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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL OF

PUBLIC WORKS • TENDERS • ADVANCE INFORMATION • AND MUNICIPAL PROGRESS

EVERY THURSDAY

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. 6.

MAY 9, 1895

No. 14.

THE CANADIAN CONTRACT RECORD,

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

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Of two splendidly arranged homes; semi-detached; by one of Toronto's best architects. They include all modern improvements; will sell for less than half cost.
A. NORMAN, Davisville, Ont.

TO CONTRACTORS

Tenders for all trades will be received by the undersigned for the erection of the new buildings for

Trinity College School, Port Hope.

The lowest or any tender not necessarily accepted.

DARLING, SPROATT & PEARSON,
Mail Building, Toronto.

TENDERS FOR SEWERS

Sealed Tenders, addressed to the undersigned, and marked "Tender for Sewers," will be received by the Council of the Town of Cornwall until noon of the

20th Day of May, 1895,

For the construction of

The Leitch Creek Sewer and Branches.

The Main Sewer (over 3,300 feet long) to be of 24 inch Scotch tile pipe, and the branches (over 4,400 feet long) to be of 9 inch Scotch tile pipe.

The whole to be completed on or before the 1st day of September, 1895, according to plans and specifications to be seen on, and after the 9th instant, at the office of the undersigned, where forms of tender can be obtained.

An accepted bank cheque, equal to 10 per cent. of the amount of the tender, and payable to order of the Corporation of the Town of Cornwall, must accompany each tender. This cheque will be forfeited if the party declines to enter into the contract, but it will be returned in case of non-acceptance of tender.

The lowest or any tender not necessarily accepted.

GEORGE S. JARVIS,
Clerk Town of Cornwall.

Town Hall, Cornwall, May 7, 1895.

Mr. Simon Peter, contractor, Quebec, is dead.

Messrs. Brouillette & Trempe, contractors, Montreal, have dissolved partnership.

CONTRACTS OPEN.

ROSEWOOD, MAN.—Mr. Wood will build a new residence this summer.

PENETANGUISHENE, ONT.—Chas. Gropp intends building a new residence.

SARNIA, ONT.—The County Council propose making alterations to the court house.

CARBERRY, MAN.—The electors have sanctioned a by-law to borrow \$11,000 for school purposes.

THESSALON, ONT.—A new parsonage will be erected this summer for the church of the Redeemer.

SWEETSBURG, QUE.—The Council are considering the question of constructing a system of waterworks.

COLLINGWOOD, ONT. A donation of \$2,000 has been made towards the proposed hospital extension.

WELLINGTON, B. C.—The Foresters have adopted the plans of J. J. Honeyman for their proposed new hall.

HESPELLER, ONT.—The Grand Trunk contemplate building a new bridge over the River Speed at this place.

HARTLAND, N. B.—Tenders are invited by S. J. Brown, Secretary, until the 20th inst. for the purchase of \$4,000 of debentures.

RAT PORTAGE, ONT.—The council has given the first reading to a by-law to raise \$10,000 by the issue of debentures for local improvements.

PORTAGE LA PRAIRIE, MAN.—The Baptist congregation have purchased a site and propose to erect this summer a new church to cost \$10,000.

KOMOKA, ONT.—A. Seabrook, Sec. of Committee, will receive tenders until 6 p. m. on the 10th inst. for the erection of a school house in this village.

ORANGEVILLE, ONT.—A by-law to raise the sum of \$45,000 for the construction of a system of waterworks was carried by the ratepayers last week.

ST. JOHN, N. B.—The school trustees have decided to erect a new schoolhouse on Erin street, at a cost of about \$12,500, exclusive of the boiler and plumbing.

SEAFORTH, ONT.—Tenders for the erection of a three story brick hotel in this town are invited by A. Davidson, until to-morrow (Friday) at one o'clock.

CHICOUTIMI, QUE.—The ratepayers have decided in favor of the construction of an aqueduct for waterworks purposes, and tenders will be asked for the work.

BARRIE, ONT.—Kennedy & Co., architects, are receiving tenders for the erection of a brick residence on Collier street, for Thos. McCulloch. Estimated cost, \$5,000.

CORNWALL, ONT. The Council of the township of Osnabruck have decided to improve the Hoople Creek drain. J. H. Wiggins, C. E., of Brockville, has made a survey of the work, and estimates the cost at \$9,240.

LONGUEUIL, QUE.—Tenders are invited by Mr. Dagenais, sec.-treas., until the 18th inst. for two high pressure water filters. Plans may be seen at the town clerk's office.

PRESTON, ONT.—The corporation is asking for tenders until the 13th inst. for the purchase of 5 per cent. 10 year municipal debentures. Address, W. A. Husband, Town Clerk.

HENSALL, ONT.—Tenders, addressed to Alex. G. Smillie, Clerk, are invited by the council of the township of Tucker-smith until the 27th inst. for the erection of two Queen's Truss cedar bridges, one 80 feet and one 90 feet span.

LONDON, ONT.—The School Board will ask the City Council for an appropriation of \$34,100 to provide additional accommodation. The Globe Casket Company contemplate making extensive alterations to its premises and plant.

NEW WESTMINSTER, B. C. The Consolidated Railway and Light Company propose installing an electrical plant capable of producing 1,000 horse power, to operate their railway and lighting system. Mr. F. S. Barnard is general manager.

ST. ANNE DE LA PERADE, QUE.—The Municipal Council is asking for tenders until the 15th inst., addressed to J. A. Baribeau, Secretary-Treasurer, for the construction of an iron bridge with stone piers over the river St. Anne at this place.

