINSTER, B. C.—F. J. Lynch has purchased a lot on Clarkson street on which he will erect a cigar factory.

LONDON, ONT.—Bids were opened December 18, for purchase of \$130,000 debentures, but owing to low price offered, the sale was deferred.

SASKATOON, SASK.—A site has been secured for the new post office and customs house, and tenders for the erection of the buildings will be called for shortly.

WEYBURN, SASK.—Robinson, Walsh, Greig & Leavens have purchased a site corner Souris avenue and Second street, on which to erect a hotel to cost \$49,000.

MEDICINE HAT, ALTA.—J. D. McGregor will commence work immediately in connection with his irrigation scheme. A pump will be installed costing \$5,000,000.

SARNIA, ONT.—On January 7, 1907, the ratepayers will vote on the question of spending \$25,270, for construction of sewers and water mains, and erection of a storehouse.

ST. ANDREWS, N.B.—G. Murdoch, C.E., of St. John, N.B., is preparing a report on the question of installing a sewerage system, and also the construction of a wharf.

BRANDON, MAN.—Morris & Douglas have decided to erect a new theatre to cost \$50,000, and have instructed A. & W. Melville, architects, Winnipeg, to prepare plans therefor.

LA TUQUE, QUE.—A company is being formed, in which John Breakey, President of the Quebec Bank, and W. Hanson, of Montreal, are interested, for

the purpose of establishing large pulp and paper mills here.

PEMBROKE, ONT.—Tenders will be received up to January 5th, 1907, by J. P. Sarsfield, chairman of the Waterworks Committee, for the supply of steel pipe, specials and valves.

PORT ARTHUR, ONT.—The Railway & Municipal Board have granted the application of the town for approval of a by-law to extend the waterworks system, at a cost of \$50,000.

REGINA, SASK.—The Winnipeg Oil Co., Winnipeg, Man., may erect a large warehouse here.—Mr. Smith, of Smith & Ferguson, will erect a large block of buildings on Rose street next year.

WOODSTOCK, N.B.—It is reported that the Dodge Manufacturing Co., of Indiana, have acquired the business of the Hoinston Foundry & Machine Co., and intend to erect several new buildings.

SINTALUTA, MAN.—G. G. Barbe will receive tenders up to December 29 for masonry, plastering, carpentry, galvanized iron, heating, painting and glazing necessary in the erection of a brick school here.

ST. JOHN, NFLD.—A large hotel to be erected here at a cost of \$100,000 among those interested in the project are: W. A. McKay, North Sydney, N. S., R. Taylor, Halifax, N. S., and Z. Garneau, Quebec, Que.

BRANTFORD, ONT.—The City Council have granted a franchise to the Dominion District Steam Heating Company, of Toronto, for the establishment of a plant for distribution of steam and hot water for heating purposes.

STRATFORD, ONT.—The Grand Trunk Railway have taken out a permit for the erection of a new round house, cost \$8,000.—The Stratford and St. Joseph's Radial Railway Company are seeking permission from the Dominion Government, to operate an electric road from this city to St. Joseph.

VANCOUVER, B. C.—P. Burns & Co. have purchased property on which they will erect a block of buildings.—The Royal Bank have purchased property on Government street and will erect a new building.—Tenders will be received up to January 21st, 1907, by W. W. Northcott, City Purchasing Agent, for the supply of 4,000 feet of six-inch and 10,000 feet of four-inch cast iron water pipe.

EDMONTON, ALTA.—The ratepayers have passed by-laws authorizing the expenditure of \$121,000 for new pavements, \$119,000 for street car rails, and \$45,000 for an incinerator.—A pipe line will be laid connecting the Strathcona pumping station with the city water mains, estimated cost \$6,000.—The City Commissioners have been authorized to purchase a 3,000,000 gal. oil turbine pump.

OTTAWA, ONT.—F. Gelinas, Secretary, Department of Public Works, will receive tenders up to January 11th, 1907, for construction of a wharf at Baddeck, N. S., and up to same date for construction of a wharf at Middle County N. S.—The Grand Trunk Pacific Railway will shortly take tenders for the construction of the following portions of a new road: Moncton to Chipman; Grand Forks to Quebec bridge; La Tuque forty miles westward, and from Lake Abitibi eastward one hundred and fifty miles.—The Quebec Central Railway will extend their new line to connect with the Temiscouata Railway at Cavana, 150 miles from St. George, through the La Famine Valley and along the river and frontier line.

MONTREAL, QUE.—It is reported that O. D. Slavey, an American hotel

manager, in conjunction with Montreal and American capitalists, is planning the erection of a twelve-story hotel on the southwest corner of Dominion Square. He states that the plans have already been prepared for the structure, which will cost \$125,000.—The Bank of Toronto have decided to defer the erection of their new building, to be erected corner of St. James and McGill streets, till the spring of 1908.—A. Bruce Smith, Manager of Telegraphs, Grand Trunk Pacific Railway, will receive tenders up to December 31st, for delivery of 8,000 cedar telegraph poles 25 feet long, and 2,000 30-feet long.—A. Ferland has purchased a lot on St. Andre street, and A. Pickard has purchased vacant property on Demontigny street.—The Mount Royal

addition will be made to Cooke's Church, corner Mutual street and Queen street east.—A by-law providing for the issuance of \$125,000 car-route debentures will be submitted to the ratepayers, January, 1907.

WINNIPEG, MAN.—R. Filer, of Montreal, Que., contemplates the erection of a large apartment house, corner Langside and Cornish avenues.—A Roman Catholic church is to be erected at Fort Rouge and another in the western part of the city.—Tenders will shortly be called for the supply of a 1000 h. p. generator and a 500 h. p. boiler for the city.—Joseph Bernhardt has purchased the store and site owned by John Leslie and will erect a hotel.—It is reported that the Y. M. C. A. will make additions to their premises.—Tenders will shortly be taken by the Provincial Government for poles, wire, crossarms, etc. necessary for the construction of telephone lines throughout the Province of Manitoba.—A. & W. Melville, architects, are preparing plans for a new theatre to be erected at Brandon.—The Fire, Water & Light Committee have recommended that the well known as No. 1 be deepened to the same level as No. 2 and the old pump of well No. 1 be sunk to the new level. The cost of the changes will be about \$12,000.—C. B. Smith, C. E., states that tenders will shortly be called for the work necessary in connection with the proposed power development at Point du Bois Falls.—The Imperial Syrup Company will erect a factory for the manufacture of macaroni.—The Grand Trunk Pacific Railway have purchased a large block of land, about four miles west of this city, which they will use as yards, and will also erect workshops.

FIRE

Forge building of the Nova Scotia Steel & Coal Company, New Glasgow, N. S., damage \$5,000.—Richardson's dry-goods store, Reach & Company's grocery store, and adjoining buildings, Calgary, Alta., loss \$50,000.—J. L.

Thornley's shoe store, Fernie B. C., loss \$2,000.—Residence of W. J. Schwigler, Port Arthur, Ont., loss \$6,000.—Mill of T. Lefebvre & Company, Montreal, Que., loss \$25,000.—Charmandy Block, North Bay, Ont., loss \$6,500.—Lalonde & M'Ilroy's planing mill, Winnipeg, Man., loss \$6,000.

CONTRACTS AWARDED.

PETERBORO, ONT.—Erection of military buildings for Dominion Government: Robt. Clinkscale, this town, contractor.

HALIFAX, N. S.—Erection of round and engine houses for Intercolonial Railway: M. E. Keefe Company, Halifax, contractors.

VANCOUVER, B. C.—Erection of a bridge on Third street: Asken & Kennedy, Vancouver, successful tenderers at \$749.

SEAFORTH, ONT.—Purchase of town debentures: Wood, Gundy & Company, Toronto, successful tenderers at \$55,111.

LONDON, ONT.—Supply of 1,200,000 feet of lumber for McClary Manufacturing Company's storage building: G. H. Belton, London, Ont., successful tenderer.

SYDNEY MINES, N. S.—Erection of station, freight house and other buildings for Intercolonial Railway: Chappell Bros. & Company, Sydney, N. S., successful tenderers.

WOODSTOCK, ONT.—Installation of a heating system in Collegiate Institute: McEachren Heating & Ventilating Company, Galt, Ont., successful tenderers at \$2,900.

WINNIPEG, MAN.—Erection of steel tower and water tank for Lake of the Woods Milling Company: Ontario Wind Engine & Pump Company, Winnipeg, successful tenderers.

TORONTO, ONT.—Erection of grand stand at Exhibition Park, F. H. Morris, Toronto, successful tenderer at \$216,465.—Erection of Horticultural Building at Exhibition Park: E. R. French, Toronto, successful tenderer at \$90,000.

AMHERSTBURG, ONT.—\$12,244.45 4½ per cent sewer debentures have been awarded to W. C. Brent, Toronto, at 97.09 and accrued interest. Other bids received were: Wood, Gundy & Co., Toronto, 97.75; Aemilius Jarvis & Co., Toronto, 96.576.

AN OPPORTUNITY FOR CEMENT USERS

The third annual convention of the Natural Association of Cement Users will be held at Tattersall's, Chicago, January 7th to 12th, and as usual the Ideal Concrete Machinery Company, of South Bend, Ind., will prepare an exhibit, to which, through this publication, they extend an invitation, to not only their many customers, but those who will also attend the Convention because of their interest in the great possibilities embodied in the use of concrete in its various forms.

This Company is never at a standstill, and from year to year add parts, accessories or attachments to their famous "Ideal" block machine, which gives their customers an opportunity to add to their equipment.

During the past year they have perfected a complete brick machine, which can also be used as an attach-



DUMPING BUCKETS

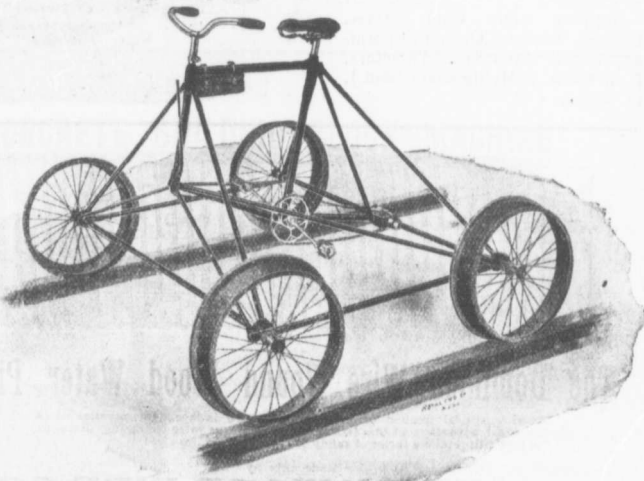
OF ALL KINDS



HOISTS
 DERRICKS
 WIRE ROPE
 BLOCKS, ETC.



RAILROAD
 VELOCIPEDES
 HAND CARS
 RAIL CARS
 PUSH CARS
 TRACK TOOLS
 LIGHT RAILS



W.H.C. MUSSEN & CO.
 MONTREAL

ment to their well-known block machine.

An extensive set of friezes and belts courses so arranged as to give perfect return corner effect, will greatly please and interest contractors, builders and architects.

The new Model "E" interchangeable 24-inch block machines will also be shown. New face plates in endless variety. Porch pier block molds with fluted corners, and round designs, will further prove that this Company intends to remain in the lead.

Their stellar attraction, however, around which centers the great interest of this splendid array of new features, will be the Ideal concrete mixer, which they at last have brought to that perfection detail which entitles it to be classed an "Ideal."

Our readers are cordially invited to inspect this exhibit, and we can assure them that at the headquarters of the the Ideal Company, they will find a corps of attendants who will be pleased to explain as well as demonstrate by actual operation everything shown.

NEW COMPANIES.

St. Paul Cobalt Mining Company, Limited, Cobalt, Ont., incorporated, capital \$600,000. Directors, A. G. Terrill, S. F. Nelson, and H. Gibson.

Anthony Blum Gold Mines, Limited, Toronto, Ont., incorporated, capital \$100,000. Directors, J. G. Shaw, J. Montgomery, and J. G. Strong.

