

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Title on header taken from: /
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments: /
Commentaires supplémentaires: Some pages are cut off.

This item is filmed at the reduction ratio checked below /
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL OF CONTRACTS

EVERY

PUBLIC • WORKS • TENDERS •
ADVANCE • INFORMATION •
AND • MUNICIPAL • PROGRESS

WEDNESDAY

This paper reaches every week the Town and City Clerks, Town and City Engineers, County Clerks and County Engineers Purchasers of Municipal Debentures and leading Contractors in all lines throughout Canada.

VOL. 10.

FEBRUARY 1, 1899

No. 1.

THE CANADIAN CONTRACT RECORD, PUBLISHED EVERY WEDNESDAY

As an Intermediate Edition of the "Canadian Architect and Builder."

Subscription price of "Canadian Architect and Builder" (including "Canadian Contract Record"), \$2 per annum, payable in advance

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

CONFEDERATION LIFE BUILDING, TORONTO
Telephone 2362.

Branch Office:
New York Life Insurance Building, Montreal.
Bell Telephone 2299.

Information solicited from any part of the Dominion regarding contracts open to tender.

Advertising Rates on application.

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

TENDERS WANTED

Tenders will be received by the undersigned up to noon of FRIDAY, FEBRUARY 10TH, 1899, for the erection of

Stone Abutments and Steel Superstructure

of a new bridge over the river Thames, in the Township of East Zorra, 1/4 mile west of the village of Cassel. Abutments to be about 23 ft. in height and preference of St. Mary's stone facing, with field stone backing. Superstructure to be 20 ft. in length and 14 ft. wide.

Offers will be received for either abutments or superstructure separately, or both.

Parties to furnish their own plans and specifications. The whole work to be completed on or before Sept. 1st, 1899.

Tenders will be opened and contract awarded, if satisfactory, at the Royal Hotel, Woodstock, on Saturday, Feb. 11th, at 1 o'clock p.m.

THOMAS LOCKHART,
Reeve East Zorra,
Walmer P.O., Ont.

MAIN TRUNK SEWER

OTTAWA, ONT., JAN. 16, 1899.

Sealed tenders, endorsed "Proposals for Main Trunk Sewer," will be received by the undersigned up till Noon on

Monday, 6th February, 1899,

at the City Hall, for the construction complete of the following works:

1916 lineal feet 6' 0" Circular Brick Sewer.
6016 " " 5' 0" " " "
7650 " " 4' 6" " " "
332 " " 2' 0" x 3' 0" Egg-shaped Sewer.

Average depth of cutting, 21 feet, through earth and rock.

Plans and specifications may be seen at the Engineer's office on and after Tuesday, the 24th inst., from whom forms of tenders and full particulars can be obtained.

Proposals must be accompanied by a certified bank cheque, payable to the order of the City Treasurer, for five per cent. of the tender, to be retained as security for the satisfactory completion of the work.

The corporation do not bind themselves to accept the lowest or any tender.

JOHN GALT,
City Engineer.

TENDERS FOR Electric Light Plant

Sealed tenders endorsed "Tenders for Electric Light Plant" and addressed to E. Carrier, Esq., Chairman of Lighting Committee, Hull Que. in care of City Engineer, will be received up till noon on MONDAY, THE 6TH DAY OF FEBRUARY, 1899, for the following:

Two 50 Light Arc Dynamos, 1,200 c.p., with double circuit Switchboard, Lightening Arresters, Ammeters, Cut-outs, &c., complete.

75 1,200 c.p. Arc Lamps (long burning, double or single carbon).

100 Clear Glass Globes.

8 miles No. 6 W.P. Wire.

Insulators—per 100.

Guy Wire—per 100 lbs.

30 4-pin Cross Arms, 75 2-pin Cross Arms, 200 Side Blocks and 300 Top Pins.

The whole F.O.B. Ottawa or Hull Plans, etc., may be seen and any further information obtained from the City Engineer.

The lowest or any tender not necessarily accepted.

R. W. FARLEY,
City Engineer

Hull, Que., 16th January, 1899.

CONTRACTS OPEN.

BEETON, ONT.—Richard Dunnan will build a residence in the spring.

GADSHILL, ONT.—J. E. Ratz is arranging for material for a new residence.

PIERSON, MAN George Riebel intends building a stone store in the spring.

LITTLE CURRENT, ONT.—Ramesbottom & Spencer will build a saw mill here.

ATHENS, ONT.—Steps are being taken to raise funds to build a Methodist church.

RIDGETOWN, ONT.—Mr. Cawthorpe, of Thamesford, will build a grain elevator here.

DONEGAL, ONT.—A brick residence will be built next summer by John McCourt.

WALLACE, ONT.—R. W. Travis contemplates building a fine residence next summer.

COLBORNE, ONT.—Dudley Colver is placing on the ground material for a new residence.

MAPLE, ONT.—Material is being placed on the ground by Josh Kaiser for a new residence.

ST. JACOB'S, ONT.—It is rumored that a town hall will be erected here at an early date.

GLAMIS, ONT.—The school board are wrestling with the question of a site for a new school.

SAWYERVILLE, QUE.—We understand that tenders have been taken on the building of a new church.

AVONMORE, ONT.—J. E. Hough has purchased property and intends erecting a new building in the spring.

WOODSTOCK, ONT.—The Fire and Light Committee has presented a report to the council recommending improved fire protection and the erection of a new fire hall.

TEECUMSEH, ONT. It is probable that Robert Kearns will erect a brick residence in the spring.

CROMARTY, ONT.—John Hoggarth will likely build a new residence during the coming summer.

SHALLOW LAKE, ONT.—Contractors have figured on half a dozen residences to be built in 1899.

ECHO HOLLOW, ONT.—It is learned that Mr. Boyer intends building a residence this year.

ELLIOT'S CORNERS, ONT.—It is the intention of Joseph Elliot to build a brick house in the spring.

CORNWALLIS, N.S.—It is reported that Mrs. Huff, of New York, will build a mansion here next summer.

PORT HOPE, ONT.—Mrs. Wells will, at an early date, take steps to rebuild on the site of the Hampton House.