NANAIMO, B. C.—As a result of the defeat of the by-law to grant funds for the erection of a brick school building, it is said the public school trustees will make arrangements for the erection of a frame building, with the \$15,000 provided by the government.

FREDERICTON, N. B.—The Fredericton Bicycling and Boating Club propose to erect a new club house, and a committee consisting of Thos. Allen, R. S. Barker and others has been appointed to procure plans and estimates.—F. B. Edgecombe is having plans prepared for a new stone residence.

WALLACEBURG, ONT.—A meeting of those interested in the proposed new flax mill was held last week. J. M. Bright, of Listowell, was appointed manager, and it was decided to apply for incorporation, with a capital of \$10,000. The question of a site for the mill has not yet been decided upon.

KINGSTON, ONT.—The Dominion Government has agreed to deepen the Rideau river at this point to a depth of 14 feet. This will necessitate the dredging of 4,000 feet of an average depth of five feet.—The School Board will ask the City Council for a grant of \$20,000 to build a new school in Frontenac ward.

VICTORIA, B. C.—Mr. J. H. Falconer, of this city, proposes to erect a fruit canning factory at Kamloops.—In reply to enquiries regarding the construction of the E. and N. railway from Wellington to Comox. Mr. Dunsmuir has stated that

should the Dominion Government grant the usual subsidy of \$3,200 per mile, the road would be commenced at once, the necessary surveys having been made. About 60 miles are yet to be built.—Permanent pavements will be laid on a number of streets this summer.

ST. VALERIEN, QUE.—Rev. F. P. Cote is calling for tenders for forty-two pews for the Catholic church of this place.

HAMILTON, ONT.—The by-law authorizing the Council to raise the sum of \$36,000 for the erection of a new coal building was carried by the ratepayers last week. Should a satisfactory agreement not be reached with the County Council, the city is now in a position to proceed with the erection of the building.

ST. BONIFACE, MAN.—The Town Council contemplate granting \$35,000 in bonuses to industrial enterprises this year. A grant of \$16,000 to Adolphe Turner & Co. for the erection of a flour mill, is one of the schemes on foot, and another is a bonus of \$10,000 to Winnipeg parties who purpose starting a shoe factory and tannery.

PETERBORO', ONT.—A deputation from this town last week interviewed the Minister of Railways requesting that the Dominion Government grant a revote of \$4,000 towards the construction of a draw bridge over the Otonabee river at Rosa, towards which the Ontario Government have made a grant of \$2,500. It is understood the request will be granted.

WINNIPEG, MAN.—The Young Men's Christian Association have in view the erection of a new building, to cost \$60,000. A site has been purchased and subscriptions received to the amount of \$27,000.—Wm. Litchfield, McIntyre block, invites tenders until the 16th inst., for 3 iron ladders, 3 stand pipes and 9 metal platforms for fire escape purposes.—C. H. Wheeler, architect, is receiving tenders this week for alterations to warehouse for Bryan & Co.—W. Chesterton, architect, will let contracts in a few days for a residence at Indian Head, Assa.

HALIFAX, N. S.—The necessary capital for the construction of eight miles of electric street railway has been secured. The City Engineer, Mr. Doane, is revising the plans and specifications preparatory to asking for tenders for construction work.—H. B. Clarke will build a new residence at the corner of South Park and Ruhland streets. Elliott & Hopson are the architects.—The plans for the new drill shed to be erected in this city, for which tenders are now being asked by the Dominion Government, provide for a main hall for the infantry 250 x 110 feet, a gun room 46 x 110 feet, with a basement for shooting and bowling alley.—Henry Busch, architect, is preparing plans for a residence for H. B. Clarke.

MONTREAL, QUE.—The Road Department is receiving tenders this week for the construction of a number of sewers.—Tenders are asked by the Montreal General Hospital until noon of the 10th inst., for the plant necessary for the supplying of electric current in their hospital for one thousand lights, 16 candle power, also for supplying the same number of lights, and in addition four motors of an average of nine horse power each. James Patton, Sec. Committee of Management.—In the annual report of the Governors of McGill University, presented at a meeting held last week, the necessity of greater classroom accommodation for the faculty of arts is pointed out.—A deputation of military men of this city have requested the Minister of Militia to remove the military school from St. Johns to Montreal. The City Council has offered a grant of \$25,000 towards a new building.—The Montreal Exposition Company, which proposes to hold an international exhibition in this city in 1896, has made

application to the Dominion Parliament for a charter of incorporation. Several prominent citizens are among the applicants. A number of local architects are preparing plans for the buildings which will be required, among whom are Messrs. Lapointe, Theo. Daoust, Perrault & Lesage, J. R. Rhind, and Eric Mann.—The question of the erection of a large cold storage warehouse was discussed by the Board of Trade last week, but no definite action was taken. The building proposed would cost upwards of \$300,000.

The parishioners of St. Laurent will expend about \$35,000 in enlarging the present parochial church. Mr. Robert H. Falbord, architect, has the work in hand.