Coleman & Quebec Mining Company, Limited, Ottawa, Ont., incorporated, capital \$1,000,000. Directors, V. O'Connor, R. Mason, J. Wilson, A. T. Shillington, and J. Carss.

Algoma Custom, Smelting & Refining Company, Limited, Sault St. Marie, Ont., incorporated, capital \$250,000. Directors, T. H. Pollock, J. Hermann, W. H. Green, H. Appleton, and A. Dunsmore.

Stellar Silver Cobalt Corporation, Limited, Sudbury, Ont., incorporated, capital \$1,000,000. Directors, J. F. Black, J. H. Morin, and C. McCrea.

Delaney & Pettit Sand Paper Company, Limited, Toronto, Ont., incorporated, capital \$50,000. Directors, C. Delaney, C. S. Pettit and G. H. Pettit.

The Vulcan Company, Limited, London, Ont., incorporated, to manufacture furnaces, stoves, etc., capital \$100,000. Directors, R. W. Shaw, E. W. M. Flock, and F. G. Mitchell.

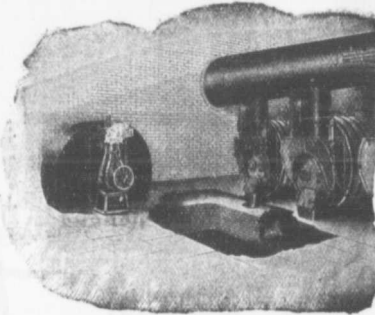
Old Chap Mining Company, Limited, Cobalt, Ont., incorporated, capital \$1,000,000. Directors, W. H. Francis, R. G. Coan, and Fay W. Libby.

Canadian Clothespin Manufactur-

Portland Cement...

HIGH GRADE GERMAN BRANDS FOR GRANOLITHIC AND ARTIFICIAL STONE SIDEWALKS.

Sewer Pipes, Best English Cements. Best Belgian Cements Culvert Pipes, &c. W. McNALLY & CO., Montreal

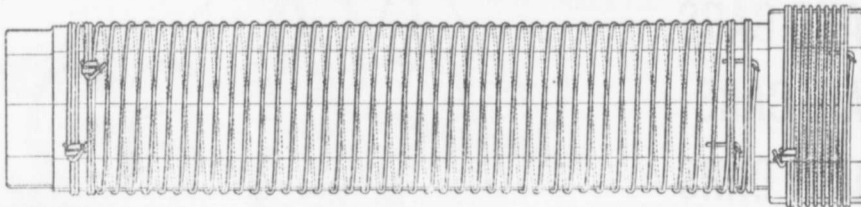


MECHANICAL DRAFT

- Short Stacks
- Positive Draft
- Saves Fuel
- Burns Cheap Coal
- Constant Steam Pressure
- Independent of Weather

Catalogue P

CANADIAN BUFFALO FORGE COMPANY, LTD. MONTREAL, QUE.



The Dominion Wire Wound Wood Water Pipe

Showing special method of winding with two independent parallel wires. The great advantage of this is, that in event of one wire becoming damaged, the pipe still retains a factor of safety of 2.5.

Made only by

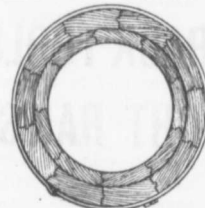
THE DOMINION WOOD PIPE CO., LIMITED

NEW WESTMINSTER, B. C.

LIMITED

Also Manufactures of Continuous Stave Pipe for Irrigation and Power Purposes.

WRITE FOR CATALOGUE.



End view of Pipe and Coupling.

The Northern Electric and Manufacturing Co., Limited

MONTREAL AND WINNIPEG

TELEPHONES, SWITCHBOARDS, FIRE ALARMS, LINE MATERIAL AND SUPPLIES

GENERAL OFFICE AND FACTORY

Corner Notre Dame and Guy Street, MONTREAL

ing Company, Limited, Arnprior, Ont., incorporated, capital \$40,000. Directors, Wellington M. Howe, W. A. Cameron, R. Richardi, S. R. Rudd, M. Havey, J. J. Neilson and J. G. Ledgerwood.

Cobalt Silver Prince, Limited, Cobalt, Ont., incorporated, capital \$1,000,000. Directors, S. D. Maddin, D. Crawford, H. Campbell, H. H. Lang, and F. Finn.

Cobalt Chief Silver Mining, Limited, Toronto, Ont., incorporated, capital \$600,000. Directors, J. W. Mc-

Donald, G. J. Valin, T. Brown, Eva L. Bradley and Gertrude Cherpaw.

Flanagan & Cameron, contractors, have commenced business at Fort William, Ont.

A new contracting firm at D'Israeli, Que., has been registered. The members are H. Beaudoin and F. Soucy.

Canadian Portland Cement Company, Toronto, have declared a 3½ per cent. dividend for half year, payable January 2, 1907.

Rhodes, Curry & Co., of Amherst, N. S., have received an order for several narrow gauge, twenty ton flat cars for the Anglo-Newfoundland Developing Co., of Grand Falls, Nfld.

CORRUGATED
WRITE FOR PRICE
METALLIC ROOFING CO.
LIMITED
TORONTO, CANADA.
IRON



"BULL DOG" SHOVELS

forged from one piece of High Carbon Bar Steel without weld or rivet, solid neck and blade, tempered in oil, straight chucked handle can be replaced when broken.

CANADIAN SHOVEL & TOOL CO.
WRITE FOR CATALOGUE LIMITED **HAMILTON, CANADA**



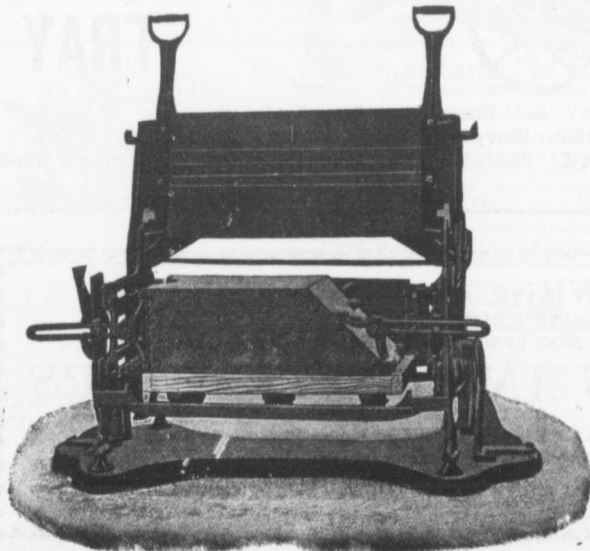
Sectional View of finished One-piece Shovel, showing gauge or thickness of steel at different points

Note Solid Shank

... Speaks For Itself ...

THE MILES CONCRETE BUILDING BLOCK MACHINE

Makes 40 Different Sizes of Stone in Any Design, as well as the Specials, viz.:
 Water Table, Gable, Circle, Angle, Chimney, Cornice, Pier Blocks, etc
Catalogues and Information Cheerfully Furnished.



This Machine makes all blocks face down—"the only practical way"—allowing of a richer and finer facing, producing blocks that are perfect in appearance and impervious to moisture.

Let us tell you how the "Miles" will pay for itself over any other machine in three months' operation.

Manufactured and Sold by
VINING BROS.
M'f'g. Co.
 Niagara Falls, - Can.

CALENDAR ANNOUNCEMENT.

Messrs. F. H. Hopkins & Company, railway and contractors' supplies, Montreal, have issued their 1907 calendar, which is a first-class one for office purposes, being printed on green paper and the figures being large and distinct. It illustrates some of the different lines handled by this firm, who will be pleased to mail one, free of charge, to any of our readers upon request.

ERRATUM.

In the description of the R. Forbes dam at Hespeler, Ont., which appeared in the last issue of the CONTRACT RECORD, it was stated that the old dam was "a modern structure." The word "modern" should have been "wooden."

A. LEOFRED

(Graduate of McGill)

Consulting Engineer

WATERWORKS A SPECIALTY.

50 St. John Street **QUEBEC**
Metropolitan Ins. Bldg. Phone 545.

THE GREY AND BRUCE PORTLAND CEMENT COMPANY

of Shallow Lake, Limited.

Manufacturers of

BRAND OF

"HERCULES" PORTLAND CEMENT

Very finely ground. Unsurpassed for sidewalks, floors and all work requiring the highest grade of Portland Cement. For prices address,

A. D. CREASOR, Sec'y-Treas.
Head Office, Owen Sound, Ont.

JNO. S. FIELDING

C. E.

CONSULTING ENGINEER

EARTH LOADED
STONE LOADED
WATER LOADED

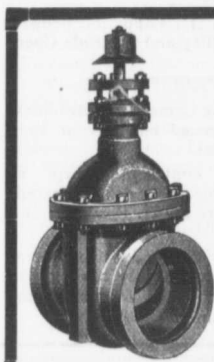
REINFORCED CONCRETE

DAMS

ALSO

**HYDRAULICS,
WATER POWER
DEVELOPMENT
REPORTS, ESTIMATES, ETC.**

TORONTO - 15 **TORONTO STREET**



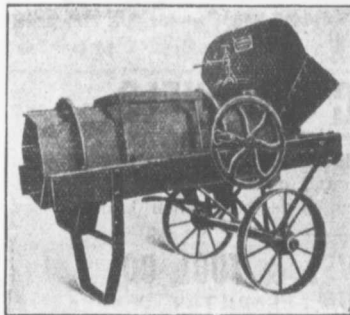
**KERR'S
WATERWORKS VALVES**

Are tested to 300 pounds hydraulic pressure before being stocked. They are of good substantial weight and design, and can be relied upon.

Write for catalogue, and we will tell you more about them.

THE KERR ENGINE CO., LIMITED
Walkerville - - Ont.

The Hand Power Continuous Concrete Mixer



FOR

Sidewalk and Street Work, and other classes of work where but small capacity is required.

Other Mixers, Hand, Steam, Electric, Gasoline and Gravity

E. F. DARTNELL
MONTREAL

THE WILKINSON PLOUGH COMPANY, LIMITED
TORONTO, CANADA



**SOLID
STEEL
TRAY**

TRAY: Solid Pressed Steel, Edges Turned Over.
WHEEL: Heavy Wrought Iron, running in Cast Bearings.
FRAME: Selected Hardwood, Handles Capped and Projecting over Wheel

OF PARTICULAR INTEREST TO MUNICIPALITIES

Canadian White Company, Limited

SOVEREIGN BANK BUILDING, MONTREAL, CANADA

WINNIPEG OFFICE: BANK OF BRITISH NORTH AMERICA BUILDING

ENGINEERS AND CONTRACTORS

FOR

Steam and Electric Railroads: Electric Light and Power Plants: Building Construction: Water and Gas Works: Docks, Harbor Works, etc., etc.

J. G. WHITE & COMPANY, INC.
New York City

CORRESPONDENTS
J. G. WHITE & COMPANY, LIMITED,
London, England

WARING-WHITE BUILDING CO.
London, England

I. A. Chadburn and G. W. Bought have registered at Montreal, as the Standard Cement Brick & Block Company.

Messrs. M. A. Stewart and G. G. Powell, assistant roadway engineers, City Engineer's Department, Toronto, will assume the duties now devolving upon Mr. W. M. McPhail, who leaves the city's service on December 31 to assume the management of the Western Bitulithic Paving Company, with headquarters in Winnipeg.

JOHN GALT
C. E. and M. E.
CONSULTING ENGINEER
and **EXPERT**

SPECIALTIES:
WATERWORKS, SEWERAGE
and **ELECTRIC LIGHT**

Chief Assistant Engineers:
O. W. SMITH, C. E. W. J. BOWERS, C. E.
23 Jordan Street **TORONTO**

The Electric Blue Print Co.
40 Hospital Street, MONTREAL

BLUE PRINTS
POSITIVE BLUE PRINTS
BLACK PRINTS
MULTI-COLOR PRINTS

Best Finished Work on the Market at the Lowest Prices.

WHY PURCHASE STRUCTURAL STEEL

We offer 300 tons second hand **TEE AND GIRDER RAILS**, for bridges, &c., cut in lengths to suit purchasers.

SESSENWEIN BROS., MONTREAL

Men for Contractors
EMPLOYMENT OFFICE
Phone **WINNIPEG, MAN.** 868
4858 Main St.