THOROLD, ONT.—The Fire Department has requested the village council to purchase 300 feet of fire hose.

KAMLOOPS, B.C.—The municipal council will probably purchase another dynamo for the electric light plant.

LINDSAY, ONT.—H. A. Rider, 48 Wellington street east, Toronto, is advertising for a factory site in this town.

COLLINGWOOD, ONT.—It is probable that steps will be taken at an early date to provide a proper system of sewerage.

HEATHTON, QUE.—The official board of the Methodist church has resolved to build a parsonage at Baldwin's Mills.

HALIFAX, N.S.—An effort will be made by the citizens to induce the government to erect a new post office building here.

BATHURST, N.B.—It is stated that T. D. Adams, of the firm of Adams, Flanagan & Co., New York, intends erecting a large pulp mill here.

TILSONBURG, ONT.—E. D. Tilson, of this place is preparing to build a new cottage this year on Fairhaven Island, Muskoka Lake.

BURINGTON, ONT.—James R. Coleman, of the Brant Hotel, is organizing a company with a view to erecting a summer hotel here.

MORDEN, MAN.—N. Redford wants tenders by February 10th for building a school house, frame, with stone basement, or an all stone building.

PERTH, ONT.—Thomas Manders has purchased two building lots on Mary street, and intends erecting a brick residence at an early date.

ANDOVER, N.B.—H. E. Evans, who is interested in the proposed pulp mill to be built at the Tobique Narrows, is expected here in a few days.

FORT WILLIAM, ONT.—The by law to raise \$11,000 for extending the electric light system has been ratified by the Lieutenant Governor in council.

PICTON, ONT.—At a public meeting of ratepayers held last week, it was decided to improve the electric light plant. A

by-law to raise about \$10,00 for this purpose will be submitted to the rate-payers.

CHATHAM, ONT.—It is rumored that the council will install another dynamo for arc lighting.

BELLEVILLE, ONT.—The Belleville Gas Company intend putting in a larger main on Bridge street east this spring.

TUCKERSMITH, ONT.—The Tuckersmith Branch Agricultural Society are making arrangements to build a new hall.

RICHMOND HILL, ONT.—It is expected that the plans of the new market buildings will be in the hands of the council this week.

WOODBIDGE, ONT.—J. Watson has prepared plans for a brick store and dwelling on Main street for J. Franks, to cost \$2,500.

ARNPRIOR, ONT.—It is believed that the construction of the North Lanark Railway will be followed by the establishment of smelting works here.

CHESLEY, ONT.—James Ward, of Eden Grove, has decided to build a grain elevator here. A site has been purchased and work will be commenced at once.

SMITH'S FALLS, ONT.—It is believed that this town will grant a bonus of \$25,000 towards the proposed Kingston, Smith's Falls, Richmond and Ottawa Railway.

ST. MARY'S, ONT.—A second-hand steam heater for a Ronald steam fire engine is wanted by the town. Address, T. McGorrick, chairman Fire and Light Committee.

KINGSTON, ONT.—The restoration of St. George's Cathedral is now an assured fact. The committee has decided to engage Mr. S. G. Curry, of Toronto, as consulting architect.

SHELBURNE, ONT.—The school board wants plans and specifications by February 9th for an eight-roomed school house, to cost not more than \$8,000. Address F. H. Silk, secretary.

LIVERPOOL, N.S.—Work on the new electric light and waterworks system will probably be commenced as soon as spring opens. The sum of \$30,000 has been voted by the ratepayers for this purpose.

BADDECK, N.S.—Steps are being taken to raise the necessary capital to construct a telephone system in the counties of Inverness and Victoria. It is proposed to have the service established next summer.

REGINA, N.W.T.—A movement is on foot to secure an ample water supply for the South Regina district. It is not yet known whether the work will be undertaken by the town or by an incorporated company.

TORONTO JUNCTION, ONT.—Among the new buildings to be erected in the spring are two brick structures on Quebec avenue by Mr. Powell, two by Mrs. Linton, and one by Mr. Wilson, principal of Annette street school.

NEW HAMBURG, ONT.—Allen Bossenbery has had plans prepared for a brick residence to be commenced as soon as the weather will permit.—Henry Weiderhold has prepared plans for a commodious residence for Fred. J. Walker.

THESSALON, ONT.—T. E. Williams, solicitor, will apply to the Ontario legislature for an act to incorporate the Thessalon and Grand Portage Railway Company, to build a railway from Thessalon to Grand Portage, thence northerly a distance of 30 miles.

QUEBEC, QUE.—H. Stavely, architect, has in hand expensive improvements to the lower town establishment of the Chic Hardware Company. The improvements include, amongst other things, two additional storeys and the installation of a modern elevator. Sixty plate glass windows will be put into the building.

WALLACEBURG, ONT.—Aaron Gordon is preparing to erect two brick stores.—The Board of Works have recommended the reconstruction of the approaches to the east end bridge. An engineer will be engaged to report on the work.

PEMBROKE, ONT.—The town council is considering the purchase of a bell or gong to ring automatically, and the putting in of a whistle at the waterworks pump house. Firms supplying these goods should communicate with the town clerk.

CHARLOTTETOWN, P.E.I.—Tenders are wanted by Rev. A. P. McLellan, rector St. Dunstan's College, up to Saturday, February 17th, for the erection of a brick wing, 96 x 40 feet, to the college building, from plans prepared by C. B. Chappell, architect.

HULL, QUE.—Assurances have been given by the Minister of Public Works that an appropriation will be voted at the coming session of the Dominion parliament for a wharf to be built here; estimated cost, \$25,000.

MADOC, ONT.—R. F. Houston has been commissioned to prepare plans for a block of three stores and a post office for W. H. O'Flynn, and for a large block, containing six stores, for the Wright Estate. Both buildings will be two storeys high, with plate glass fronts.

HARTLAND, N. B.—The erection of a new school house has been definitely decided upon. The building will cost \$3,000, and must be completed by January 1st, 1900.—A joint stock company of citizens has been formed to undertake the construction of a bridge over the river.