TORONTO, ONT.—The Public School Board are asking for tenders until noon of Friday next, for the supply of window shades, garden hose and kindergarten furniture.—The members of the Dominion Parliament for this city will interview the Minister of Militia and urge the granting of an appropriation for the construction of armouries for the cavalry and artillery at the new drill hall.—The Executive Committee of the City Council have struck out the appropriations for the Cherry street bridge, the proposed asphalt plant and a dredge. The item for sheep pens at the Exhibition grounds has been reduced by \$2,500. The committee on manufacturing sites have recommended that the City Council grant a site to the Kemp Manufacturing Company for the erection of enamel works in the north side of Gerrard street, on the Don flats. The plans of the company include the erection of a brick building 250 x 80 feet.—The City Engineer recommended to the Board of Works on Monday, the construction of the following pavements as local improvements: brick, Arthur street, from Bathurst street to Euclid avenue, cost \$8,150; Prospect street, from Rose avenue to Parliament street, cost \$2,200; Baldwin street, from McCaul street to Spadina avenue, cost \$14,200; St. Patrick street, Spadina avenue to McCaul street, cost \$14,240; McCaul street, cost \$25,800. Asphalt, Avenue road, from Bloor street to Davenport road, cost \$17,920. Cedar block, D'Arcy street, from Spadina to McCaul, cost \$4,076; Northcote avenue, from Queen street to Afton avenue, cost \$3,400; Henry street, from College to Baldwin, cost \$2,400; Nassau street, from Spadina to Bathurst, cost \$4,360; Beaconsfield avenue, from Queen street to Afton avenue, cost \$3,210. Wooden blocks, Sullivan street, cost \$2,460, and Bellevue avenue, cost \$3,460. Cement concrete sidewalks were recommended on the east side of Yonge street from Maitland to Bloor street, cost \$5,900, and on the east side of Sherbourne street, between Wesley and Howard streets, cost \$1,900, also a concrete pavement on lane east of Bay street, from Wellington to Melinda street, cost \$600. Wooden sidewalks were recommended to the value of \$15,000.—The proposed extension of the Dovern court trolley route along Ossington avenue, south from College street was favourably reported upon. It is proposed to pave the track allowance with concrete and stone sets. The report of the engineer was passed by the Board of Works.—The Parks and Gardens Committee will ask for tenders for the erection of sheep pens at the Exhibition grounds, to cost \$5,000, and for the construction of several small drains.—An established manufacturing firm is prepared to negotiate with contractor for the erection of a suitable building. Address box 144, Globe office. Sanderson, Percy & Co., 63 Adelaide street west, want tenders for removing building, corner Sheppard and Adelaide streets.—The Property Committee has decided to ask for tenders for the erection of a new fire hall on Dundas street, the cost not to exceed \$5,000.—The Separate

School Board will let contracts shortly for various repairs to schools. F. H. Herbert, architect, has prepared plans for a residence on Huron street, tenders for which will be called next week.—A building permit has been granted F. W. Harcourt for a two-storey bk. addition to dwelling 113 St. George st., cost \$2,000.—C. J. Gibson, architect, of this city, is receiving tenders for a business block at Gananoque.

OTTAWA, ONT.—The following appropriations for the Maritime provinces are contained in the Dominion estimates: Intercolonial railway, increased accommodation at Halifax, \$65,000; branch from the I. C. railway between Windsor Junction and Bedford to Dartmouth, \$100,000; Indiantown branch, \$2,000; increased accommodation at Moncton, \$1,000; increased accommodation at Sydney, \$20,000; rolling stock, \$10,000; public buildings: Halifax drill hall, including purchase of site, \$20,000; Lunenburg post office, custom house, etc., to complete, \$4,600; Pictou, N. S., post office, \$10,000; Marysville, N. B., public building, \$5,000; Tracadie, N. B., Lazaretto, \$20,000; Dominion public buildings, removals, improvements, repairs, etc., \$9,000; dredging plant, \$25,000; dredge vessels and repairs \$20,000; dredging, Nova Scotia, Prince Edward Island and New Brunswick, \$30,000; dredging, general service \$5,000; dredge for the Maritime provinces, \$35,000; harbors and rivers in Nova Scotia: Arisaig, repairs to wharf, \$1,000; Bayfield new wharf, \$2,000; Bayfield breakwater, repairs, \$1,000; Bouladerie, Ross ferry, \$3,200; Cow Bay, breakwater, urgent works of reconstruction, renewal and repair and dredging, \$4,000; Digby pier, \$4,000; Georgeville, extension of wharf, \$2,000; Grand Etang, \$5,000; Great Village, repairs to wharf, \$500; Margaree beach, protection, \$3,200; Parrsboro, wharf repairs, etc., \$700; Seaside wharf, \$2,000; to cut a channel at Monck's Head, from Dunn's lake to Antigonish harbor, \$200; New Brunswick Burnt Church wharf, \$2,000; Gardner's Creek, new wharf, \$7,000; Negro Point breakwater, St. John Harbor, \$7,000; River St. John, including tributaries, \$5,000; Shediac harbor, new breakwater, for protection of Intercolonial railway wharf at Point du Chene, \$2,500; general repairs and improvements to harbors and river work, \$7,500. For the province of Quebec the appropriations for public buildings are as follows: Dominion public buildings, renewals, improvements, repairs, etc., \$12,000; Grosse Isle quarantine station, \$1,000; Montreal Dominion public buildings, improvements, alterations, \$8,000; Quebec post office, new wing, including alterations to old buildings, furniture, etc., \$2,500; Quebec immigrant buildings on Queen's wharf, Louise embankment and breakwater, \$1,000; Richmond post-office custom house, etc., \$5,000; St. Vincent de Paul Penitentiary, \$5,000. The following are the votes for harbors and rivers in Quebec: Anse a l'Eau, Tadousac pier, \$1,500; Baie St. Paul to complete wharf at Pointe aux Corbeaux, \$5,000; Chicoutimi wharf, \$2,000; Etang du Nord, repairs, \$1,000; Grand Riviere, to complete harbor of refuge by extending the wharf, \$8,000; general repairs and improvements to harbor, river and bridge works, \$10,000; Laprairie works in connection with ice piers, \$2,000; Lacolle, repairs to wharf, \$900; Matane, repairs to pier, \$600; Phillipsburg pier, the municipality having contributed \$4,000, \$6,500; Pointe Aux Esquimaux, wharf, \$5,000; Rimouski, formation of tidal basin, \$8,000; Roberval pier, Lake St. John, \$2,000; River Richelieu, Belœil channel, guide piers, \$5,000; St. Irene, addition to pier, \$2,000.—The directors of the Old Men's Home have accepted plans prepared by Mr. Mather, architect, for a new wing to the present building, and tenders will be