Men of all descriptions furnished on short notice for railroad and building contracts.

Special Attention Given to Furnishing Gangs.
E. E. BRYANS & CO.

McGREGOR & McINTYRE, LIMITED

67 to 91 Pearl Street, Toronto, Ont.

STRUCTURAL IRON WORKS

Beams, Channels, Tees, Angles, Chequered Plates, etc., in stock.
Fire Escapes. Sidewalk Doors, Iron Stairs, etc., etc.
Sole Agents for Duplex Hangers and Goetz Post Caps, Wall Boxes, etc.

PHONES: 7248
7249

ESTIMATES FURNISHED

JOSSON CEMENT

Is the Highest Grade Artificial Portland Cement and the Best for High Class Work. Has been used largely for Government and Municipal Works.

TO BE HAD FROM ALL CANADIAN DEALERS OR FROM

C. I. DE SOLA, 180 St. James Street, MONTREAL

AMBURSEN DAMS

OF REINFORCED CONCRETE

Write us at once for information.

Ambursen Hydraulic Construction Co., of Canada, Limited
Coristine Building, MONTREAL

A. & E. LOIGNON, C. E.

17 Place D'Armes Hill, MONTREAL

REINFORCED CONCRETE CONSTRUCTIONS

FOR

Fireproof Buildings, Hydraulic and Public Works
Steel Structures for Bridges and Buildings
Warehouses, Factories, Water Power Developmen

ROBINSON'S PATENT MOULD
for Cement Culvert Pipe

With or without Cone Top Filler. These Moulds are standard both in sizes and thickness of wall. Furnished with plain or telescopic joints. Write for Catalogue.



CLIMAX ROAD MACHINE CO.
HAMILTON, ONT.

Please mention the CANADIAN CONTRACT RECORD when corresponding with advertisers.

The Toronto Pressed Steel Co., Limited
Toronto and Winnipeg

Manufacturers

Drag Scrapers (Solid pressed bowl)
Wheel Scrapers (pressed or square bowls)
Dump Cars, from 1 to 3 yards
Wheelbarrows, Wood or Steel Trays
Waggons, Carts, Cement Mixers, Etc.

Prompt delivery from stock at Toronto and Winnipeg.
Send for complete catalogue. Write nearest office.



FOR SALE

We Offer Subject to Prior Sale for Immediate Shipment

4000 ft. **S. & F. CAST IRON PIPE** 8 in. x 45 x 12 ft. (Proved 300 pounds)
4000 ft. " " " " 10 in. x 65 x 12 ft. (and Coated.)

Also a Large Assortment of 2" to 10".

Our Season Being Over We are Prepared to Sell at Old Prices to Reduce Stock.

L. H. GAUDRY & CO., Importers, **QUEBEC** and **MONTREAL**
76 PETER STREET 307 CORISTINE BUILDING

NEW COMPANIES.

Canadian Cobalt Corporation, Limited, Toronto, Ont., incorporated, capital \$1,000,000. Directors, J. W. Bayne, G. B. Strathy, R. R. Perry, L. C. Todd, and J. E. Riley.

Nepigon Mines Limited, Toronto, Ont., incorporated, capital \$5,000,000. Directors, J. H. Black, J. Ferguson, L. P. Sandbach, G. C. Campbell and A. M. Wiley.

Keewatin Silver Cobalt Mining Company, Limited, Toronto, Ont., incorporated, capital \$1,000,000. Directors, J. G. Shaw, A. Montgomey, and others.

Walkerville Carriage Goods Company, Limited, Walkerville, Ont., incorporated, capital \$40,000. Directors, T. E. Crocker, H. P. Crocker, F. H. Galusha, and A. W. Acson.

The Silverado Mines, Limited, Cobalt, Ont., incorporated, capital \$1,500,000. Directors, A. S. Galoska, H. Wallace, and others.

United States Cobalt Company, Limited, Toronto, Ont., incorporated, capital \$3,000,000. Directors, Robert McKay, G. Grant, and others.

Western Oil & Coal Consolidated have been granted a license to do business in the province of Ontario. A. Mills, Toronto, attorney.

Dominion Heating & Ventilating Company, Limited, Hespeler, Ont., incorporated, capital \$40,000. Directors, E. McNally, M. A. Secord, and Lillian Reid.

Peerless Larder Lake Mines, Limited, Toronto, Ont., incorporated, capital \$1,000,000. Directors, F. Hicks, W. F. Thomson, and others.

Davis Silver Cobalt Mines, Limited, Toronto, Ont., incorporated, capital \$2,000,000. Directors, G. W. Kenyon, G. A. Stanton, and others.

Jury Copper Mines, Limited, Sault Ste. Marie, Ont., incorporated, capital \$1,000,000. Directors, C. R. Shaw, C. H. Williams, and others.

Canadian Hardware and Manufacturing Company, Limited, Toronto, Ont., incorporated, capital \$50,000. Directors, W. S. Harrison, W. H. Elderson, S. M. Linn, and W. J. McManus.

The Iroquois Pipe Line Company, Limited, Chatham, Ont., incorporated, capital \$100,000. Directors, H. D. Symmes, W. E. Woodroof, and D. A. Coste.

Gold and Silver Mountain Mining Company, Limited, Cobalt, Ont., incorporated, capital \$1,000,000. Directors, D. H. McAndrew, R. Russell, and others.

Burroughs Larder Lake Mines Company, Limited, New Liskeard, Ont., incorporated, capital \$500,000. Directors, S. Read, J. E. Whyte, and others.

Western Canada Development

Company, Limited, Winnipeg, Man., incorporated, capital \$2,000,000. Incorporators, J. S. Hough, A. C. Ferguson, C. Williams, C. B. Lindsay, and W. M. Graham, all of Winnipeg.

Maritime Dairy Company, Limited, Sussex, N. B., incorporated, capital \$98,000. Incorporators, J. D. Prier, S. H. White, W. J. Mill, H. P. Robinson, all of Sussex, N. B., and others.

Northland Mining Company, Limited, London, Ont., incorporated, capital \$250,000. Directors, T. H. Smallman, J. Smallman, G. H. R. Harris and Amelia A. Harris.

Algoma Steel Bridge Company, Limited, Sault Ste. Marie, Ont., incorporated, capital \$40,000. Directors, A. Y. Bayne, M. McCollum, C. L. Brown, M. B. Stone, and A. B. Hillier.

British American Cobalt Mines Limited, Toronto, Ont., incorporated, capital \$3,000,000. Directors, J. Black, A. J. F. Ross and others.

Cobalt Bullion Mines Limited, Haileybury Ont., incorporated, capital \$1,000,000. Directors, A. T. Budd, H. P. Glidden, J. MacKay, P. J. Montague and F. Pottage.

Clifton Sand, Gravel & Construction Company, Limited, St. Catharines, Ont., incorporated, capital \$250,000. Directors, P. I. Price, H. Yale, and Nella L. Nelson.

Union Standard Furnace Company, Limited, Toronto, Ont., incorporated, capital \$100,000. Directors, C. A. Ryerson, C. L. Rosevear, G. M. Arnold, G. Shepard, and W. M. Weeks.

Nipissing Construction Company, Limited, Toronto, Ont., incorporated, capital \$40,000. Directors, J. W. Bain, G. D. Strathy, R. R. Perry, L. C. Todd, and J. E. Riley.

Ore Contracting Company, Limited, Bessemer, Ont., incorporated, capital \$40,000. Directors, G. W. Wallace, S. B. Sturtevant, and F. Pottage.

Baxter Oil Company, Limited, Thamesville, Ont., incorporated, capital \$50,000. Directors, J. W. Baxter, J. Dean, J. H. Thomas, B. H. Wark, and Carry J. Baxter.

Canada Pulverizer, Limited, Toronto, Ont., incorporated, capital \$100,000. Directors, J. N. Lewis, J. K. Leslie and S. H. Brandford.

Saint Martin's Railway Company, Limited, St. John, N. B., incorporated, capital \$99,000. Incorporators, G. W. Vaughan, W. E. Foster, T. A. McKeown, W. G. Scovil, all of St. John, N. B., and F. M. Anderson, Campbellton, N. B.

Dufferin Cobalt Silver Mining Company, Limited, incorporated, capital \$1,000,000. Directors, R. A. Helmer, J. E. Hutchison, E. A. Larmouth, G. H. Craig, and F. H. Honeywell.

Schofield Paper Company, incor-

porated, capital \$49,000. Incorporators, H. B. Schofield, E. A. Schofield, R. Frith, all of St. John, N. B., and others.

St. John Pulp & Paper Company, Limited, incorporated, capital \$275,000. Incorporators, G. McAvity, H. N. Stetson, of St. John, N. B., G. C. Cutler, F. B. Cutler, of Boston, Mass., and J. L. Cutler, of New York.

Hanbury Hardware Company, Limited, Brandon, Man., incorporated, capital \$300,000. Incorporators, H. J. Hanbury, J. M. Brown, E. H. Johnson, G. R. Coldwell, all of Brandon, Man., and A. E. Carmichel, of Winnipeg.

Globe Lumber Company, Limited, Winnipeg, Man., incorporated, capital \$60,000. Incorporators, H. C. Webb, A. Lucus, C. W. Tait, A. B. Donnelly and C. W. Bradshaw, all of Winnipeg.

Valleyfield Cobalt Mining Company, Limited, Valleyfield, Que., incorporated, capital \$1,000,000. Incorporators, T. B. Belanger, O. P. Prieur, L. Cossette, A. Cossette, and J. N. Bourassa, all of Valleyfield, Que.,

Mount Royal Color & Varnish Company, Limited, Montreal, Que., incorporated, capital \$100,000. Incorporators, H. Lamontagne, T. Lamontagne, E. Lamontagne, J. Lusignan, N. Morency, H. Lapierre, and Edouard Lamontagne, all of Montreal.

The Northern Coal & Coke Company, Limited, Winnipeg, Man., incorporated, capital \$1,000,000. Incorporators, J. S. Hough, A. C. Ferguson, C. Williams, E. B. Lindsay, and W. M. Graham, all of Winnipeg, Man.

Dominion Marble Company, Limited, Montreal, incorporated, capital \$50,000. Incorporators, F. A. Johnson, R. T. Hopper, F. H. Markey, W. W. Skinner, and R. C. Grant, all of Montreal.

Charles Gurd & Company, Limited, Montreal, Que., incorporated, to manufacture beverages, syrups, etc., capital \$75,000. Incorporators, C. Gurd, W. R. Gurd, A. McK. Murphy, C. G. Gurd, and W. Gamble, all of Montreal.

Dominion Envelope Company, Limited, Toronto, Ont., incorporated, capital \$100,000. Directors E. Newell, T. McMillan, I. Curry, and H. A. Lawrence.

Liskeard Heat & Power Company, Limited, New Liskeard, Ont., incorporated, capital \$200,000. Directors, K. Farrah, J. Armstrong, J. J. Grills, H. Hartman, and Francis L. Smiley.

The question of water supply for Prince Rupert, B. C., is likely to be very easily solved. Investigation has located lakes higher than the Shawatlans lake, which will provide excellent water at a height which will require no pumping to supply the city.

GERMAN ALSEN, at higher prices than competitors has again this year been awarded the most important contracts of the World because practical tests by leading Engineers proved its merit and relative economy. Note the following:

	1905-1906		1905-1906
MEXICO CITY	120,000 bbls.	U.S. PHILIPPINE GOVMT. ORDER	40,000 bbls.
NECAXA DAM (shipping instructions so far 60,000 bbls.) approximate amount	175,000 bbls.	GOVMT. ORDER SOUTH AMERICA	150,000 bbls.
XOCHIMILGO WATER WKS., MEX. approximate	200,000 bbls.	RIO DE JANEIRO, SANTO'S, ETC.	40,000 bbls.

- Also enormous quantities for the PACIFIC COAST, AUSTRALIA, ENGLAND, SOUTH AFRICA, &c. -

There is always a certain trade who will pay for the best. We also make American Alsen, the highest grade of domestic Portland cement.

CEMENT 45 BROADWAY, NEW YORK CITY **CEMENT**
We protect our customers!

