

CONTRACTS OPEN.

TOTTENHAM, ONT.—A grain elevator is to be built here.

DRAYTON, ONT.—The question of adopting electric street-lighting is under consideration.

DESERONTO, ONT.—The Deseronto Navigation Co. will build a large side wheel steamer.

STRATFORD, ONT.—A stand-pipe is needed to complete the efficiency of the waterworks system.

ST. CATHARINES, ONT.—The Baptist Church was destroyed by fire on the 1st inst. Arrangements will be made to rebuild.

AMHERSTBURG, ONT.—Tenders will be received by the Town Clerk until the 1st of April, for the construction of water works.

MILLBANK, ONT.—Mr. Geo. Shearer, Poole, Ont., will receive tenders until April 4th, for the erection of a brick church at this place.

BELLEVEILLE, ONT.—Mr. Thomas Hanley is preparing plans for improvements to St. Thomas Church; also for a number of residences.

NANANIMO, B. C.—The United Brewery Co., lately organized, is making preparations for the erection of new buildings as soon as the weather will permit.

W. TORONTO JUNCTION, ONT.—It is rumored that Messrs. Campbell & Mossman of Toronto contemplate the erection of a business block and music hall in Dundas St.

LONDON, ONT.—The Public School Board wants tenders for school desks.—Tenders are wanted for the necessary supplies for the water works department for the current year.

MOUNT BRIDGES, ONT.—Mr. J. Thomas, of this place, will receive tenders until the 27th inst. for the erection of an Oddfellows' hall. Separate tenders wanted for masonry.

BROCKVILLE, ONT.—The New York Central Railway is said to be at the back of a scheme to bridge the St. Lawrence in this neighborhood.—The Council want tenders for 100,000 feet of pine and cedar lumber for street purposes.

WOODSTOCK, ONT.—It is rumored that the S. O. Pacific Railway line will be extended from Woodstock to Suspension Bridge next summer, and that the G. T. Railway will build a spur line from Linden or Copetown to Brantford.

WINNIPEG, MAN.—The Dept. of Works, Ottawa, invites tenders for the construction of a bridge over Old Man's River at McLeod.—The Moosomin & Souris Railway and Coal Co. will apply to the Dominion Government for an Act of Incorporation to enable them to build a railway from Moosomin to a point near the international boundary.

NEW WESTMINSTER, B. C.—Preparations are proceeding for the erection, in the near future, of a large business block, mentioned in the RECORD some weeks ago as about to be erected by a syndicate of local capitalists, and which will occupy the block bounded by Columbia, Lorne, Clarke and McKenzie sts.—It is understood to be the intention to rebuild the Masonic building lately destroyed by fire.—The Council will be urged to erect a new bridge over the river at this place.

OTTAWA, ONT.—It is understood to be the intention of the Dept. of Railways and Canals to shortly call for tenders for the construction of a drain through the lands on the north side of the Lachine Canal, to carry off surplus water and avoid suits for damages against the Government. The estimated cost of the work is \$100,000.—It is stated to be the intention of the Provincial Government to build a new wing to the Ottawa Normal School at a cost of \$25,000.

MONTREAL, QUE.—A meeting of Freemasons is to be held on the 31st inst., to consider a project for the erection of a Masonic temple.—Meetings are being held for the purpose of considering ways and means for the erection of a Home for the intemperate.—A by-law has passed the Council providing that on a sufficiently signed petition being presented by the owners of property bounded by a lane on the rear side, such lane may be

entirely paved with stone, asphalt, macadam or other permanent materials excepting wood.—The following building permits have been granted: Ulderic Provencher, 2-storey wood and bk. house, Duquette street, O; Champoux, contractor, cost \$1,700; Canada Mill Co., wood and bk. ware house, cor. Murray and Wellington streets, cost \$2,000; Frs. Godin, three 3-storey wood and bk. houses, 707 St. Laurent street, cost \$4,000.

HAMILTON, ONT.—At the next meeting of the Collegiate Institute Board, the question of providing increased accommodation will be considered.—The Chedoke Street Railway Co. is applying for incorporation for the purpose of constructing a street railway with single or double track through the Townships of Barton and Glanville for the carriage of freight and passengers. The motive power to be steam, electricity, or whatever the township authorities may permit. The names of the provisional directors are: W. G. Walton, Wilham Magee, Jr., John A. Barr, James Chisholm and John Dickenson.—The City Engineer has reported that the cost of diverting the James and Park street sewers, in view of the probable construction of the Toronto, Hamilton and Buffalo Railway, will be \$30,000.—Mr. Stewart, architect, is preparing plans for a four storey rear wing for the St. Nicholas Hotel.

KINGSTON, ONT.—News has been received from Albany that it is the intention of one of the American railway companies to erect a bridge over the St. Lawrence River in St. Lawrence County to the Canadian shore. The bridge is designed to be used for railroad and other purposes. Messrs. Jones, Griffith, Huntly, Coal and Reynolds, of Albany, have been appointed to locate the bridge.—Plans are in course of preparation for a new Separate School building. They will be considered at a meeting to be held a few days hence.—Construction will begin in April on the proposed Kingston & Smiths' Falls Railway.—A site has been purchased and plans prepared for a new Baptist Church; the final arrangements are under consideration by the congregation.—Plans will be completed in a day or two for necessary improvements to the Congregational Church.—Mr. Robt. Gardiner has purchased a lot on Carleton Island on which he proposes to erect early in the spring a handsome summer cottage.