asked at once.—A deputation from Prince Edward Island, consisting of A. A. McLean, Dr. Jenkins and Alexander Martin, interviewed the government last week and urged the extension of the Prince Edward Island railway from Southport to Murray Harbor and from Elmina to Souris, a distance of 65 miles.—The St. John River Bridge Company, which is applying for incorporation, proposes to build four bridges across the St. John River at the following points: Near Claire station, at St. Hilaire, at Edmundston, and at St. Leonard's, N. B. The promoters are Thos. Malcolm, Duncan Ross, of Edmundston, E. D. Boswell and Roger Ryan.—The Deschenes Bridge Company proposes to construct a bridge across the Ottawa river between Britannia and Deschenes. One of the promoters is J. R. Booth. The capital stock is to be \$500,000, and the head office at Ottawa.—The South Shore Suburban Railway Co. authorizes the company to construct a line with a bridge over the St. Lawrence, from Longueuil or St. Lambert to St. John's, in the county of Iberville. Hon. A. W. Ogilvie and Hon. Louis Tourville are among the incorporators. The capital is to be \$1,000,000.—The bill to amend the act incorporating the Canada and Michigan Tunnel Co. changes the name to the Canada & Michigan Bridge & Tunnel Company, and authorizes the substitution of a bridge for a tunnel across the Detroit river at the option of the company.—Wm. Hodgson, architect, is receiving tenders this week for a brick residence, corner Metcalfe and Waverley streets, for Thos. Birkett.

FIRES.

The summer residence of C. Scott, of Tilsonburg, situated at Port Burwell, Ont., was destroyed by fire on the 2nd inst. Loss over insurance, \$4,000.—The dwelling house of Daniel Ryan at Forest Hill, N. B., has been burned. Small insurance.—A two-story brick house at Moncton, N. B., owned by Wm. Lannon, was burned last week. Loss, \$1,500; insurance, \$500.—The shingle brick, tile and saw mills of James Richardson, at Kerwood, Ont., were destroyed by fire a few days ago. Loss \$6,000; no insurance.—The George N. Oille machine shop and foundry, owned by Hogan Leggatt, of Montreal, and operated by Wright & Cunningham, was destroyed by fire on the 6th inst. Loss, \$10,000; insurance \$4,000.—The store of W. J. Ritchie and the dwelling of Stewart Herron, at Gellert, Ont., were burned on Sunday last.—The factory of the Dominion Art Woodworking Company at Toronto Junction, Ont., was damaged by fire on Monday last to the extent of \$6,000, covered by insurance. John Burnett's saw mill at Breslau, Ont., was burned on the 7th inst. Loss, \$3,000; no insurance.

CONTRACTS AWARDED.

BRANTFORD, ONT.—The contract for a new public school has been let to Havil & Whitham, at \$7,518.

COLLINGWOOD, ONT.—Contracts have been let as follows for an annex to the Collingwood Meat Company's establishment: brick and stone work, John Chamberlain; other trades, Bryan Mfg Co., \$2,500. Wilson Bros., architects.

HALIFAX, N. S.—Henry Busch, architect, has let contracts for the following works: house on Brenton Place for Miss Crone, to cost \$3,000, M. J. Dunlop, contractor; house for Misses Hubley and Blakely, to cost \$3,500, Walter Sounds, contractor; house for F. A. Marr, on Pleasant street, M. J. Dunlop, contractor.

TORONTO, ONT.—The Board of Works have awarded contracts for waterworks supplies as follows: Portland cement, Rathbun & Co., 52 cents per 100 lbs; bricks, Walter Morley, \$6.50 per thousand west of Simcoe street, \$5.95 east of Simcoe;

oak tops for valve chambers, J. W. T. Bryce, \$4.74 each; brass and bronze castings, divided between J. G. Dean and Wilson & Cousins; brass work for house services, J. G. Dean; cast iron pipes, St. Lawrence Foundry Co., 4-inch, \$3.60, 6-inch, \$5.25; stop valves, John Perkins Co., 6-inch, \$13.50, 12-inch, \$31.25; hydrants, Ontario Engine & Machine Co., \$29.50 each; coal and wood, Conger Coal Co., iron valves and stop-cock valves, John Abell Co.; lead pipe, James Robertson & Co., \$3.87½ per 100 lbs.; special castings, Galloway, Taylor & Co., \$1.90 per 100 lbs. The tenders for lumber, rubber valves and lubricating oils were referred to the City Engineer for a report.