FIRE ESCAPES

Wire Screens for Road Making

Wrought Iron and Wire Guards and Enclosures for Jails, Asylums, Etc.

The Geo. B. Meadows, Toronto Wire, Iron & Brass Works Company Limited
 67 Wellington Place, TORONTO



GALVANIZED WIRE WOUND WOODEN PIPE

No frost breaks, no corrosion. No electrolysis. It is easily and cheaply laid.

Its carrying capacity is never decreased by rust.

JAMES THOMSON, President. J. G. ALLAN, Vice-President. JAMES A. THOMSON, Secretary. ALEX. L. GARTSHORE, Treasurer.

THE GARTSHORE-THOMSON PIPE & FOUNDRY CO. LIMITED.

Manufacturers of

Flexible and Flange Pipe,
 Special Castings and all kinds of
 Waterworks Supplies.



3 inches to 60 inches diameter.

for Water, Gas, Culvert and Sewer

HAMILTON, ONT.

CANADIAN IRON AND FOUNDRY CO. LIMITED

Special Castings
 Flange Pipe
 Branches
 Hydrants
 Valves



Valve Boxes
 and
 General
 Water
 Works
 Supplies

SMALL DIAMETER WHEELS AND AXLES FOR CONTRACTORS.

CAR WHEELS. CASTINGS OF ALL KINDS.

Works at:

HAMILTON, ONT.
 ST. THOMAS, ONT.
 FORT WILLIAM, ONT.

MONTREAL, P. Q.
 THREE RIVERS, P. Q.
 LONDONDERY, N. S.

HEAD OFFICE: CANADA LIFE BUILDING, MONTREAL

THE HUMAN SIDE OF THE ENGINEERING PROFESSION*

(AN OUTLINE)

By V. KARAPETOFF, Cornell University.

FUNDAMENTAL THOUGHT: Professional usefulness and personal satisfaction depend on the right conception of life and on the degree in which this conception of life is manifested in daily activity.

PART I.—WORK AND CONDUCT.

There are three essential requisites for an efficient and successful engineer:

- A. Sound professional knowledge;
- B. Knowledge of business forms and of human relations;
- C. Good and strong character.

A. PROFESSIONAL KNOWLEDGE. A man who knows only "how" to do certain things, but does not know "why" they are done so, usually remains in subordinate positions. Get into the habit of analyzing; also, have your knowledge systematized.

In order not to get "rusty" you ought to do some study, or at least some reading outside of your daily routine work. This outside work may be classified, in an ascending scale of difficulty, as follows:

1. Keep notes on your regular work, with sketches, samples of calculations, etc. On separate notes keep matters of doubt to straighten them out at a future opportunity.
2. Read regularly at least one periodical relating to your specialty, and keep some kind of a general index on at least one subject in which you are particularly interested.
3. Be sure about the fundamental laws, facts, and assumptions on which your branch of engineering is based. If you are but recently from college, you can go over your old books and notes; otherwise read a good modern text book.
4. Gradually get familiar with more advanced books treating of the various branches of your profession; go from time to time to the public library and see if there is anything new in your specialty.
5. Select some one branch of engineering, if possible somewhat different from that in which you are regularly engaged, and devote some time to it. Know more than the next fellow does; it will pay you.
6. Do not miss any chance to make an original investigation; this will develop your thinking, increase your self-confidence and raise your standing in the profession.
7. Inventing is the highest form of the engineering activity; there is no reason why you should not bring some improvement into the work in which you are engaged. Concentrate your mind on one thing, work patiently and persistently, and you will be sure to achieve something that will be new and useful.

B. KNOWLEDGE OF BUSINESS FORMS AND OF MEN. You naturally expect some day to occupy a responsible position in your profession. This is impossible without a sound knowledge of established business forms and of human relations in general. Here again there are several stages of study and observation. Take up as many of them as your ambition, time, and ability will allow.

1. Observe the characters of men you are working with; in particular, the influence of their previous

*Abstract of an address delivered before the New York, Electrical Society, October 31st, 1906.

experience and education, of their age and temperament, of their views on general life questions, etc.

2. Observe things that make them efficient and happy, or that are impediments in their work; things that they would like to have and the main things that they object to.

3. Observe critically your superiors and their ways of acting towards their chiefs and subordinates. Do this without malice, but rather with a sincere desire to find out the best way of conducting the work, when you shall be called to perform their duties. Make for yourself a clear mental picture of an ideal man in a certain position, and try to follow this ideal in your own business life.

4. Observe and read about general business systems adopted in large modern commercial and industrial enterprises; in particular,

- (a) Subdivision of the duties of various officers, and their correlation;
- (b) Correspondence, accounting, orders, receipts, etc.;
- (c) Causes of loss, waste, inefficiency, etc., and possible remedies.

Merely knowing the facts is not sufficient: you must see clearly the necessity for a certain organization. Only then will you find a right place in it for yourself and efficiently discharge your duties.

5. Do not get "rusty" on general life questions; read books on history, economics, philosophy, etc., with the view of finding the underlying facts and motives in human relations. Do not adhere too readily to a traditional school; work out your principles for yourself, and be willing to change them when new evidence is laid before you. A man in a responsible position must be a well educated man; he meets a great many men, and has to face new situations. Therefore he must be well informed on things in general, and ought to be able to judge about them.

C. TRAINING OF THE CHARACTER. Engineering and business knowledge are the necessary conditions for usefulness ("success" and usefulness are not always the same), but the proper development of the character is the third necessary condition.

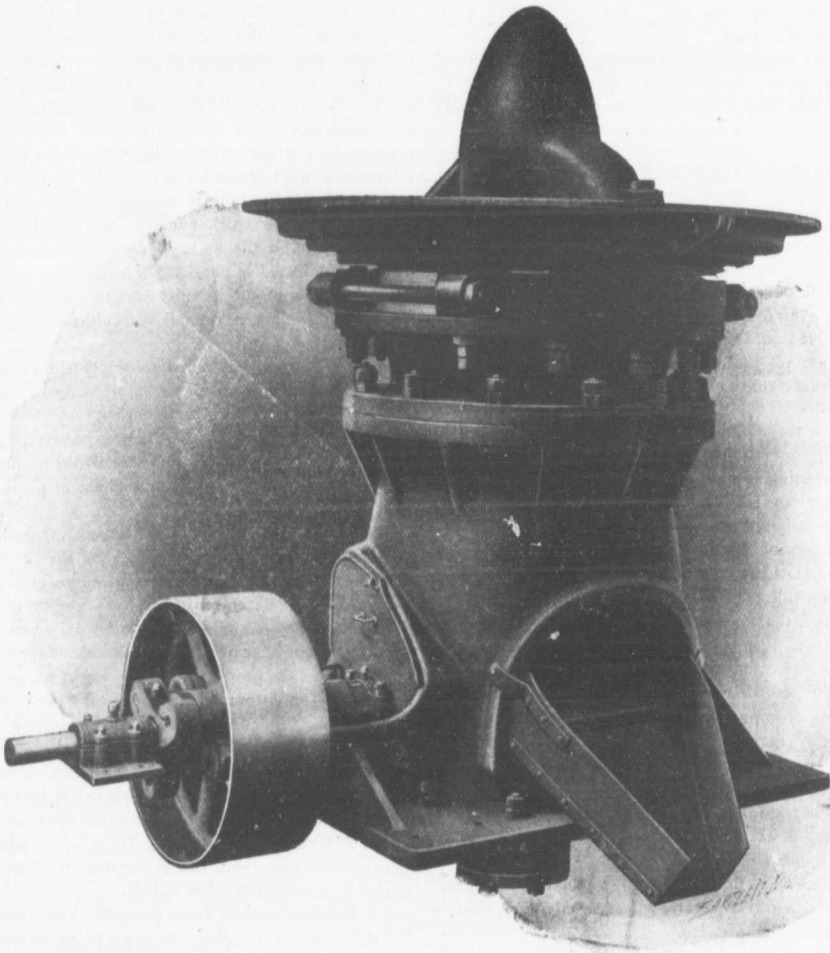
What is the use of having a profound knowledge of engineering, if you have not the necessary perseverance to achieve results; or to have a knowledge of business forms and relations, if your temper is such that nobody cares to be associated with you in business.

Practice daily the qualities of the character that you find essential for a good citizen and a good business man.

1. Work patiently on any problem until a result is achieved. If it should be impossible to get satisfactory results, at least make clear to yourself the nature of the hindrances.

2. Be honest in all things; do not be afraid to confess your mistakes or your ignorance. Train your character by doing your work cheerfully.

GATES "K" BREAKER



Gates "K" Gyratory Breaker here shown has a greater capacity than any other, is not liable to clog in feeding, is stronger, runs smoother and consumes less power per ton of rock broken than any other Breaker ever built. Fully described in Bulletin 1416.

CONTRACTORS' PLANTS

ALLIS-CHALMERS-BULLOCK

LIMITED

Head Office and Works: MONTREAL

District Offices ;

{ MONTREAL : Sovereign Bank Bldg.
 NEW GLASGOW N.S. Telephone Bldg.
 WINNIPEG : 251 Notre Dame Ave.

TORONTO : Traders Bank Bldg.
 NELSON : Josephine St.
 VANCOUVER : 416 Seymour St

3. Keep down your selfish personality and ambition. Do not let them interfere with your business. *The highest goal of personality and ambition is to have your part of the work done in the most ideal way.*

4. Be generous, polite, and considerate to others; there are no circumstances where you would be justified in breaking this rule. Remain dignified even under unjust reproach.

5. Work with the understanding that your activity of today shapes your future. You need not trust to chance; *your opportunity will come when you are ready for it.*

PART II.—UNDERLYING MOTIVES.

(A THEORY OF LIFE.)

Some men are happy and efficient in their work without having any clearly defined conceptions of life and its purpose. In a great majority of cases, however, a lack of a workable theory of life brings with it a decrease in possible efficiency and in personal satisfaction. It is of importance, therefore, to know.

- A. What are the principal limitations and wrong beliefs that are hampering engineers in their work.
- B. How these limitations can be removed by working out a theory of life that gives a general meaning to man's activity.
- C. How an engineer's work is shaped, when his underlying motives are illumined by such a theory of life.

A. USUAL LIMITATIONS that prevent an engineer from being fully efficient and happy in his work.

1. Belief that he is underpaid; abnormal striving after money.
2. Belief that his efforts are not appreciated by his employer; also that there is no chance for promotion.
3. Lack of knowledge, theoretical or practical; lack of general education; a deficient knowledge of business forms and human relations. This is often accompanied by a belief that he has no time for study; in cases where a man has not exercised his mind for a long time, he has also to contend with his own mental apathy.
4. Deficiencies in character, such as weakness, roughness, egotism, narrowness, pedantry, absent-mindedness, laziness, etc.
5. Lack of enthusiasm due to the absence of a guiding and unifying purpose in life. This is particularly noticeable in very young men who are just beginning to form their own conception of life, and in older men who already see the end of their usefulness and cherish no more illusions.

B. A THEORY OF LIFE. Each man must work out for himself a practicable theory of life; this will make his acts and words, thoughts and feelings, harmonious and consistent. The experience of humanity past and present is the material to work on; his reason is called upon to interpret this, and his conscience is the court of final appeal.

The following is an example of such a theory of life: (*)

(*) It may seem presumptuous on the part of the writer, who is not a philosopher by trade, to formulate a "theory of life"; this he gives, however, simply in order to illustrate what a practical doctrine of life (not a "canned" religion) may be. For the author personally this doctrine is the truth he believes in and according to which he tries to shape his life; for others it may serve merely as an example. He hopes that by criticizing his metaphysics readers may make their own conceptions on the subject clearer to themselves, and in this way be indirectly benefited even by a theory presumably wrong.

1. The Universe, including man, is governed by an Infinite Intelligence, which is manifested in man as his conscious life. There is no meaning in a man's life if it be detached from other men's lives. In proportion as he becomes conscious of this one, infinite life, common to all men, his own life becomes reasonable and harmonious, and the fear of poverty, sickness, old age and death gradually disappears.

2. The highest purpose of life is to work for the realization of the above ideal conditions of life on earth. We do this either by actually removing certain hindrances and fetters (practical work), or by making this great work clearer to others (literary, educational work, preaching, etc.).