BURNSTOWN, ONT.—John Forrest, chairman Building Committee, is prepared to receive tenders up to March 1st for the stone, brick and carpenter work of a church at this place. All materials furnished the carpenter except doors and windows; building to be completed about October 31st.

NELSON, B.C.—The C.P.R. has decided to continue the Crow's Nest Railway from Kootenay Landing to Nelson.—Mr. R. A. Rodgers, manager of the Parsons Produce Company, is in the city, and will make arrangements for the building of a large cold storage warehouse on the G. T. R. siding.

PETERBORO', ONT.—The Stanley Piano Company, of Toronto, intends removing to that city, a free site and exemption from taxation having been offered.—The county council, in conjunction with the Ennismore township council, is considering the construction of a new bridge across Mud Lake.

ST. CATHARINES, ONT.—At the annual meeting of the St. Catharines Cold Storage and Forwarding Company, it was stated that the company proposed building a modern cold storage building and providing better railway accommodation. Work will likely be commenced in the spring.

CORNWALL, ONT.—Mr. A. W. Campbell, Provincial Road Commissioner, was in town recently in connection with the proposed road improvements to be carried out this year.—A special committee has been appointed to consider the question of erecting a House of Refuge for the united counties.

HINTONBURG, ONT.—Mr. C. H. Keefer has been appointed village engineer, and will prepare plans for the proposed waterworks system, after which tenders will be invited.—The Orange Society is expected to take steps in the spring to build a new hall.—The ratepayers have decided to take steps to secure, if possible, the establishment of a High School in this vicinity.

NEW WESTMINSTER, B.C.—A bill has been introduced in the provincial legislature to issue debentures amounting to over \$1,000,000 for the purpose of financially relieving this city from the effect of

the fire last summer.—Plans of the new Vancouver Coal Company's wharf and warehouse have been submitted to the council for approval.—It is stated that J. Crean, manager of the Guichon hotel, will build a new hotel on the former site of the Douglas House.

OWEN SOUND, ONT.—It is learned that the new steamer of the Great Northern Transit Company will be built at Collingwood. It will be 190 feet in length, built of oak from the keel to the covering; estimated cost, \$60,000.—The county council have shelved, for the present, the question of building the proposed House of Refuge.

ROBSON, B.C.—The Canadian Pacific Railway has arranged to sub-let contracts on the western end of the Columbia and Western extensions from this place to Midway, 100 miles distant. The section for which the contract is to be let will extend from Midway to Sholt Summit, east of Greenwood, a distance of nineteen miles. Messrs. Mann, Foley Bros. & Larson are the general contractors.

NIAGARA FALLS, ONT.—The Queen Victoria and Niagara Falls Park Commissioners will meet in Toronto on February 4th to consider amended plans of the proposed works on the Canadian side which the Niagara Falls Power Company have submitted for their approval. These plans involve the removal of the power house to a site nearer the river. This will shorten the intake leading to the power buildings, but will necessitate a much longer tunnel for the purpose of carrying off the waste water.

VICTORIA, B.C.—The Victoria & Esquimalt Telephone Company purpose installing a metallic circuit for this city and district.—Over \$3,000 has been subscribed towards the erection in this city of a Chinese school.—Mayor Redfern is in favor of having plans prepared for a new fire hall, to be erected at the corner of Camosen and Yates streets.—Competitive plans will be invited by the city for a new fire hall, first and second prizes to be \$75 and \$25 respectively.

LONDON, ONT.—The congregation of St. Andrew's Presbyterian church have decided to erect a new Sunday school building, costing probably \$25,000. The building committee include John Marr, M. H. Rollands, James McSween, and others. Competitive plans will be invited.—There is a prospect of a new Presbyterian church being erected in the north end of the city.—It is the intention of the Department of Militia to enlarge and improve the drill shed here by extending it west to Wellington street, with a handsome facade.

VANCOUVER, B.C.—The authorities of the city hospital feel the necessity of a building for infectious diseases, and may take steps at an early date to build same.—Property adjoining the Brunswick hotel has been purchased by J. Burns, who purposes erecting a brick building.—The old Fewster building is being torn down to make room for a four-storey and basement brick building, which will probably be used as a theatre in connection with the Palace hotel.—Surveys have been completed by the C.P.R. of the proposed direct route for a railway from Vancouver to New Westminster. It is understood that a good grade has been found, and that work will be commenced in the spring. The distance is about 10 miles.

HAMILTON, ONT.—Mr. R. W. Gambier-Bousfield, architect, of this city, is preparing plans for a residence to be built by W. A. Drummond on his farm in East Flamboro.—The city engineer has been instructed to report on a scheme for improving the fire protection in the north-east end of the city.—The Sewers Committee of the City Council has decided to expend \$9,000 in building the Birch avenue sewer south from the Ferguson avenue sewage

disposal works, also to build a sewer on Catherine street from Strachan to Wood streets, at a cost of \$20,000.—It is said that the promoters of the proposed stock yards have secured stock to the extent of \$50,000, and that work will be commenced early in the spring.—The Wentworth county council will likely issue debentures for \$20,000.—Contracts have been given out for the Hamilton and Toronto Sewer Pipe Company's new factory, which will cost \$10,000.

MONTREAL, QUE.—The Fire Committee consider that a new central fire station should be built immediately, and the matter will be brought to the attention of the city council.—L. O. David, city clerk, desires tenders by noon of February 4th for numbers for carts, bicycles and dogs.—The city surveyor has submitted to the Road Committee a statement of the special works which require to be carried out this year, as follows: Paving, \$278,450; bridges, \$2,200; sidewalks, \$65,322; crossings, \$10,000; macadam, \$30,000; relieving sewers to prevent flooding property, \$377,200; pumping plant, Craig street, \$50,000.—The question of the bridge at Viger square station has been finally settled, the Road Committee deciding to adhere to the original plans.—The Finance Committee of the City Council have decided to have specifications prepared of the boiler requirements at the pumping station, in order that new tenders may be invited.