MONTREAL, QUE.—The Road Committee have awarded tenders as follows for annual supplies: T. Prefontaine & Co., white pine lumber, 1 inch boards, tongued and grooved per 1,000 feet face measure, at \$15.50; white pine, 1 inch boards, rough, at \$12.50; spruce at \$21, and yellow pine from 12 to 16 feet long, at \$34; Shearer & Brown, tamarack floats, 8 cents per lineal foot; To P. Amesse, St. George sewer manhole covers, \$13 each, large manhole covers, \$11, small manhole covers, \$8, flushing pipe covers, \$3.10, and bench ends and all other castings, \$1.50 per lb.; Alex. Brenner, cement, crescent brand, at 51¼ cents per 100 lbs.; Dominion Wire Company, wire spikes, at \$2.37 per 100 lbs. The tenders for 8-inch brick sewers were laid over until a future meeting of the Committee.—W. G. Reid has been awarded the contract by Charles N. Armstrong, representing the Atlantic and Lake Superior railway, for the construction of 115 miles of railway between Sorel and Point Levis, including the construction of all the bridges along the line. Those over the Richelieu river at Sorel, the Yamaska, the St. Francis and the Nicolet rivers will cost about \$100,000 each. There will also be several smaller bridges.—Messrs. Perrault, Mesnard & Venne, architects, have awarded contracts as follows for House of Refuge at St. Cunegonde, masonry, J. B. St. Louis; brickwork, Victor Decarie; iron work, A. & E. Loignon; other trades not let.—A. J. Cooke, architect, has awarded contracts as follows for two houses on Wellington street for Mr. Thompson: masonry, Heggie & Stewart; brick, A. Wand & Son; carpenter and joiners' work, J. Collins; roofing, Campbell & Co.; plumbing and heating, Creed & Small; plastering, F. Decary & Son; painting not let.

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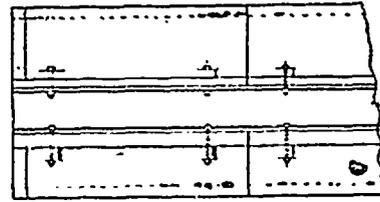
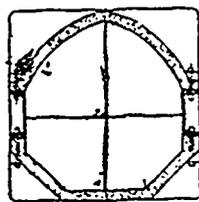
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NEW COMPANIES.

INGERSOLL, ONT. - Ingersoll Electric Power & Light Co., incorporated, capital stock, \$45,000; incorporators, S. Noxon, John Gayfer, A. E. Cayfer, Henry Richardson and G. E. Gayfer.

TORONTO, ONT. - The Cork Company, of Canada, seeking incorporation; capital stock, \$150,000, to manufacture corks, etc. Applicants, J. A. Gendron, L. V. Bachand and others.

MONTREAL, QUE. - New Light Co., applying for charter; capital \$60,000; applicants, W. Robertson, Angus M. Thorn, J. A. E. Whyte and W. D. Aird, of Montreal, and Geo. W. Booth, of Toronto.

LINDSAY, ONT. - Lindsay, Haliburton and Mattawa Railway Company, applying for incorporation, to build a railway from a point north of Lindsay to a point near Mattawa; Moore & Jackson, of this town, solicitors for applicants.

WALKERVILLE, ONT. - Natural Gas and Oil Company, of Ontario, incorporated; capital \$500,000; incorporators, D. A. King, of Kingsville, G. J. Leggart, of Windsor, and Thos. Reid, C. Walker and H. Walker, of Walkerville.

OTTAWA, ONT. - North American Graptute & Mining Co., applying for incorporation; capital \$150,000; to develop mines, and to construct wharves, warehouses, tramways, etc., in connection therewith; applicants, N. C. Sparks, A. Lumsden and I. M. Rogers, of Ottawa, N. H. White, of New York, and others.

BUSINESS NOTES.

White Bros., brick makers, Owen Sound, Ont., have dissolved.

The Rocking Grate Bar Co., Toronto, is applying for incorporation.

Archambault & Foisy, builders, Montreal, have commenced business.

Colin McCalman, plumber, Vancouver, B. C., has assigned to J. W. Weart.

J. B. Rose & Co., metal merchants, Montreal, have assigned, with liabilities of \$44,000.

Castle & Son, painters, Montreal, have dissolved, and Wm. T. & J. O. Castle have been registered proprietors.

The assets of the New Westminster Slate Quarry Company, New Westminster, B. C., were recently purchased by G. D. Brymner, for \$5,200.

A partnership has been registered between W. Townsend and A. Simmons, railway supplies, Montreal, under the name of Walter Townsend & Co.

John Fletcher & Sons, contractors, Toronto, are offering creditors 25 cents on the dollar. The business has been taken in charge by F. W. Fletcher.

The British Columbia Plumbing and Heating Co., of Vancouver, B. C., have assigned. About a year ago the firm purchased the business of W. G. Warren.

An order has been made for the winding up of the British Columbia Pottery and Terra Cotta Co. The company was incorporated in 1890, with head office at Victoria, and a capital stock of \$60,000.