3. Once this attitude is understood, the real compensation for the work consists, not in money and notoriety, but in the state of consciousness reached. This is manifested in particular:

- (a) In a clear and definite program of life, and a ready answer for all difficulties (doing your best).
- (b) In a state of harmony and good fellowship with all men, through the understanding of that life which is common to all.
- (c) In a freedom from fear, anger, jealousy, apathy, and other limitations caused by the assumption that life is an accidental chain of phenomena and circumstances.

WORK ILLUMINED BY HIGHER IDEALS. Once he has obtained a workable life-theory, all of the limitations enumerated above, that prevent an engineer from being efficient and satisfied in his work, can be removed by actually applying this theory to his daily work.

1. The belief that he is underpaid or not appreciated enough loses its power; the man works no more for a company or corporation. He works for his conscience sake, and finds his true compensation in the results of his work.
2. He is full of desire to do as much as he can, and not as little as he is allowed to. For this reason he wants to know much and have his knowledge in a practical form, ready for use. He is active and studious all the time, and the expression "mental lethargy" is incomprehensible to him.
4. He frees himself from possible shortcomings in his character by keeping the ideal of perfection continually before his mind's eye. He no longer finds difficulty in handling men and in treating his co-workers and chiefs aright; he has a sincere sympathy for them, tries to help them, and to make their work more pleasant and efficient.
5. He is full of enthusiasm, for he is aware of the infinite importance of his life and work. His work is infinite as is Life itself; and each problem solved brings with it a higher and more important problem, brings more truth and light into his consciousness.

CONCLUSION—(Credo).

1. Make yourself ready for a broader and higher field of activity; then your opportunity will surely come.
2. The true purpose and value of engineering activity lie in providing better and easier ways for satisfying ordinary human needs. This provides more leisure and opens new possibilities for a higher spiritual and intellectual development of humanity.
3. The engineer's personal satisfaction consists in knowing this high purpose of his vocation, and in giving his service at a maximum efficiency. The other compensation is a result and not the purpose.

JOHN T. FARMER

**MECHANICAL and
HYDRAULIC ENGINEER**

418 Coristine Bldg. - MONTREAL

Please mention this paper when corresponding with advertisers.

SAMSON CEMENT

MANUFACTURED BY

THE OWEN SOUND PORTLAND CEMENT COMPANY, LIMITED
Owen Sound, Ont.

Works at SHALLOW LAKE, ONT.

Write us for prices.

CLASSIFIED INDEX OF ADVERTISERS

ACCIDENT INSURANCE Page	DRILLING CONTRACTORS Page	PIPE (CAST IRON) Page
Ontario Accident Insurance Co. 19	Harvey, J. 20	Canada Foundry Co. 23
BLUE PRINTS	Peat & Sons, James. 14	Gartshore-Thomson Pipe and Foundry Co. 9
Electric Blue Print Co. 7	DEBENTURES	Gaudry & Co., L. H. 7
BLOWERS	Nav, Anderson & Co. 22	Montreal Pipe Foundry Co. 9
Buffalo Forge Co. 4	Stimson & Co., G. A. 21	PIPE (WOODEN)
BRIDGES (CONCRETE)	ENGINEERS AND CONTRACTORS	Canadian Pipe Co. 9
Steel Concrete Co. 15	British Columbia General Contract Co. 23	Dominion Pipe Co. 4
BRIDGES (STEEL)	Canadian White Co. 6	Pacific Cast Pipe Co. 20
Canadian Bridge Co. 19	ENGINEERS (CIVIL)	PUMPS AND PUMPING MACHINERY
Canada Foundry Co. 23	Archibald, George H. 15	Allis-Chalmers-Bullock. 11
Dominion Bridge Co. 15	Chipman, Willis. 17	Canadian Buffalo Forge Co. 4
Jenks & Dresser. 16	Connor, Clarke & Monds. 17	Canadian Fairbanks Co. 20
Phoenix Bridge and Iron Works. 15	Davidson, Shirley. 21	Canada Foundry Co. 23
CEMENT	Davis, Johnston. 15	Drummond, McCall & Co. 14
Alsen Portland Cement Co. 9	Fenson, C. J. 16	Mussen & Co., W. H. C. 3
Bremner, Alex. 15	Fielding, John S. 6, 13	McDougal Caledonian Iron Works Co., John. 19
Currie & Co., W. & F. P. 20	Galt, John. 7	ROAD MACHINERY
DeSola, C. I. 7	Jackson, John H. 17	Cameron & Co., Hugh. 16
Gray & Bruce Portland Cement Co. 21	Lea & Coffin. 17	Climax Road-Machine Co. 7
Hyde & Co., F. 22	Leofred, A. 6	Heaman, George. 23
Hanover Portland Cement Co. 19	McConnell, Brian D. 13	Morrison & Co., T. A. 13
Lakefield Portland Cement Co. 14	McDougall & McRae. 7	Sawyer & Massey Co. 16
McNally & Co., W. 7	Parke, Roderick J. 17	ROCK DRILLS
Morrison & Co., T. A. 20	Scott, Wm. Fry. 21	Allis-Chalmers-Bullock. 11
National Portland Cement Co. 18	Simpson, T. T. 21	ROPE
Owen Sound Portland Cement Co. 13	ENGINEERS (MECHANICAL)	Allan, Whyte & Co. 21
Ontario Portland Cement Co. 16	Farmer, John T. 21	Dominion Wire Rope Co. 24
Raven Lake Portland Cement Co. 20	Galt, John. 7	Greening Wire Co., B. 21
Stinson-Reeb Builders' Supply Co. 17	ENGINES	STEEL BARS (CORRUGATED)
Toronto Pottery Co. 22	Allis-Chalmers-Bullock. 11	Corrugated Steel Bar Co. of Canada. 16
Thorn Cement Co. 14	Cameron & Co., Hugh. 16	STRUCTURAL IRON AND STEEL
CONTRACTORS' SURETY BONDS	Sawyer & Massey Co. 16	Canada Foundry Co. 23
United States Fidelity & Guaranty Co. 21	ELECTRICAL APPARATUS AND SUPPLIES	Dominion Bridge Co. 15
CONCRETE MIXERS AND MACHINERY	Allis-Chalmers-Bullock. 11	Jenks & Dresser. 16
Dartnell, E. F. 6	Canadian Gen. Elec. Co. 23	Locomotive & Machine Co. 15
Hopkins & Co., F. H. 24	Drummond, McCall & Co. 14	McGregor & McIntyre. 16
Ideal Concrete Machinery Co. 18	Northern Electric & Mfg. Co. 14	Phoenix Bridge & Iron Works. 15
Mussen & Co., W. H. C. 3	FIRE APPARATUS	STONE
Morrison & Co., T. A. 20	Cameron & Co., Hugh. 16	Crushed Stone, Limited. 16
Toronto Pressed Steel Co. 7	Meadows, George B., Toronto Wire, Iron & Brass Works Co. 9	Doolittle & Wilcox. 21
Vining Bros. Mfg. Co. 5	McGregor & McIntyre. 6	SHOVELS (STEAM)
CONTRACTORS' PLANT	Seagrave, W. E., Walkerville, Ont. 16	Allis-Chalmers-Bullock. 11
Allis-Chalmers-Bullock. 11	HOISTING MACHINERY	Beatty & Sons, M. 22
Beatty & Sons, M. 22	Allis-Chalmers-Bullock. 11	Beatty & Sons, M. 22
Canada Foundry Co. 23	Beatty & Sons, M. 22	Canada Foundry Co. 23
Hopkins & Co., F. H. 24	Canada Foundry Co. 23	Hopkins & Co., F. H. 24
Locomotive & Machine Co. 15	Canada Foundry Co. 22	Locomotive & Machine Co. 15
Mussen & Co., W. H. C. 3	Canadian Fairbanks Co. 20	Mussen & Co., W. H. C. 3
Peat & Sons, James. 14	Gartshore-Thomson Pipe & Foundry Co. 9	SEWER PIPE
Toronto Pressed Steel Co. 7	Kerr Engine Co. 6	Bremner, Alex. 15
CONCRETE CONSTRUCTION	Montreal Pipe Foundry Co. 9	Canadian Sewer Pipe Co. 17
Ambursen Hydraulic Construction Co. 7	McDougall Co., R. 21	Dominion Sewer Pipe Co. 14
Loignon, A. & E. 7	LOCOMOTIVES AND RAILS	Toronto Pottery Co. 22
Steel Concrete Co. 15	Canada Foundry Co. 23	SHOVELS
CONTRACTORS' EMPLOYMENT BUREAUS	Gartshore, John J. 19	Canadian Shovel & Tool Co. 5
Bryans & Co., E. E. 7	Hopkins & Co. 24	Hopkins & Co., F. H. 24
Zarossi, Banco. 15	Locomotive & Machine Co. 15	Mussen & Co., W. H. C. 3
CORRUGATED IRON	Mussen & Co., W. H. C. 3	TELEPHONE SUPPLIES
Meta Lic Roofing Co. 5	Sessenwein Bros. 7	Northern Electric & Mfg. Co. 4
Pedlar People. 22	PLASTER BOARDS	TANKS AND STAND PIPES
CRUSHERS (STONE AND ROCK)	P. W. St. George. 20	Canada Foundry Co. 23
Allis-Chalmers-Bullock. 11	PILE DRIVING	Ontario Wind Engine & Pump Co. 17
Beatty & Sons, M. 22	Hood & Sons, Wm. 19	VALVES
Canada Foundry Co. 23	Russell, John E. 19	Canada Foundry Co. 23
Dartnell, E. F. 6	PAVING AND PAVING MATERIALS	Canadian Fairbanks Co. 20
Hopkins & Co., F. H. 24	Brunet, Joseph. 7	Gartshore-Thomson Pipe & Foundry Co. 9
Mussen & Co., W. H. C. 3	Forest City Paving Co. 17	Kerr Engine Co. 9
Morrison & Co., T. A. 20	Ontario Asphalt Block Co. 17	Montreal Pipe Foundry Co. 21
Sawyer & Massey Co. 16	Silica Barytic Stone Co. of Ontario. 15	McDougal Co., R. 7
	Warren Bituminous Paving Co. 7	

A NEW STYLE OF WIRE-WOUND WOOD PIPE.

The Dominion Wood Pipe Company is the name of a new firm recently organized in Vancouver for the purpose of manufacturing wooden pipe for water transmission of all kinds. This new company is composed of practical men who have had considerable experience in the manufacture of this kind of pipe, and whose combined knowledge and ideas of how to produce the best results are embodied in the "Dominion" wood pipe. A cut of this pipe appears in their advertisement in another part of this paper, and shows very clearly their new method of winding the wire so as to overcome what has heretofore been the only objection of engineers to wood stave pipe. An extract from a letter they have been sending out to inquirers, given below, explains fully this new style of winding. The following is their letter:—

"We take this opportunity of announcing that by the middle of January next, we will have the best equipped and the largest factory in Canada for the manufacture of Wire Wound and Continuous Wood Stave Pipe and to draw your attention to some of its many superior points.

We have secured an extensive site in New Westminster on the B. C. Electric, C. P. R. and Great Northern Railways and adjacent to tide water which gives us excellent shipping facilities.

We are erecting dry kilns of the most modern type, enabling us to purchase green lumber in the open market and to secure absolutely clear Douglas fir, free from knots, pitch seams, shakes, etc., and to thoroughly dry it for our purpose. This want has been the chief drawback in making good pipe during the present year.

We have applied for patents for a new system of wrapping two independent parallel wires simultaneously around the pipe instead of the one wire as formerly. The advantage of this improvement is that in the event of one wire being damaged and not being detected it simply reduces the factor of safety from 5.0 to 2.5. In the case of the old system of winding, the breaking of the wire rendered the pipe valueless. This method of winding also increases the strength of the pipe at each end by 50%.

The weakness of the pipe in the past has been in the coupling. This has been overcome by use in designing a Header, which makes a scientifically perfect joint, and if the pipe is properly laid, leaks are impossible. An application for patent has also been made for this device.