WINNIPEG, MAN.—Plans are being prepared for a warehouse to be commenced in the spring for R. J. Whittle & Company.—The Pipestone branch of the C.P.R. is to be extended this year from the end of the track 50 miles to Moose Mountain. The Rockwood branch will be extended from Toulon to a point on Lake Winnipeg, approximately 50 miles.—It is reported that the Sisters of Charity have purchased the entire block on the south side of Broadway, between Edmonton and Carlton streets, the intention being to erect a convent thereon in the near future.—Plans for a new tile bridge over the White Mud river at Gladstone have been completed by the Public Works Department.—Mr. George Browne, architect, desires tenders by Monday, February 20th, for the erection of a stone and brick office building for the Manitoba Trusts Company.—It is understood that a new wholesale warehouse is to be built on Princess street for the Bole Drug Company. Clare Bros. also contemplate erecting a warehouse in this city.—The Fire, Water and Light Committee have decided to invite tenders, to be received by April 3rd, for engines and boilers in connection with the new waterworks system. The city engineer has suggested that a single 5,000,000 gallon pump be purchased, instead of 4,000,000 gallon duplicate pumping apparatus.—The Minister of Interior is being urged to erect a building in this city for a representative Canadian exhibit in connection with the Winnipeg Industrial Exhibition.—It is reported that McKenzie & Mann will erect a large block at the corner of Portage avenue and Main street.

OTTAWA, ONT.—The county council has decided to engage an engineer to report on the question of the Rideau river floods.—J. R. Booth will shortly commence the building of a new power house at the Chaudiere, on the site of the old saw mill. A large dynamo will be installed therein, capable of running all the machines in the Deep Cut car shops and supplying the light required.—The Separate School Board have selected a site at the corner of Cumberland and St. Andrew's streets on which to build a new school, which will comprise 12 classrooms.—The Ottawa Street Railway Company will probably extend their road to the new rifle range next summer.—The directors of St. Patrick's Orphan's Home have

decided to build an extension, work on which will be commenced in the spring.—The Fire and Light Committee will shortly invite tenders for annual supplies for the department.—There is likely to be keen competition for the contract for the construction of section 3 of the main drainage scheme. Already over 20 tenders have figured on the work.—Captain D. Noonan states that the construction of his new steamer will not commence until next summer.—The Russel, Dundas and Grenville Counties Railway Company is seeking incorporation, to construct a railway from South Indian through several townships.—The Central Counties Railway Company desires to construct two sections of railway from Hawkesbury, to connect with the Rockland branch, or with the Canada Atlantic Railway.—The Portage du Fort and Bristol Branch Railway Company will apply to Parliament for an act to authorize the extension of the line from Guyon to Hull, and to build a bridge at Deschenes.—A. E. York has been granted a building permit for a brick veneered dwelling on Third avenue, to cost \$2,000.

TORONTO, ONT.—The sum of \$700 has been subscribed towards rebuilding Ashbury church in North Toronto, but work will not be commenced until the estimated cost, \$1,200, is obtained.—The Toronto Bicycle Club will hold a meeting to-night to discuss the question of building a club house.—Applications are wanted by W. J. Douglas, town clerk, Eglinton, up to noon on Thursday next, for the position of engineer of the water and electric light works of North Toronto.—Plans will be prepared at an early date for several residences to be built in South Rosedale. Particulars may be obtained from J. L. Scarth, 11 Toronto street.—At the annual meeting of St. Enoch's Presbyterian church, Winchester street, it was stated that the congregation had increased to such an extent that extra accommodation would soon have to be provided.—John Holmes, 222 Carlton street, wants tenders for extending and concreting of the Boswell House, corner Spadina avenue and Adelaide street.—The question of providing additional fire protection for the Parkdale district is being considered by the Fire and Light Committee. An addition may be made to the Cowan avenue fire hall.—A sub committee of the public school board has recommended that increased school accommodation be provided as follows: six rooms to relieve the overcrowding in Bolton avenue, Hamilton street and Morse street schools; two rooms in Rosedale; two additional rooms in Wellesley school; three rooms in Huron street school; two rooms in Palmerston avenue school; two rooms in Perth avenue school, and two rooms in Dovercourt school.—The Board of Control has decided to advertise for alternate tenders in wood and iron for the vault fittings for the new city building.—The city engineer has recommended the construction of the following pavements: 24-foot asphalt pavement on Bedford road, from Lowther avenue to Bernard avenue, cost \$8,536; 24-foot cedar block pavement on Oxford street, from Augusta avenue to Lippincott street, cost \$1,702; 24 foot brick pavement on Manning avenue, from College street to Harbord street, cost \$10,612; 24 foot macadam roadway on Sworl street, from Spruce street to Gerrard, cost \$1,059.—The Metropolitan Railway Company want tenders for 1,000 cedar telegraph poles, 65,000 cedar ties and 300 cedar trolley poles.—A building permit has been granted to George Farhall, for a brick store, north side of Bloor street, west of Ossington avenue, cost \$1,500.—Representatives of the city council and the Board of Trade will probably go to Ottawa this week to consult with the Dominion government regarding proposed improvements to Toronto harbor.

The deputation will ask that the channel be dredged to a depth of 20 feet and the south piers extended into the lake 300 feet.—The National Sanitarium Association, at a meeting held on Saturday last, decided to ask the city council for a free site for the erection of a Toronto home for consumptives.—The city engineer has been instructed to advertise for tenders for the supply of 500 tonse of stone.—Architects in general will be invited to submit plans for the proposed St. Lawrence market improvements, which are estimated to cost \$150,000. The architect whose design is accepted will receive a commission on the total cost, and to the authors of the plans given second and third place \$200 and \$100 respectively will be paid.

FIRES.

Recent fires included the following: Residence of Byron Jameson at Wellandport, Ont.; partially destroyed.—Residence of Mrs. Butchart at Owen Sound, Ont.; loss \$8,000, insurance \$4,000.—C. P. Wright's hardware store at Aylmer, Que.; damaged to the extent of \$18,000.—Building at Sudbury, Ont., owned by the C.P.R., loss \$3,000, partially insured.—Residence of W. L. McDonald and large warehouse of Samuel Leach at DeLoraine, Man.; totally destroyed.—Machine shop of the Montreal Gas Company, damaged to the extent of \$4,000.—Residence at Peterboro', Ont., owned by the Chamberlain Estate; fully insured.—The Oddfellows' building on Princess street, Kingston, Ont., totally destroyed, together with furniture and fittings; loss \$35,000, insurance \$20,000.—Residence of Schuyler Giffin near Port Stanley, Ont.