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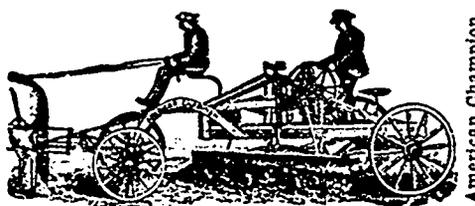
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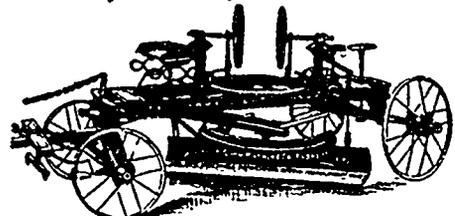
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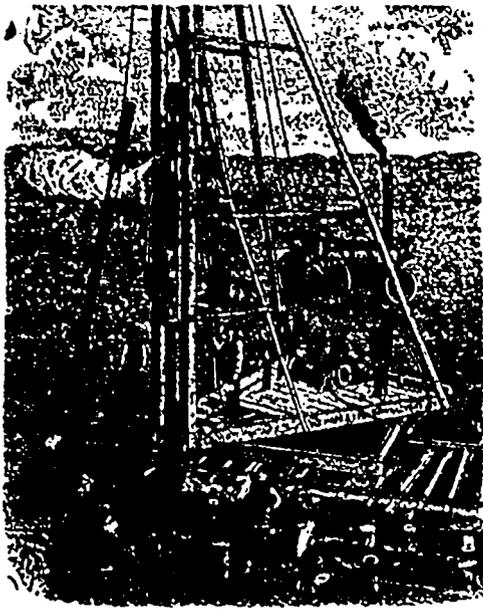
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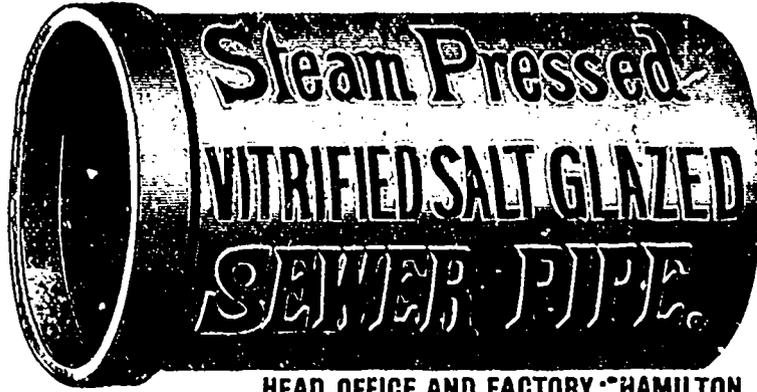
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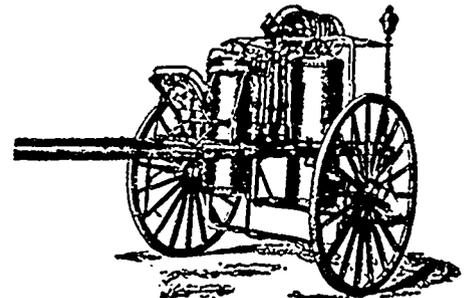
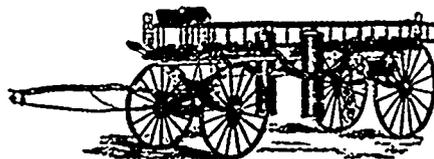
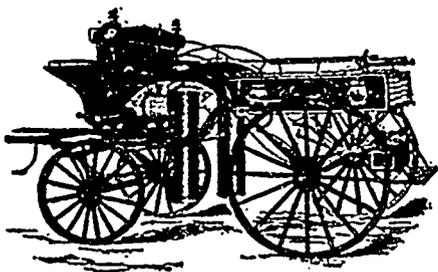
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MUNICIPAL DEPARTMENT

MUNICIPAL ELECTRIC LIGHTING.

By GEORGE WHITE-FRASER, A. AM. INST. ELEC. ENG.

Having decided upon the purchase of an electric lighting plant, and obtained the money necessary, the next important steps are the general design of the entire system, from building to transformer and lamps, and the selection of the make of machinery to be employed. Persons inexperienced in the management of electric lighting business do not, and cannot, appreciate the extreme importance of the original designing of a system; nor the fact that any little inefficiency at this stage will have the effect of imposing a permanent burden on the enterprise that no amount of careful, experienced supervision afterwards can remedy or diminish. This design will decide whether the business can be economically carried on; whether it is, for good and all, to have saddled on to it all sorts of defects. An electric light station is a factory for the manufacture of electric current; and the lines are the means whereby the current is distributed. Every manufactured article has a minimum cost of production. It cannot be made for less than this minimum, and the object of every intelligent manufacturer is to produce it as near as possible to the minimum cost, which is made up of the following items: the article's fair share of interest on the first cost of the machinery and plant required; its fair share of cost of raw material; wages, depreciation, maintenance and so on; and a reduction in any one of these items results in reducing the cost of the article. Of these items, some are purely operatives, while others are purely capital charges. Anything that tends to reduce the amount of capital necessary to be employed, reduces the share of interest on capital which the article has to pay back; and the only way to reduce the amount of capital employed is to have every individual piece of machinery or detail in the factory proportioned for its work. We must have no men doing boy's work, or vice versa, otherwise capital will be wasted. An electric lighting system must be regarded as an entirety; as one harmonious whole, in which the various parts work together easily and economically, for the attainment of a common object, and if recognized principles of designing and proportioning be not studied and applied, the result is simply waste of money. It includes every piece of machinery or apparatus, from building, boiler, engine, dynamo, lines, poles, transformers, right down to the little incandescent lamp, which, as being the means for the utilization of the current is a very important article indeed, and doesn't receive half the consideration it should. The sizes of each of these details should be proportioned with regard to the general result. The size of the wires, the location of centers of distribution, have just as much influence over the ultimate efficiency of the plant as has the size of engine or dynamo; and if the design of the system be not according to intelligent consideration of local conditions, and be not based on this necessary unity or fitness for a purpose, but be loose and incoherent, it simply means waste of money to begin with, and increased expense to follow. For instance, the purchase of an engine of 125 H. P., where one of 100 H. P. is sufficient means, first, the needless investment of 25 H. P. worth of capital; and second, interest, maintenance and depreciation on the same; and