To give a perfect dipping or coating, we have arranged to heat the pipe to such a degree, that when dipped, the composition which is

Phone No.: PARKDALE 1809.

Post Office and Telegraph Address: SWANS

THE DOMINION SEWER PIPE CO., LIMITED

SWANSEA, TORONTO, ONT.



MANUFACTURERS OF

- VITRIFIED SALT GLAZED - SEWER PIPES

Price Lists and Discounts on Application — In Sizes from 4 inches to 24 inches

Turbine Pumps and Electric Motors

For use in connection therewith; all of highest efficiency and best workmanship.

MADE BY

MATHER & PLATT, Ltd., Manchester, England.

Drummond, McCall & Co.,

CANADIAN AGENTS

MONTREAL



DRILLING CONTRACTORS

WATER, SALT, OIL AND GAS WELLS

to any depth from 100 to 3000 feet. Contracts taken in any part of Canada. Excellent references. Estimates. Geological Reports. Expert Drillers and Complete Drilling Rigs Furnished.

JAMES PEAT & SONS

Established 1865. PETROLEA, ONT.

Portland Cement

Monarch Brand



Highest quality—guaranteed to fulfill the requirements of specifications for Portland Cement approved of by the Canadian and American Societies of Civil Engineers.

Prompt shipments from mill or stock at Fort William and Port Arthur.

THE LAKEFIELD PORTLAND CEMENT CO., LIMITED
LAKEFIELD, ONT.



"Lehigh" Portland Cement

Capacity 20,000 Barrels Per Day.

The "Lehigh Portland Cement Company, Limited," are also now building a plant at Belleville, Ont., of 750,000 barrels annual capacity. Until this plant is completed all orders can be shipped from the United States. For prices, etc., address—

THORN CEMENT CO. - Buffalo, N. Y.

SALES AGENTS FOR CANADA

GEO. H. ARCHIBALD
CONSULTING CIVIL ENGINEER

820 Union Bank Bldg.
WINNIPEG, CAN

Municipal Improvements.
Reinforced Concrete and Steel Construction

BANCO ZAROSSI

Italian Licensed Labor Contractor
460 St. James St., MONTREAL

All kinds of Italian Laborers furnished
on short notice.

DAVIS & JOHNSTON
CIVIL ENGINEERS

WATER WORKS, SEWERAGE
AND SEWAGE DISPOSAL

Wm. Mahlon Davis, Herbert Johnston, C. E.
M. Can. Soc. C. E.
Offices: BERLIN and GALT

ARTIFICIAL STONE PAVEMENTS

SIDEWALKS A SPECIALTY
CORPORATIONS Will do well to consider our work
and prices before letting contract.

The Silica Barytic Stone Company
of Ontario, Limited.

WALTER MILLS Head Office:
General Manager. INGERROLL, ONT.

THE PHOENIX BRIDGE & IRON WORKS, LIMITED
MONTREAL
GENERAL STEEL CONTRACTORS

Large Stock I BEAMS, CHANNELS, ANGLES, TEES, ZEES and
PLATES always on hand.

**Dominion
Bridge
Co., Ltd.**

P. O. Address, MONTREAL, P.Q.
Works at LACHINE LOCKS, P.Q.

STEEL BRIDGES

For Railways and Highways
Piers, Trestles, Water Towers,
Tanks, Buildings, Roofs, Girders,
Beams and Columns

Toronto Agent: GEO. E. EVANS,
35 Canada Life Bldg., TORONTO, ONT

PORTLAND CEMENT.



SEWER PIPES

FIRE BRICKS

FIRE CLAY

ALEX. BREMNER

50 Bleury Street, MONTREAL



STRUCTURAL STEEL

FOR

BRIDGES, BUILDINGS,
ROOF-TRUSSES, ETC.

THE LOCOMOTIVE & MACHINE CO.
of Montreal, Limited

Imperial Bank Building - Montreal



FACTORY BUILDINGS

ENTIRELY IN

REINFORCED CONCRETE

STEEL CONCRETE COMPANY

E. A. WALLBERG, President

Merchants Bank Building

MONTREAL

kept at a temperature of 350° to 370° Fah., penetrates and reaches every point of the outer surface of the stave and wire.

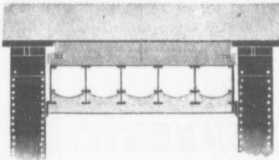
We will esteem it a great favor if you would give us an opportunity of tendering on any pipe you may require.

We are, Dear, Sir,
Yours very truly,

THE DOMINION WOOD PIPE CO.
Temporary office Fee Block, Vancouver B. C."

NEW CONSTRUCTIONAL DEVICE.

The accompanying illustration shows a new form of construction which has found favor in United States and is about to be introduced in Canada by the Climax Road Machine Co., of Hamilton. It



consists of corrugated arch plates put between the steel I beams to support concrete floors in bridge work and fireproof buildings.

A. C. McKenzie & Co., contractors, Vancouver, B. C., have dissolved, Mr. McKenzie retiring.

C. J. FENSOM, B. A. Sc. CONSULTING ENGINEER

Aberdeen Chambers - Toronto
Machinery designed, supervised, inspected and contracted for.

TESTS - REPORTS
Electric Light Plants, Power Plants,
Pumping Plants.

STEEL

HIGHWAY

BRIDGES

JENKS & DRESSER
SARNIA, ONT.

BUILDERS OF
STEEL HIGHWAY BRIDGES
STRUCTURAL STEEL WORK
CONCRETE ABUTMENTS

Crushed Stone, Limited STONE

of any Size and in any Quantity on hand for Sidewalks, Roadwork or Concrete Work

Works:
KIRKFIELD, ONT.

Head Office: 47 Yonge St. Arcade, TORONTO
Phone Main 4516
G. W. Essery, Manager.

Blue Lake Cement

MADE BY

THE ONTARIO PORTLAND CEMENT CO. LIMITED
HEAD OFFICE: BRANTFORD, ONT. LONG DISTANCE PHONE 194

THE JOHNSON CORRUGATED STEEL BAR

FOR



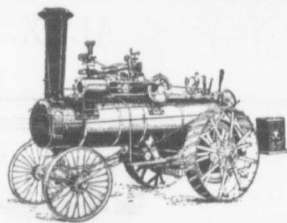
REINFORCED CONCRETE

Manufactured by

THE CORRUGATED STEEL BAR CO. OF CANADA, LIMITED

Operating under Johnson Patent No. 91690 and by license of Sir Wm. Mather.

Office: Coristine Building, MONTREAL



New, Re-built and Second-hand
TRACTION and PORTABLE ENGINES
(Simple and Compound)

For drawing and driving Rock Crushers, Road Graders, Cement Mixers, Grinders, Thrashers, Plows, Saw Mills and miscellaneous uses.

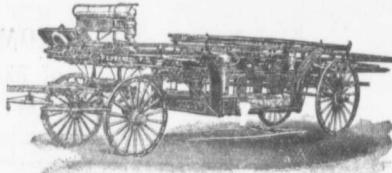
All Powers Quality the Best
Correspondence Solicited

Sawyer & Massey Co., Ltd.

Road Machinery Department
Hamilton - - - - - Canada

LIGHTNESS, STRENGTH AND ECONOMY

Seagrave Patent Trussed Ladders, Trussed Aerial, City Service and Village Hook and Ladder Trucks, Combination Hook and Ladder Trucks and Chemical Engines, Trussed Trucks and Hand Pumps, Combination Hose Wagons and Chemical Engines, Hose Wagons, Combination Hook and Ladder Trucks and Hose Wagons, Chemical Engines, Fire Extinguishers, Hose Reels, Patrol Wagons, Ambulances, Specialty Wagons, Patent Sleigh Runners, and other Modern Fire Fighting Tools.

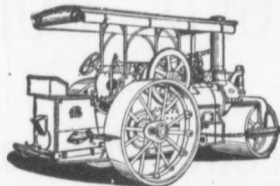


Prompt attention given all inquiries. All goods built to order.

Long Distance
Phones 686 and 684
W. E. SEAGRAVE, WALKERVILLE
ONT.

"WATEROUS"

ROAD MACHINERY AND FIRE APPARATUS



FIRE ENGINES in five sizes, with a full line of fire-fighting goods

We Rebuild other makes of Fire Engines with our patent Boiler.

BRANTFORD PITTS DOUBLE ENGINE STEAM ROAD ROLLER

IN THREE SIZES—10, 12 and 15 ton.

CORRESPONDENCE SOLICITED.

HUGH CAMERON & CO., Selling Agents 72 Queen St. West,
Manning Chambers, TORONTO

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

WILLIS CHIPMAN

Hon. Grad. McGill University.
M. Can. Soc. C.E. M. Am. Soc. C.E.
Mem. Am. W.W. Ass'n.
WATERWORKS, SEWERAGE WORKS, GAS WORKS, ELECTRIC LIGHT AND POWER PLANTS
Reports, Surveys, Construction, Valuations
103 BAY STREET - TORONTO

LEA & COFFIN

and H. S. FERGUSON
ENGINEERS
Waterworks, Sewerage, Water Powers
Pulp and Paper Mills
Reinforced Concrete Structures of Every Description.
Coristine Building - MONTREAL

RODERICK J. PARKE

A.M. Can. Soc. C.E. A.M. Amer. Inst. E.E.
CONSULTING ELECTRICAL ENGINEER.
Electrical Light and Power.
Steam Plants, Gas Power Plants, Water Power Plants.
Estimates, Tests, Reports, Valuations.
52-53 James Building - TORONTO, CAN.
Long Distance Telephone-Office and Residence
Cable Address "Rodparke" (W. U. Code.)

A. W. CONNOR, B.A., C.E. E. R. CLARKE, B.A., Sc

W. Monds, B.A., Sc.
CONNOR, CLARKE & MONDS
CONSULTING ENGINEERS
Hydraulic, Municipal and Railway Work; Long Distance Power Transmission; Machinery; Pumps; Complete Industrial Plants; Fire-proof Steel or Reinforced Concrete Office and Mill Buildings; Bridges, Towers, etc.
CEMENT TESTING LABORATORY
36 TORONTO ST. TORONTO, ONT

Paving Granite

Granite Sets for Street Paving - CURRING cut to any shape ordered. - Fine Rich Colors for Building and Monumental Purposes.
Quarries, St. Philippe d'Argenteuil, P.Q.
Address all communications to
JOS. BRUNET - COTE DES NEIGES, MONTREAL

WATER SUPPLY APPLIANCES

For Corporations, Municipalities, Villages, Residences, Etc.
Sprinkler Systems a Specialty.



Wood and Steel Tanks, Steel Substructures

Windmills, Pumps, Gasoline Engines, Hydraulic Engines, Etc.
ONTARIO WIND ENGINE AND PUMP CO., LTD.
WINNIPEG TORONTO MONTREAL

John H. Jackson

CIVIL ENGINEER
WATER POWER, ELECTRIC RAILWAYS, STRUCTURAL STEEL.
Niagara Falls, Canada
Associated with Charles H. Mitchell, C. E., Hydraulic Engineer.

McDOUGALL & McRAE

ENGINEERS
Electric Light and Power Plants.
Electric Railroads.
General Consulting Work.
Citizen Building - **OTTAWA**

300 MEN

Employed in cement walks, kerb and gutter, Paving and Building Construction. We can do work **QUICKER, CHEAPER, BETTER**, than small contractors.
Forest City Paving Co.,
B. V. HOLE, Manager. **LONDON, ONT**

THE ONTARIO ASPHALT BLOCK CO., L'T'D.

MANUFACTURERS OF
ASPHALT BLOCK PAVING
Information and samples furnished municipalities on application.
Main Office: WINDSOR, ONT. Works: WALKERVILLE, ONT.

THE CANADIAN SEWER PIPE CO.



FOR
Sewers, Culverts and Water Pipes
Inverts for Brick Sewers

WRITE FOR DISCOUNTS
ST. JOHNS, P.Q. HAMILTON, ONT. TORONTO, ONT

"GIANT" AND "NORTHAMPTON"
PORTLAND CEMENT

For Immediate Delivery

The above Cement we fully guarantee to fulfil the requirements of Canadian and American Societies of Civil Engineers.
Large stock always carried at Fort William, Port Arthur and Duluth.
Telegraph, Telephone or write for prices.