CONTRACTS AWARDED.

YMR, B.C.—The municipal council has awarded to D. C. Cummings the contract for a waterworks system.

HUMBERSTONE, ONT.—Charles Richman has secured the contract for a residence to be erected by William Deeks.

LIVERPOOL, N. S.—Rhodes, Curry & Co., of Amherst, have secured the contract to build a new post office at this place; cost \$12,000.

LONDON, ONT.—Contracts have been let as follows for building the cold storage boiler house. Brickwork, H. Lucas, Toronto; carpenter work, Hillard & McKinley; cost, \$2,500.—The county council has accepted tenders as follows: Erection of bridge over Mud creek, between townships of East Williams and McGillivray, William L. Bice, \$473; bridge at Sebce flats, between East Williams and McGillivray, J. F. Nichols, \$178.

BARRIE, ONT.—Thomas Kennedy & Co., architects, of this city, have awarded contracts as follows for a residence for Rev. Father Gerain. Stonework, etc., D. J. Kennedy, Elmvale; brickwork, A. F. Stewart, Elmvale; carpenter work, painting, glazing, tinsmithing and galvanized iron, A. Tessier, Penetang; heating and plumbing, Purdy, Mansell & Co., Toronto.

ST. JOHN, N. B.—The Board of Public Works received the following tenders for the construction of four watering carts: George Haman, London, Ont., \$255 each; Price & Shaw, \$257 each; J. A. Kelley, \$260 each; George Murphy, \$275 each. Tenders were also submitted as follows, the city to supply the sprinklers: E. Murphy, \$225 each; Price & Shaw, \$800 for four carts (accepted); J. A. Kelly, \$185 each.

TORONTO, ONT.—The tender of the Polson Iron Works Company has been accepted for the building of a passenger steamer for the Richelieu Navigation Co.—The tender of A. J. Brown for the construction of a chain ferry, at \$4,378, and that of Medler & Arnott, for cribwork, at \$2,784, have been accepted by the Board of Control.

POINTING UP BRICK WORK.

In finishing off the outside faces of brick walls, the operation of pointing is often resorted to. This consists in filling up all the joints with superior mortar, and in the better class of work with cement. To properly "point" a wall requires great care, and indeed some skill, where thorough neatness and finish in the joint are to be secured. Moreover, pointing requires to be conscientiously done, for much of the capability of a wall to resist the action of damp and of driving rains depends upon the way in which the joints are made good. The first operation of "pointing" is to remove all the mortar from the face of the brick, the mortar is next removed or raked out from between the joints with a tool made for the purpose, and for some distance inwards, this being done in order to give a "key" bond or hold for the mortar or cement used in the pointing. As a rule, all brickwork intended to be "pointed" or "tucked" is laid first with ordinary common brick mortar, the bond properly made and the walls kept plumb, and before the mortar is set hard it must be raked out of the joints about half an inch deep. When there is not much ornamental work in brick on the face of the building, the brickwork may be laid "overhand"—that is, the bricklayer may do his work from the inside of the building—and then "tucked" or "pointed" from a swinging scaffold. In common brickwork, where the brick used are of an inferior kind—that is, not pressed and of a uniform color—it may be necessary to stain the whole work, because some of the brick are much darker than others, and give to the wall a mottled appearance when finished, that is

not at all pleasing. The first thing to be done in preparing for all kinds of tuck-pointing, is the cleaning down or washing of the walls to be pointed, and clearing them of all mortar stains or dirt. This should be done with a solution of muriatic acid and water, making use of one pint of acid to each pail of water used. That the acid may not leave any damaging effects after it, the work should also receive a cleansing of pure water immediately after the application of the solution. It is only necessary to clean as much of the wall at a time as can be easily reached by the workman doing the pointing.

The next operation to be performed is the stopping. Red is composed of one part of fine putty lime to three parts of fine white sand washed clean. This is colored with Venetian red and Spanish brown, and made to suit in shade as near as possible a brick colored with the intended stain. There should be sufficient stopping made at one time to complete the work, as it cannot be made a second time to have the same shade as at first. It takes three hods of stopping to point 200 feet of superficial brickwork, so it will not be difficult to find out how much will be required for the whole work. The stopping should be "stayed" with coppers, say one pound of coppers to every three hods of mortar or stopping, dissolved in hot water and incorporated when cold. The joints are then stopped or pointed in a rough manner, and no more should be done at a time than can be immediately finished by applying the putty joint before the stopping has become too hard. If this is not done, the putty joint will not combine with it as it ought, and it will fall off in a very short time.

When a sufficient amount is stopped in, it is usual to rub it well with a piece of dry carpet or sacking, or something of that kind, and rub the stopping well into the pores of the brick, that the work may appear as uniform as possible. When this is properly performed, the wall is ready for the color, which is composed of the same mineral paints as the stopping, Venetian red and Spanish brown, one pound of each to one and one-half gallons of water; as these colors have not setting properties, it is necessary to add about one pound of coppers to three gallons of the stain, prepared in the same manner as for the stopping.

The Hamilton Bridge Works Company, of Hamilton, Ont., have just issued their 1899 catalogue, a copy of which has reached our desk. The work contains much valuable information regarding the erection of railway and highway bridges, steel, iron, and structural work of all kinds. A model specification for highway bridges is given, followed by a number of hints of value to municipalities and persons inviting tenders for bridges. There are also numerous tables and a list of some of the important engineering works carried out by the Hamilton Bridge Works Company. The works of this company cover an area of 131 square feet, the main building being 350 feet long and 150 feet wide, the machine shop 100 x 200 feet, the marking, assembling, and riveting shop 200 x 100 feet, and the new grinder shop 132 x 40.

WATER WORKS

Municipalities contemplating the installation of Water Works Plants will do well to communicate with us, as we can offer several Excellent Pumps in First-Class Condition, Low in Price, on Easy Terms, and Built for Water Works Service.

The Northey Mfg. Co'y.