third, an unnecessary increase of engine friction, requiring a corresponding increase in the consumption of fuel; all of which might have been saved by proper design, but which now will be unnecessary expenses while the engine continues to run. The same illustration will apply to every detail. The conclusion is—Design entire system most carefully, and decide what is necessary. The consideration of this question will involve investigation of the amount of lighting; class of lighting; whether commercial or residential; and in what proportions; churches, halls, etc.; kind of fuel; hours of lighting; and so on. It is not to be expected that a proper determination can be arrived at of these important factors by inexperienced persons, but there are plenty electrical specialists who can be referred to. The passing of this stage brings us to the question of what kind of machinery to select, and the decision must be arrived at on grounds both purely commercial and purely technical; proper weight being given to commercial, as distinct from electrical excellence. Business principles must guide in this, as in all other matters. Make up your mind what you want—how much you want; and go into the open market for it. So little attention has been given by the public to electrical affairs, and so general is the utterly mistaken impression that electrical machinery is yet "in its experimental stage," that a special article on the commercial and technical considerations governing the selection of electrical and steam machinery will be given next.

THE VENTILATION OF SEWERS.*

By W. F. VAN BUSKIRK, A. M. CAN. SOC. C. E.

The best modern practice aims at making sewers so perfect in alignment and grade that sewage will be kept moving at a nearly uniform rate of flow from the house drain to the main outlet, without depositing solids in any part of the system, and will reach the outlet before decomposition sets in.

Owing, however, to the impossibility of making perfectly smooth joints, etc., and of maintaining a uniform depth of flow at all times, a certain amount of the solids in suspension will be deposited in the system; and when decomposed or partially dried upon the walls of pipes will form gases, and impregnate the air with bacteria.

To mitigate this evil, flushing at frequent intervals and the admission of large quantities of fresh air to the sewers must be resorted to.

Automatic flush tanks located at the heads of all branch sewers liberate large volumes of water at once, filling or nearly filling the smaller-sized sewers and scouring the walls and bottoms of pipes. The air in front of these volumes of water is, of course, forced out at manholes, etc., and fresh air is drawn in through all openings both in main sewers and house systems immediately in rear of them. It will be seen, therefore, that unless fresh air inlets are provided on sewer side of cut-off traps on house drains, the seals of traps will be broken, and a clear way will be provided for foul air and bacteria from street mains to interior of houses.

Exactly similar action takes place in each house system whenever a large quantity of water is discharged from a fixture, so that it is necessary to provide ventilators for the admission of air upon the sewer side of all traps in use. These ventilators should all be carried above roof line, since they will both admit and discharge air with every change in density of air in pipe system. Manholes with perforated covers will, if built at short intervals on line of sewer, admit and discharge a sufficient amount of air for ventilating purposes; and as they are generally located in the centre of streets at intersections are far enough removed from dwell-

*Abstract of paper read before the Engineering Society of the School of Practical Science, Toronto.

ings to prevent any injurious contamination of air.

It is important that any deposit on the walls of sewers be not allowed to dry before removal by flushing, for the reason that the number of bacteria and their spores that can be taken up by air from dried sewage is much greater than that from sewage in the liquid state.

In order to prevent deposits becoming at all dry, flush tanks should be timed to discharge after the period of maximum daily flow, since it is not advisable, owing to the large quantity of water required, to discharge them more frequently than once in twenty-four hours.

I am aware that my contention in regard to the danger of disease germs being carried by sewer air is at variance with the opinions of many engineers; but, on the other hand, I am supported by the great mass of the medical profession, whose opinions are worthy of consideration, although they are much inclined to blame "sewer gas" for "all the ills that flesh is heir to." In the discussion of this question, engineers generally have in mind sewers of the most approved construction, accurate grades and alignment, smooth walls, etc.; while doctors have in mind the sewer as it unfortunately is in many cases. As an example of the article which the doctor has in mind, I quote the description of a sewer recently examined by me:—

"A badly-constructed, foul-smelling stone box drain, located below the centre of the roadway, and having its outlet in the heart of the business part of the town.

"The box drain is constructed of stone, with open joints, has rough flag top and bottom, is two feet wide, and two and one-half feet deep, but is now nearly half filled with gravel and dirt. This drain is connected directly to cellars, sinks, etc., without traps, and has no openings for ventilation, and is never flushed except by heavy rainfalls."

Who will say that disease germs cannot escape from these "sewers"? Our friends, the physicians, have many cases on record in their numerous periodicals and reports which, upon examination, will convince almost anyone that diseases are communicated by sewer air.

The want of a reasonable explanation as to the manner in which the organisms are carried from one point to another has been the stumbling block in the way of engineers. The recent experiments with the bacilli of typhoid fever performed by David Arthur, M. D., King's College, London, will, I think, go far towards removing this block. After describing several experiments in a report to the recent sanitary congress, he says:—"This, in my opinion, is one of the principal ways sewage microbes find access to sewer air. The bacteria of the sewage may creep like those of typhoid up the walls of the damp nutrient sewers, so that they may be literally alive with them. Moulds here also grow with great proliferation. In their struggle for existence they will often be covered with bacteria, and in shooting forth their spore stalks must carry some bacteria with them. When the spore stalks are sufficiently long to project from the damp sewer walls, and have become ripe for dissemination, the clinging bacteria and their spores will become liberated, mould spores and bacteria and their spores will be wafted with every air current; many will gravitate to the sewage, others will stick to the damp sewer walls, others will be carried up the ventilators to the outside air, while others, again, may gain access to dwelling houses."