STINSON-REEB BUILDERS' SUPPLY CO. Limited
MONTREAL, P. Q.

REGINALD LAWSON

WESTERN REPRESENTATIVE, UNION BANK BUILDING
Phone 3397 WINNIPEG, MAN.

For the Province of Saskatchewan:
REGINA STORAGE AND FORWARDING CO. - REGINA

Mr. Jepson P. Duke, for many years Town Treasurer of Amherstburg, Ont., died November 29th, in his 81st year.

A new kiln and the necessary complement of driers, etc., are

being added to the plant of the Vancouver Portland Cement Company; at Tod Inlet, B. C.

The death occurred a few days ago of W. C. Johnson, who for three years was chief engineer of

the Shawinigan Water & Power Company. Deceased was 50 years of age and was considered an expert on hydraulic engineering, having had a very wide experience throughout Canada and United States.

One Grade

"The Cement of Quality"

The Highest



NATIONAL Portland Cement

Tests of

BY

The City Engineer of Toronto for 1903-4

Note the High Grade of National. Compare it with others.



Year.	No. Samples Tested.	Soundness Fajji Test.	Specific Gravity	Residue in Test on No. 100 Sieve	Setting Time in Minutes		Tensile Strength in pounds per square inch.									
					Initial	Final	Neat.					3 (Sand) to 1 (Cement)				
							1 dy.	7 d. s.	28 d. s.	3 mos.	1 yr.	1 dy.	7 d. s.	28 d. s.	3 mos.	1 yr.
1903	20	O.K.	3.135	2.1	162	345	307	701	783	827	*	74	214	299	367	*
1904	44	O.K.	3.150	2.0	132	342	300	744	848	914	938	86	262	354	401	427

* Tests for 1 year were not completed when records closed. 1905 report not yet issued.

THE BEST IS THE CHEAPEST

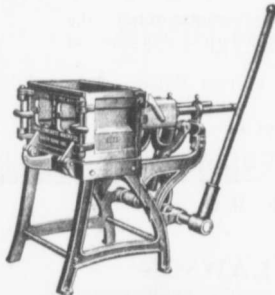
The National Portland Cement Company

Limited

Head Office and Mills: DURHAM, ONTARIO

To Make The Winning Bid

The Ideal Concrete Machine makes it possible to cut your bid without cutting your profit.



It is impossible to underbid the contractor who manufactures his own Ideal Concrete Building Blocks with an Ideal Concrete Machine.

The marvelous simplicity and rapidity of the Ideal Machine makes it possible to produce Ideal Concrete Blocks at a cost that makes the lowest bid a profitable one. May be successfully operated by any one without previous experience or other assistance.

Ideal Blocks are adapted to any possible architectural design, and excel all other materials in fire and weather-proof qualities.

Ideal Concrete Machinery

Embodies the only principle (face down) permitting the use of rich facing material with less expensive material in back of blocks. Adaptable to the manufacture of five different systems of blocks—Hollow, Solid, Veneer, Two-piece, and Continuous, in various shapes and sizes. The same machine makes countless designs of face, and natural stone effect. (See illustration).

Practically everlasting. Not a chain, spring, wheel or cog in its construction.

Catalogue and valuable facts for builders free on application.

IDEAL CONCRETE MACHINERY CO.

DEPT. A. Q. SOUTH BEND, INDIANA.

W. H. C. MUSSEN & COMPANY

MONTREAL, CANADA

SOLE AGENTS FOR CANADA

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

PILE . . . DRIVING

On land and water by steam.
Pile drivers or drop hammers.
Dams, wharves, bridge building,
trestle work and general contract-
ing.
Submarine diving and all kinds
of submarine work.



We have always a stock in hand to
let of:
Diving Outfits, Portable Boil-
ers, Hoisting and Pumping
Machinery, Etc.

WM. HOOD & SON
10 Richmond Sq. - MONTREAL

Established 1898
The Hanover Portland Cement Co., Ltd.
Hanover, Ontario
Manufacturers of the Celebrated
"SAUCEEN" Brand of PORTLAND CEMENT
Prices on application. Prompt shipments.

The Ontario Accident Insurance Co.

ACCIDENT, EMPLOYERS, ELEVATOR
AND GENERAL LIABILITY

104 St. Francois Xavier St. Montreal

RAILS For Contractors, Switches, Gir- ders, &c. New and Second Hand. LOCOMOTIVES & CARS

John J. Gartshore
83 Front St. West,
(Opposite Queen's Hotel.) TORONTO

ELECTRICITY

If you desire to keep posted on
the wonderful progress that is
taking place in the use of elec-
tricity for an almost endless var-
iety of purposes, you should sub-
scribe to the

Canadian Electrical News and Engineering Journal

A 44 PAGE MONTHLY,
PRICE \$1 PER YEAR

Write for free sample copy to

The G. H. Mortimer Publishing Co.
LIMITED
Toronto Montreal Winnipeg Vancouver



PILE DRIVING and Foundation Work.

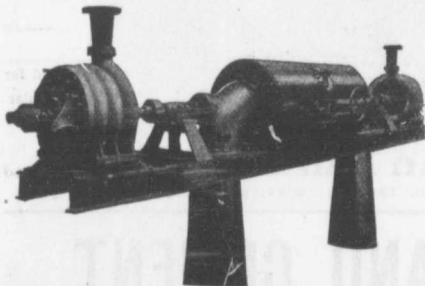
By 5-ton Automatic Steam Pile Hammer.
Water Jet or Drop Hammers, Dock Build-
ing, Submarine Work and Dredging.

BUILDING MOVER AND WRECKER

General Contracting.

JNO. E. RUSSELL, - Toronto
Residence, 1010 Queen St. E.—Phone M. 4525
Office and yard 307 Logan Ave.—Phone M. 3007

PUMPS FOR WATER WORKS



Two Worthington 3-Stage Turbine and McCormack
Water Wheels, built for Port Arthur, Ont., Water
Works, 1440 gal. per minute against 350 ft. head.

WATER WORKS SYSTEMS INSTALLED

Boilers, (Return Tube and Water
Tube,) Tanks, Penstocks,
Mill Machinery.

Builders in Canada of

"WORTHINGTON" TURBINE PUMPS

The John McDougall Caledonian Iron Works Co.,

Estimates Cheerfully Furnished

Montreal.

Limited.

SACKETT PLASTER BOARDS

Great time saver. Fire and sound proof. Cheaper than wooden and metal lath construction. In stock at Montreal and Toronto. Address

PERCIVAL W. ST. GEORGE,
80 St. Francois Xavier St. Montreal
R. E. H. BUCKNER,
Ont. Lime Association, Toronto

Brian D. McConnell
CIVIL ENGINEER

*Water Works, Water Powers,
Sewerage Systems, Railways*
Temple Building,
MONTREAL
Phone Main 1473

T. A. MORRISON & CO.
204 St. James Street
MONTREAL

*Stone Crushers and Grinders
Steam Road Rollers
Fire Engines, Steam and Gasoline
Concrete and Macadam Stone*

J. HARVEY

CONTRACTOR
PETROLEA, ONT.

Driller of Oil, Gas, Salt or Artesian Wells. Deep Wells a Specialty.



Contracts taken in any part of Canada. Several years experience in Artesian Wells for Municipal Water Works. Estimates or geological information cheerfully furnished.

REFERENCES GIVEN

--- MACHINE BANDED WOOD STAVE WATER PIPE ---

High pressure pipe for Water Works Systems, irrigation power plants, etc. Sizes 20" to 24", half the cost of cast iron. Write for Catalogue.

PACIFIC COAST PIPE CO., LTD. Box 563, Vancouver, B. C.

W. & F. P. CURRIE & CO.
345 St. James St., Montreal

Importers of

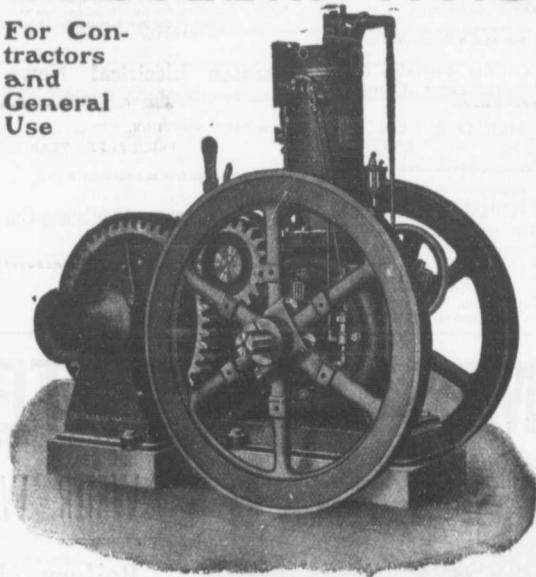
SEWER PIPES,
CULVERT PIPES, ETC.
VENT LININGS,
FLUE COVERS,
FIRE BRICKS,
FIRE CLAY,
WHITING.



PORTLAND CEMENTS,
HIGH GRADE ENGLISH
" " GERMAN
" " BELGIAN
PLASTER OF PARIS
BORAX,
CHINA CLAY.

GASOLENE HOISTS

For Contractors
and
General
Use



Equipped
with
Variable
& speed
Device.
Can be
started or
stopped in
a moment.

Clean
Safe
Economical

Send for
Circular

The Canadian Fairbanks Co., Limited
MONTREAL TORONTO WINNIPEG VANCOUVER

"RAVEN" PORTLAND CEMENT

— Unexcelled for Strength and Uniformity —

RAVEN LAKE PORTLAND CEMENT CO.

Limited

Long Distance Telephone: RAVENLAKE, ONT.

Telegraph and Post Office Address: VICTORIA ROAD, ONT.

Telephone: Main 5127.

Shirley Davidson, B. A. Sc.
(McGill University)
Contracting and Consulting Engineer
Bank of Ottawa Building,
224 St. James Street, MONTREAL.

WILLIAM FRY SCOTT
STRUCTURAL ENGINEER

Consultation or Design: Buildings, Building Construction, Foundations, Walls, Roofs, Bridges, Masonry, Fireproof, Reinforced Concrete, Reinforced Brick, Steel Timber, Specifications, Examinations, Valuations, and Reports for Investment.
22 Toronto St., TORONTO, ONT.
Main 1324 North 4206

T. T. SIMPSON
CIVIL AND CONSULTING ENGINEER
Electric, Hydraulic Plants,
Waterworks, Sewerage, Bridges.
33 Bank St. Chambers, OTTAWA.

Municipal and Other Bonds
and Debentures Bought
Highest Prices Paid.

G. A. STIMSON & CO.
14 and 26 King Street West - TORONTO

**THE BEST
ENGINEERING HELP**

can be obtained at small cost by advertising in the CANADIAN CONTRACT RECORD.

Engineers, young and old, read the CONTRACT RECORD and when about to make changes or in looking for new jobs, consult its columns.

Contractors watch these pages when in need of engineers for special work, foreman or assistants.

Best results can be had by advertising wants of this nature in the CONTRACT RECORD.

THE RATE: 10 cents per line per issue, 12 lines to an inch.

Replies to advertisements may be addressed in care of this paper, and will be forwarded without extra charge.

The Canadian Contract Record
Confederation Life Bldg., TORONTO
BRANCH OFFICES:
MONTREAL - WINNIPEG - VANCOUVER

Contractors to H. M. Governments

ALLAN, WHYTE & CO.

Clyde Patent Wire Rope Works, Rutherglen, Glasgow, Scotland

WIRE ROPES for Cableways, Aerial Ropeways, Elevators, Cranes, Derricks, Pile Driving, Drilling, etc.

Large stocks carried by **DRUMMOND, McCALL & CO.,**
MONTREAL AND TORONTO

Crushed Stone and Slag

Best for Concrete. Any quantity shipped promptly.
Get our prices. Long distance phone 286.

Doolittle & Wilcox, Limited, Dundas, Ont.