KING STREET
SUBWAY,

— TORONTO

CHARLES HUGHES - Milton West, Ont.

All Kinds of Municipal Work

CURBING, CROSSING, CHANNELLING, FLAGGING, ETC.

Rough Heavy Lime-stone for Breakwater Cribbing, Etc.

Credit Valley Grey Dimension, any size, Sills, Steps, Coursing, Bridge Blocks, Engine Beds.

— Estimates Given for All Kinds of Cut Work —

JOSSON CEMENT .. Manufactured at.. NIEL ON RUPPELL

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

C. I. de Sola, Manager in Canada :: 180 St. James Street, MONTREAL



To Contractors: We have special facilities for the manufacture of all classes of

BRIDGE IRON

Including Rods, Bolts, Nuts, &c. Also Drift Bolts for Breakwaters.

PRICES ON APPLICATION **SWANSEA FORGING COMPANY, SWANSEA** (NEAR TORONTO)

MUNICIPAL DEBENTURES BOUGHT

ÆMILIUS JARVIS & CO. (Toronto Stock Exchange) 23 King St. West, TORONTO

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

DEBENTURES BOUGHT

Municipalities saved all possible trouble by applying to

G. A. STIMSON & CO. Investment Dealers

24 and 26 King St. W. - TORONTO

ARTIFICIAL STONE PAVEMENTS

SIDEWALKS A SPECIALTY

CORPORATIONS Will do well to consider our work and prices before letting contracts

The Silica Barutic Stone Company of Ontario, Limited.

WALTER MILLS, General Manager Head office: INGERBOLL, ONT.

THE HERCULES CULVERT CO.

Manufacturers of

Portland Cement

Culvert Pipe

Culvert Arches

HOG-TROUGHS, CURBING, Etc., and GENERAL CONTRACTING and SUPERVISION of all CEMENT AND CONCRETE STRUCTURES. Guaranteeing permanence and satisfaction. For Prices, Estimates and further Particulars write . . .

The Hercules Culvert Co. - HAMILTON

Please mention the CONTRACT RECORD when corresponding with advertisers.

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

RODERICK J. PARKE

Consulting Electrical Engineer

MUNICIPAL ELECTRIC LIGHTING COMMERCIAL POWER INSTALLATIONS

Isolated Electric Lighting and Power Plants for Manufactories. Estimates, Specifications, Advice on Tenders, Valuating.

310 Temple Building - TORONTO, CANADA

VAUGHAN M. ROBERTS

Civil and Sanitary Engineer

Waterworks, Sewers, Electric Light, Electric Railways.

Plans and Specifications prepared.—Work supervised. 18 Ontario Street, ST. CATHARINES

E. A. WALLBERG, C.E.

BRIDGE ENGINEER

Bell Telephone Building, MONTREAL

Bridges, Buildings, Foundations, Plans, Specifications, Superintendence and Expert Reports on existing structures

W. T. ASHBRIDGE, C.E.

A. M. CAN. SOC. C.E.

609 Temple Building, - TORONTO

Special Attention given to

MUNICIPAL IMPROVEMENTS

Sewerage Works, Water Supply, Pavements, Concrete Construction, Etc.

THE PHOENIX BRIDGE & IRON WORKS

Civil Engineers and Contractors

BLACKSMITHS AND MACHINISTS STEEL AND IRON STRUCTURAL AND ARCHITECTURAL WORK

Beams, Channels, Angles and Tees always in stock.

29 to 49 McGill Street,

P.O. Box 893.

MONTREAL

THE HAMILTON AND TORONTO SEWER PIPE CO.

(LIMITED.)

- FOR -

SEWERS,

CULVERTS

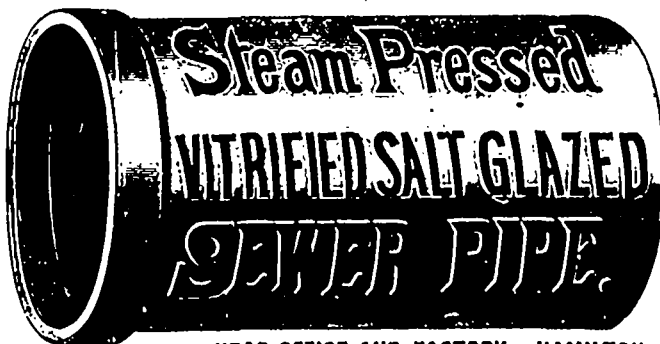
AND

WATER PIPES.

INVERTS

For Brick Sewers

Write for Discounts



HEAD OFFICE AND FACTORY: HAMILTON, CANADA

THE STANDARD DRAIN PIPE CO.

OF ST. JOHNS, P. Q., (LIMITED)

Manufacturers of

Salt-Glazed

Vitrified

SEWER

PIPES

Double Strength Railway Culvert Pipes, Inverts, Vents,



AND ALL KINDS OF FIRE CLAY GOODS

For Artificial Stone Pavements, Roofing Gravel, Concrete, Etc.

USE "CRUSHED QUARTZITE"

LAURENTIAN SAND & GRAVEL CO.

Telephone 2491.

MONTREAL

13 St. John Street.

Write for Prices delivered in your town.

THE CADWELL SILEX STONE CO'Y

SILEX STONE

WALKS

CURBINGS

A SPECIALTY

NOTICE TO CORPORATIONS. It will be to your interest to get our prices before letting contracts

C. W. Cadwell, Manager, Windsor, Ont.

CANADIAN CONTRACTORS' HAND-BOOK

(SECOND EDITION)

Contains 150 pages of the most valuable information, substantially bound in cloth. Price, \$1.50; to subscribers of the "Canadian Architect and Builder," \$1.00.

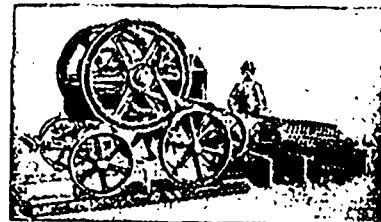
The C. H. Mortimer Publishing Co. of Toronto, Limited,

Confederation Life Building, TORONTO.

Branch Office: New York Life Building, Montreal.

THE JENCKES MACHINE CO.