I am strongly of opinion that all wastes known to contain germs of contagious or infectious diseases should be burned immediately, and should in no case be discharged into sewers.

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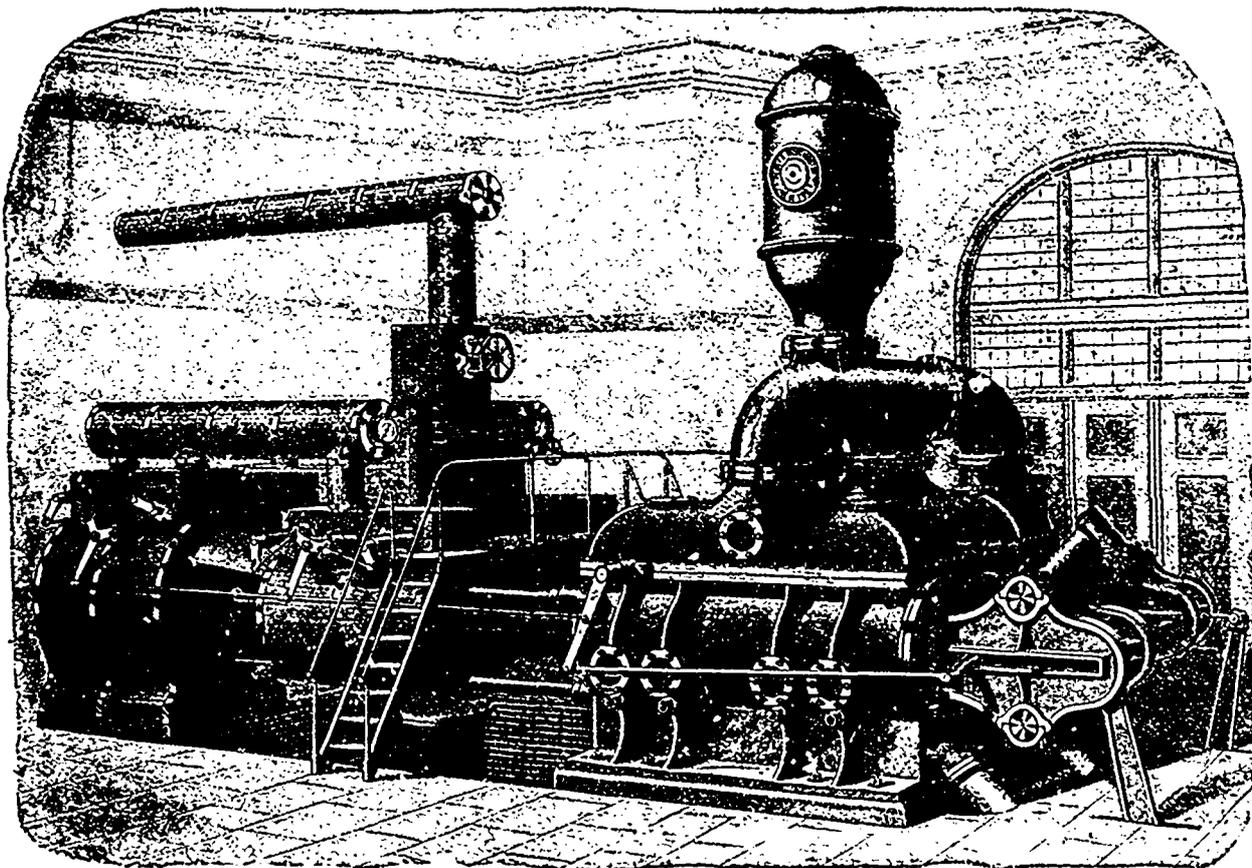
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CONDITION OF THE MARKET.

TORONTO: Indications point to a fairly brisk building season, which, it is thought, will fairly exhaust the present supply of building brick, and as a consequence prices are likely to stiffen.

MONTREAL: The market is improving as the building season advances, and dealers anticipate a satisfactory season. The demand for cement from local buyers is good, and prices are firm.

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Table with columns for Toronto and Montreal prices for various lumber types like clear picks, mill run, and shingles.

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Table listing yard quotations for materials such as mill cull boards, shipping cull boards, and hemlock scantling.

B. M.

Table listing prices for various building materials under the 'B. M.' category, including flooring, lath, and shingles.

Toronto. Montreal.

Table listing prices for brick and stone materials, including Common Walling, Good Facing, and various types of stone.

SAND.

Table listing sand prices, such as Per Load of 1 1/2 Cubic Yards.

STONE.

Table listing prices for various types of stone, including Common Rubble, Large flat Rubble, and Freestone.

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Toronto. Montreal.

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Table listing prices for hardware items like cut nails, steel, and various types of spikes.

PINE BLUED NAILS.

Table listing prices for pine blued nails in different sizes.

Table listing prices for casing and box, flooring, shook, and tobacco box nails.

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Table listing prices for finishing nails in various sizes.

SLATING NAILS.

Table listing prices for slating nails in different sizes.

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Table listing prices for common barrel nails.

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SHARP AND FLAT PRESSED NAILS.

Table listing prices for sharp and flat pressed nails.

STEEL WIRE NAILS.

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Table listing prices for iron pipe and galvanized iron pipe.

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Table listing prices for lead pipe and waste pipe.

Galvanized Iron:

Table listing prices for galvanized iron, including Adam's-Mar's Best and Gordon Crown.

Structural Iron:

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