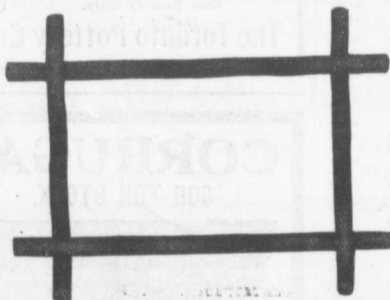
Advertisements
in the
CONTRACT
RECORD
bring
results

THE UNITED STATES FIDELITY AND GUARANTY Co.



Acts as Sureties on
Contractors' Bids or Tenders
and on Final Bonds
Rates Reasonable. See our Agent
in your town or write direct to us
Head Office for Canada:
6 Colborne Street, Toronto
A. E. KIRKPATRICK, MANAGER

WE WILL BOND YOU

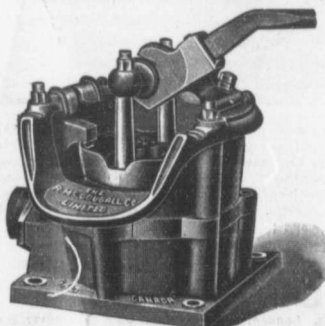


**CONCRETE BONDING
OF
CRIMPED STEEL WIRE**

**THE STRONGEST,
BEST AND CHEAPEST**

If interested write for pamphlet and full particulars

**THE
B. GREENING WIRE CO.
LIMITED
HAMILTON, ONT.
MONTREAL, QUE.**



DIAPHRAGM PUMPS

For Contractors' Use.—This class of pump will handle about anything than is wet and their usefulness has been shown in thousands of cases. We try always to have a few on hand for Emergency orders, also extra Diaphragms and 3" Suction Hose and Fittings.

Try us once if in a hurry or even if you have lots of time.

We also Supply

**Manhole Covers and Frames,
Catch Basins, Pavement Plates, Etc.**

The R. McDOUGALL COMPANY, Limited
GALT, CANADA.

Prices of Building Material
PRESSED BRICK, Per M.

TORONTO PRESSED BRICK AND TERRA COTTA WORK
F. O. B. Milton, Ont.

Red No. 1	\$13 00
" 2	11 50
" 3	10 00
Buff No. 1	17 00
" 2	15 00
Brown	25 00
Roman Red	30 00
" Buff	45 00
" Brown	45 00
Hard Building	8 00
" Sewer	8 00
" Backing	7 00

Moulded Ornamental from \$2.00 to \$5.00 per 100.
Terra Cotta string Courses and Frieze, from 50c. to \$3.00 per ft. run.
Roofing Tiles, \$20.00 per 1,000.

DON VALLEY BRICK WORKS.

Nos. 1, and 2, Red Pressed Bricks	.....
Nos. 1 and 2 Buff Pressed Brick	.....
No. 1 Brown Pressed Brick	.....
Pompeian Red, Buff and Brown Pressed Bricks	.....
Ornamental Bricks of all kinds for Mantel purposes	.....
Glazed Bricks of all Colors	.....
Porous Terra Cotta Fireproofing of all Descriptions	.....
Vitrified Street-Paving Bricks	.....
Semi-Vitrified Foundation Bricks	.....
Common Stock Red and Grey Bricks	.....
Sewer Bricks	.....
Stone or Macadamized Roadways	.....

Please write to head office, 54 St. James St., Toronto, for catalogue and prices.

BEAMSVILLE BRICK AND TERRA COTTA CO.

F. O. B. Beamsville.

Red Peerless Facing	\$16 00
" No. 1	14 00
" No. 2	12 00
" No. 3	10 00
Brown Peerless Facing	20 00
" No. 1	18 00
Buff Peerless	20 00
" No. 1	18 00
" No. 2	15 00

Moulded and Ornamental Brick from \$3 to \$10 per C.

Roman Red (Size 12 x 4 x 1 1/2 in.)	30 00
" Buff	30 00
" Brown	35 00
Vitrified Paving Brick No. 1	15 00
" " " No. 2	15 00
Sewer	8 00
Roofing Tile	22 00

LUMBER

CAR OR CARGO LOTS, F. O. B. TORONTO.

Per M. Ft.

1 inch No. 1 Pine cuts and better	\$40.00 to \$51.00
1 1/2 to 2 inch No. 1 cuts and better	54.00 60.00
1 inch No. 3 Pine cuts and better	38.00 40.00
1 1/2 to 2 inch No. 3 cuts and better	40.00 42.00
1 inch Pine Dressing and better shorts	24.00 26.00
1 x 4, 6 and 8 Common	20.00 21.00
1 x 10 and 12 Common	21.00 24.00
1 inch mill run sidings	21.00 22.00
1 inch mill run	21.00 22.00
1 x 10 and 12 mill culls	17.00 18.00
1 inch dead cull sidings	12.00 13.00
1 1/2 inch Flooring	27.00 28.00
Hemlock, 1 x 4 to 8 inch	17.00 18.00
1 x 4 to 8 inch, 12 to 16 feet	18.00 22.00
1 x 4 to 10 inch, 16 feet	20.00 19.00
1 1/2 inch No. 1 1/2 Pine Lath	4.75 5.00
1 1/2 inch No. 2 1/2 Lath	4.00 4.25
1 1/2 inch No. 1 1/2 Hemlock Lath	3.50
XXXX Pine Shingles	30.00 3.25
XX Cedar Shingles	2.25 2.30
B.C. Shingles:	
XXX 6 butts to 2 inch	3.25
XXXX 6 to 2 1/2 inch	3.47
XXXXX 5 to 2 inch	3.80

HARDWOODS—PER M. FEET CAR LOTS.

Ash, white, 1sts and 2nds, 1 to 2 inch	\$33.00 to \$35.00
Ash, black, 1sts and 2nds, 1 to 1 1/2 inch	28.00 30.00
Birch, M. R. 1 inch	22.00 24.00
" 1 1/2 inch to 2	23.00 25.00
Basswood, Common and better, 1 to 1 1/2 inch	21.00 24.00
Basswood, 1 1/2 to 2 inch	24.00 26.00
Elm, soft, mill run, 1 to 1 1/2 in.	23.00 24.00
Elm, rock, mill run, 1 to 1 1/2 in.	23.00 25.00
Maple, common and better, 1 to 1 1/2 inch	22.00 23.00
Oak red plain, 1sts and 2nds, 2 to 4 inch	44.00 46.00
Oak, white, 1sts and 2nds, 1 to 1 1/2 inch	42.00 44.00
Oak, quartered, 1sts and 2nds	70.00 80.00

We are the largest buyers of Western School Debentures in the British Empire

School Trustees do well to communicate with us when having debentures to offer for present or future delivery—

HIGHEST PRICES PAID. PROMPT SETTLEMENT.

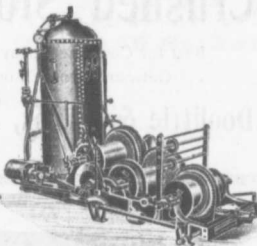
NAY, ANDERSON & CO.
Regina, Sask.

Lafarge (NON-STAINING) Cement

PORTLAND CEMENT FIRE BRICKS
DRAIN PIPES FIRE CLAY
CULVERT PIPES SEWER BRICK
SEWER BOTTOMS

F. HYDE & CO.,

King, Queen and Wellington Sts. - MONTREAL



M. BEATTY & SONS, Limited
WELLAND, ONTARIO, CANADA

DREDGES, DITCHERS, DERRICKS, STEAM SHOVELS,

Submarine Rock Drilling Machinery,
Mine Hoists, Hoisting Engines
Centrifugal Pumps for Water and Sand
Stone Derricks, Clam Shell Buckets,
Steel Skips, Coal and Concrete Tubs,
and other Contractors' Machinery.

Office 75 Cottingham Street DISTRIBUTORS
Yards 75-81
Long Distance Phone North 1787.



VULCANITE PORTLAND CEMENT

The Recognized Standard for Sidewalks

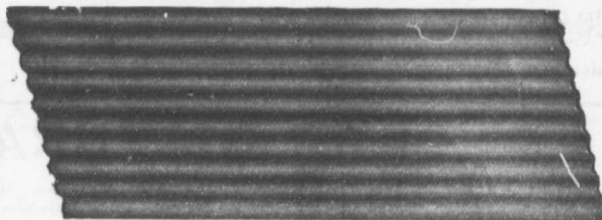
A strictly High-Grade Portland Cement. Pronounced by prominent contractors to be the most Uniform Portland Cement on the market.

One Quality Only. Capacity 5,000 bbls. per day.

The Toronto Pottery Co., Limited, Toronto, Ont.

CORRUGATED IRON

600 TON STOCK. PROMPT DELIVERY.



Pedlar's Corrugated Steel Sheets are manufactured on a 38,000 lb. Oh Press—one corrugation at a time—and are guaranteed straight and true to size Six Hundred Tons in Stock in Oshawa, Montreal, Toronto, Ottawa and London, in gauges varying from 28 to 18, both painted and galvanized. Made in 1", 2" or 2 1/2" corrugation—corrugation lengthwise or across the sheet. Sheets 2 3/4, 5, 6, 8 or 10 feet long at no extra charge. Ask for Catalogue No. 14 R and give specifications for prices.

We are the largest makers of Sheet Metal under the British Flag.

ESTABLISHED 1861 — CAPITAL INVESTED, \$250,000.

THE PEDLAR PEOPLE

Montreal, Que. Ottawa, Ont. Toronto, Ont. London, Ont. Winnipeg, Man. Vancouver, B. C.
321-3 Craig St. W. 423 Sussex St. 11 Colborne St. 64 Dundas St. 76 Lombard St. 615 Pender St.

Write your nearest office. Head office and Works, OSHAWA, ONT.
"Keeping Everlastingly at It Brings Success."



Head Office and Works,
Toronto, Ont.

CAST IRON PIPE FOR WATER OR GAS

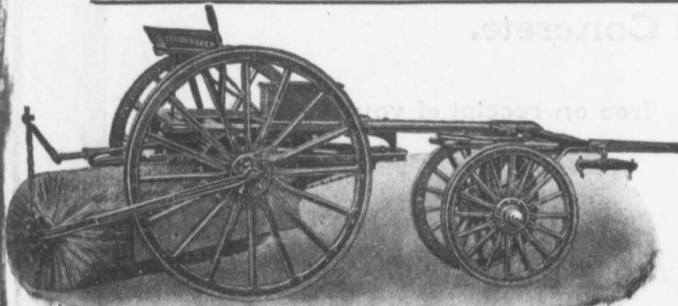
Special Castings,
Tees, Crosses, Flanges Pipe, Valves, Hydrants,
Stand Pipes, Valve Boxes, Drinking and Ornamenta! Fountains.

District Offices : MONTREAL, HALIFAX, OTTAWA, WINNIPEG, VANGOUVER, ROSSLAND

The **British Columbia General Contract Company, Limited**
Telegraphic Address : "Dredging" Fairfield Building, VANGOUVER, B. C.

ENGINEERS and CONTRACTORS

Municipal Works and Buildings	Concrete Construction	Railways
Bridges	Harbor Works	Dredging and Reclamation



Stackpole
Patent Improved

Street Sweeping Machine

Is the Standard
of Perfection

Because no sweeper so effectually does the work for which it is designed as "The Studebaker." It Sweeps Clean. No sweeper is constructed with the same degree of care and mechanical precision. It Wears Well. "The Studebaker" has the smallest number of working parts, and has less gearing than any other sweeper made. It is free from all unnecessary complications. With reasonable care it does not get out of order. Send for complete descriptive catalogue.

Does not clog or get out of order. Greatest width of spray
Can be graded from driver's seat to any volume.
We also make an . . .

IMPROVED VERTICAL SPRAY

for Pavements

Geo. Herman, Mnfr., London, Ont.

Wishing all our
Customers and Friends
A Happy and Prosperous New Year

— Our 1907 Calendar —

Our Calendars are now ready for distribution.

This years' is certainly a great office Calendar.

Good big plain figures—just what you want.

If you would like one—drop us a Post Card.

— Concrete Handbook —

The Ransome Concrete Handbook is most certainly a great help to those interested in Reinforced Concrete.

We will mail one free on receipt of your request.

F. H. Hopkins & Co.

Successors to the Late James Cooper

MONTREAL

Dunn Bros., Winnipeg, Agents

Gorman & Clancy, Alberta Agents.