31 Lansdowne Street - SHERRBROOKE, QUE.



Builders of

STONE AND ORE CRUSHERS

and Macadamizing Machinery.

Complete Plants Planned and Erected.

Write us for Catalogue of Crushing Machinery, and Prices, stating requirements.

MUNICIPAL DEPARTMENT

TO MUNICIPAL OFFICERS.

The CONTRACT RECORD is desirous of publishing, as far as possible, advance information regarding projected works of construction in all parts of Canada, such as sewerage and waterworks systems, railways, street pavements, public and private buildings, etc. Municipal officers would confer a favor upon the publisher by placing at our disposal particulars of such undertakings which are likely to be carried out in their vicinity, giving the name of the promoter, character of the work, and probable cost. Any information thus furnished will be greatly appreciated.

SEWAGE DISPOSAL BY BACTERIA BEDS AND THE SEPTIC TANK.

Concluded.

In view of the present interest in the possible use in the United States of these methods of treatment for handling the effluent from small sewerage systems, what Mr. Thudichum says of such plants in England is particularly timely. "For dealing with the sewage from a small community, such as a public school or an asylum, or a small hamlet, one of two biological methods may be employed, according to the fall available. In the first method, which may be on the lines of either the Sutton or the septic system, or a combination of the two, the sewage is passed through the tank, or for 24 hours on to a coarse bed, and then on to fine beds, where it remains for two hours and is then discharged. If bacteria beds only are employed they should be four in number, two coarse and two fine, each of sufficient capacity to take a whole day's flow. The sewage, or the overflow from the cesspit, where such exists, is allowed to pass into one of the coarse beds for 24 hours and is then diverted to the second bed, the effluent from the first being discharged into the corresponding fine bed. Here it is allowed to remain during two hours and is then finally removed. By this method there is no doubt far more anaerobic action in the coarse bed than is the case where the system is worked normally; but the rest, which is given every alternate day, gives an opportunity for the destruction by oxidation of the organic matter retained by the bed. The attendance required is very slight, and can be readily given by a gardener. It consists merely in turning a few valves, with an interval of three hours between the first and second operations, and in an occasional raking of the surface. If the fall be insufficient to admit of the employment of two sets of beds, the septic tank and the fine beds only can be employed; and in this case the alternating gear used with the latter is essential, as otherwise the attendance would prove a severe tax,

"In the second method it is presupposed that the sewage cannot be delivered at or sufficiently near the surface to be passed on to a bed. In this case the best plan is to provide a storage tank, a coarse-grain and a fine-grain bacteria bed, each of three being capable of containing the sewage of an entire day of 24 hours. At a fixed time on each day the sewage should be pumped from the storage tank into the coarse bed, should remain there two hours, and then be passed into the fine bed, and after a similar period of rest in the latter be finally discharged.

"The sewage from the Claybury Asylum of the London County Council has been treated by a single pair of coarse-grain bacteria beds with perfect success for over three years. At Radley College an installation has recently been completed in which the overflow from a cesspit is treated by two pairs of beds, two coarse and two fine grain. These beds were constructed by excavating, the sides being of brickwork and the bottoms of clay puddle. The coarse beds are each 16 x 10 feet by 3 feet deep. The bed material is coke, that in the coarse beds being all rejected by a screen having a half-inch mesh, and that in the fine having all passed a mesh of three-eighths of an inch, with the fine dust removed. The water capacity of each bed is 160 cubic feet, that being the maximum quantity of sewage which they have to deal with daily."

The discussion on this paper brought out some valuable information. According to the report in the "Surveyor," Mr. Baldwin Latham stated that the effluents from a system of biological filters or contact chambers, to use his name, with which he was experimenting, were equal to the best effluent obtained from irrigation in England. The sewage of Bilston is charged with salts of iron and is the color of mahogany. When it had all been liquefied by an arrangement corresponding to the septic tank, which need not be closed, it is passed through a contact filter, with surprising results. The amount of albuminoid ammonia has been reduced to 0.03 and 0.028 grain per imperial gallon, even though the sewage contains the refuse from galvanizing works and as much as 28 grains of chlorine per imperial gallon. At Friern Barnet the results were not quite so good as those at Bilston. The sewage showed 1.16 grains of albuminoid ammonia per imperial gallon and the effluent 0.05 grain. In the

case of Manchester the sewage contained a great quantity of manufacturing effluents of every description, especially those from chemical and dye works, but after treatment by contact filters the amount of albuminoid ammonia per imperial gallon was only 0.07 grain.

Dr. Rideal referred to the lack of definiteness in such terms as coarse and fine beds. In one case what was termed a coarse bed was made of material which would not pass through a half-inch screen, and a fine bed was made of material which would pass through; in another case the fine material had to pass through a three-eighths-inch screen. At Exeter the bed used to treat the effluent from the septic tank was made of material intermediate in size between Mr. Thudichum's coarse and fine sizes. Then again, it was important to notice that the fine screening of the Sutton process produced 30 barrow loads of refuse per million gallons of sewage in the case of the Worcester Park works, and this refuse must be dealt with in some other way.

Mr. E. G. Mawbey stated that the sewage of Leicester was treated on clay land for eight years, but during the last four years the population had been increasing at the rate of 6,000 a year, and it became necessary to buy more land or adopt some means of clarification. The system finally constructed for preliminary treatment comprised a detritus tank, a settling tank and coarse filter beds. Since the construction of these works it was found that the amount of land necessary for the final treatment was reduced to a little more than half the original area.—Engineering Record.

Mr. W. E. Binning has been appointed town clerk of Listowel, Ont.

Municipal officers are asked to mention the CONTRACT RECORD when corresponding with advertisers.

It is reported that Mr. E. A. Wilma, city engineer of Vancouver, B.C., has been dismissed by the city council.

Mr. David Mansell, who for 17 years was treasurer of the counties of Leeds and Grenville, retiring last summer, died on January 27th.

A meeting of the Surveyors of the Province of Quebec was held in Quebec on January 25th and 26th, under the presidency of Mr. J. E. Sirois, of Ste. Anne-la-Pocatiere. The chief business was the revision of the Surveyors' Act.