TORONTO, ONT.—The Medical Health Officer recommends the erection of pumping stations on the Island.—The Public School Board for the current year contemplate the erection of the following new schools: A four room school on Fern ave., estimated to cost \$10,500; an eight room school in St. Mark's ward, estimated to cost \$30,300; a four room school in Rosedale to cost \$15,000; a two room school in St. Lawrence ward to cost \$8,000; a two room school in the eastern part of St. Matthew's ward to cost \$8,000; a four room school to relieve Borden street, Lansdowne and Palmerston ave. schools, cost \$11,000. The Board also placed \$1,000 in the estimates for the purchase of new blackboards.—A by-law for the erection of new iron and steel bridges over the railway tracks at Dundas street has passed its first reading in the Council.—The Board of Works has reported in favor of paving Jordan and Melinda streets with asphalt, at an estimated cost of \$15,298.—The Mimico Real Estate Security Co. are seeking power from the Legislature to construct in the township of Etobicoke a railway, to be operated by electricity, steam or other power, and to construct telegraph and telephone lines to the head offices of the Company in Toronto.—The following building permits have been granted: Miss Watson, two pairs 2-storey bk. fronted dwellings, s. side Simpson Ave., e. of Howland Ave., cost \$5,200; S. Taylor & Son, seven att. 2-storey and attic bk. dwellings and one stone dwelling, n. w. corner Euclid Ave. and London St., cost \$16,000; Duckworth Bros., four 3-storey bk. stores and four 2-storey stables, n. w. corner Queen St. and McDonnell Ave., cost \$12,000; J. D. Ivery, 2-storey bk. add. corner Homewood Ave. and Carlton St., cost \$1,200; Wm. White, pr. s. d. 2-storey and attic bk. dwellings, Kensington Crescent, Rosedale, cost \$7,000; R. M. Scott, det. 2-storey bk. dwelling, Harrison St., e. of Dovercourt Rd., cost \$4,000.—Mr. B. I. Brown, of Huron street, will erect several residences on Beverley street.—Mr. Jos. Saunders, of Sussex Ave., will erect a residence on Huron St., to cost \$4,000.—Messrs. J. Bedford & Sons, Rosedale, have the foundations laid for a residence to cost \$20,000.—Mr. J. A. McBurney, Spencer Ave.,

contemplates building.—The Works Committee has adopted the recommendation of the City Engineer for the construction of a Trinidad asphalt pavement on Wellington St., from Bay to York, cost \$16,000; a 16-foot Excelsior sidewalk, south side of College St., from Augusta Ave. to Markham St., cost \$12,400. The Jarvis street sewer will be extended into the Bay.

CONTRACTS AWARDED.

PETERBORO, ONT.—The contract for a residence for Mr. McWhinnie has been awarded to Mr. Arthur Rutherford.

KINGSTON, ONT.—The contracts for repairs to the Congregational Hall have been awarded as follows. Painting and glazing, T. Savage; carpentry, J. McLeod; plumbing and heating, McKelvey & Birch.

VANCOUVER, B. C.—Preparations are being made for the erection of a large business block at the corner of Hastings and Carrall sts., for Mr. J. M. Hollands. The building will be 122x34, and will be divided into 6 stores. Mr. Walter Black has the contract.

MONTREAL, QUE.—The water works department received tenders as follows for the supply of brass castings: F. L. Clark, per lb., 15½c.; R. Mitchell & Co., 16c.; C. Garth & Co., 15½c.; Cuthbert & Son, 16½c.; Dubord & Co.; 15½c. Mr. Clarke was awarded the contract. For the supply of a lathe the following parties tendered: R. H. Buchanan & Co., \$549; Machinery Supply Association, \$700; Canada Machinery Agency, \$625; R. Garth, \$700. The contract was awarded to R. H. Buchanan & Co. The following firms tendered for the supply of special castings: J. McDougall, per ton, \$43.68; H. R. Ives, \$43.80; Thos. Scanlan, \$44.70; E. Chanteloup, \$43.25; P. Amesse, \$46.20; Montreal Pipe Co., \$43.50. The contract was awarded to E. Chanteloup.

ELECTRIC CRANES.*

BY REGINALD BOLTON.

The use of hoisting machinery forms a subject of interest to many engineers, while the question of its economies is of even deeper interest to all those engaged in the transport or movement of materials. The application of electricity to this particular purpose is one that at first sight may not present great apparent advantage, but a consideration of the conditions to be fulfilled will, on the contrary, show that there is no more suitable conjunction of force and duty, and even at the present stage, no purchaser of hoisting machinery can afford to disregard the claims of the conveyance of power by electricity, for reasons which the author hopes, succinctly, to show.

There are three considerations which present themselves, and which, if answered affirmatively, cover the whole subject.

Naturally, the primary one is,

1. Its comparative economy.

The second in order is,

2. Its superior merits.

The only remaining consideration being,

3. Its practicability.

Under the first we have to look into a few of the figures of electric and steam motors on cranes.

Now, an electric motor is in itself a most economical transmitter of power, its efficiency running as high as 90 per cent. in regular work, and if worked under proper conditions, its life may be as long as that of any ordinary steam engine, while under the special safeguards designed by the author its durability would be far more prolonged. But the power must necessarily be generated and conveyed to this motor, and so the question of the economy of the generating dynamo and the power that drives it comes into question. Such directly-connected engines and dynamos as are used on board ship, and in numerous central-station installations on land, have repeatedly given a united efficiency of over 80 per cent. of the horse-power of the steam in the cylinder.

There are a far greater number of cases, however, where such a dynamo would receive its motion direct from a shaft driven by a larger engine, and in such a case an

* Abstract of a Paper read before the Civil and Mechanical Engineers' Society, February 18, 1891.