Portland Cements..

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

BELLHOUSE, DILLON & CO., 30 St. Francois Xavier St., Montreal
Sole Agents for the Compagnie Generale des Asphaltes de France (Rock Asphalt).

PORTLAND CEMENT NORTH'S CONDOR

Paving and Fire Brick a Specialty

SETTING LION and WHITE CROSS BRANDS

NORTH'S "CONDOR" BRAND AWARDED FIRST PRIZE AND GOLD MEDAL AT THE ANTWERP EXHIBITION

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

Prices of Building Materials.

LUMBER.

YARD QUOTATIONS.

Toronto. Montreal.

	\$	\$	\$	\$
Well cut boards and scantling 9 00	10 00	10 00	12 00	
Shipping cull boards, pro-				
miscuous widths..... 12 00	13 00		13 00	
Shipping cull boards, stocks 15 00	16 00		16 00	
Hemlock scantling and joist				
up to 16 ft..... 10 00	12 00		10 00	
Hemlock scantling and joist				
up to 18 ft..... 11 00	2 00	12 00	3 00	
Hemlock scantling and joist				
up to 20 ft..... 13 00	13 00	13 00	14 00	
Cedar for paving, per cord.....	5 00		5 00	
C. dar for kerbing, 4 x 24,				
per M..... 14 00	14 00		14 00	
Scantling and joist, up to 16 ft				
" " " 18 ft	15 00		16 00	
" " " 20 ft	16 00		16 00	
Scantling and joist, up to 22 ft				
" " " 24 ft	17 00		17 00	
" " " 26 ft	19 00		20 00	
" " " 28 ft	20 00		21 00	
" " " 30 ft	24 00		25 00	
" " " 32 ft	27 00		27 00	
" " " 34 ft	29 50		29 50	
" " " 36 ft	31 00		31 00	
" " " 38 ft	33 00		33 00	
" " " 40 ft	35 00		35 00	
Cutting up planks, 1 1/2 and				
thicker, dry..... 25 00	28 00	25 00	30 00	

B. M.

1/4 in. flooring, dressed, F. M.	34 00	36 00	28 00	31 00
1/4 inch flooring, rough, B. M.	18 00	22 00	18 00	22 00
1/4 " " dressed, F. M.	25 00	28 00	27 00	30 00
1/4 " " undressed, B. M.	18 00	19 00	18 00	19 00
1 " " dressed.....	18 00	20 00	18 00	22 00
1 " " undressed.....	12 00	15 00	12 00	15 00
Beaded sheeting, dressed.....	20 00	35 00	22 00	35 00
Clapboarding, dressed.....	14 00	15 00	8 00	12 00
XXX sawn shingles, per M				
16 in.....	2 40	2 35		3 00
XX sawn shingles.....	1 60	1 50		
Sawnlath, No. 1.....	1 75	2 00	2 50	2 60
Cedar.....		2 90		2 90
Red oak.....	30 00	40 00	30 00	40 00
White.....	37 00	45 00	35 00	55 00
Basswood, No. 1 and 2.....	28 00	30 00	18 00	20 00
Cherry, No. 1 and 2.....	70 00	90 00	70 00	80 00
White ash, No. 1 and 2.....	24 00	35 00	30 00	35 00
Black Ash, No. 1 and 2.....	20 00	30 00	18 00	30 00
Dressing stocks.....	16 00	22 00	16 00	22 00
Picks, American inspection..	30 00			40 00
Three uppers, Am. inspection	50 00			50 00

(Continued on Page 8.)

Paving Granite

Granite Sets for Street Paving. — CURBING 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

Notice to Contractors

WE can save you money on... Grandolithic or Crushed Stone

of any size, as we have the most complete plant in Canada. You will consult your own interests by getting our prices. We also make a specialty of Slate, Tile, Granite and all kinds of Stone. Crusher at Jarvis street wharf.

THE POWELL GRANITE & MARBLE CO'Y, Phone 3440. Office, 482-484 Yonge St., Toronto

Please mention the CONTRACT RECORD when corresponding with advertisers.

S. LAWRENCE FOUNDRY CO. ESTD 1852
OF TORONTO, LIMITED.

ARCHITECTURAL IRON & STEELWORK

CONSTRUCTORS OF FORGINGS & CASTINGS

CAST-IRON GAS, WATER & SEWER PIPES

IRON SPIKES & BOLTS.

PATTERNS & MODELS.

262 to 268 FRONT ST. EAST. TORONTO.

WATER CRANES

INDICATOR VALVE POST FOOT AND CHECK VALVES

INDICATOR AND GATE VALVES

2-3 & 4 WAY HYDRANTS

MONTREAL PIPE FOUNDRY CO., Limited

Successors to DRUMMOND McCALL PIPE FOUNDRY CO., LTD. Manufacturers of

CAST IRON WATER and GAS PIPES

and General Water and Gas Special Castings.

Prices on Application.

Offices, Canada Life Building, MONTREAL.

To Municipal Authorities, Engineers and Others

Owing to the excellent reputation which our "STAR" Brand of Portland Cement has acquired, and which trade mark is protected by government registration at Ottawa, foreign manufacturers have been sending cements into Canada under the name of "Star," which we believe to be inferior in quality, weight per barrel, etc., to our goods. Hence, to ensure the use of the genuine article, we respectfully suggest that in framing specifications you be careful to see that RATHBUN'S "STAR" BRAND is specified and used. We guarantee it.

THE RATHBUN COMPANY - DESERONTO, ONT.

EVERY ENGINEER AND CONTRACTOR

Should possess a copy of the Second Edition of the Canadian Contractors' Hand-Book, a compendium of useful information for persons engaged on works of construction, containing upwards of 150 pages. Price \$1.50; to subscribers of the CANADIAN ARCHITECT AND BUILDER, \$1.00.

C. H. MORTIMER PUBLISHING COMPANY OF TORONTO, LIMITED, Publishers,

Branch Office: New York Life Building, MONTREAL.

Confederation Life Building, TORONTO.

ALEX. GARTSHORE, President. J. G. ALLAN, Secretary and Treasurer. JAS. THOMSON, Vice-President and General Manager.

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.

