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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL
OF THE PUBLIC WORKS AND TENDERS OF CANADA

PUBLIC WORKS • TENDERS •
ADVANCE INFORMATION •
AND MUNICIPAL PROGRESS

EVERY 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.

DECEMBER 20, 1899

No. 47.

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

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TENDERS WANTED

Tenders wanted by JANUARY 1st, for 3 Acres Freestone Quarry Land, near Glenwilliam, Ont. On hand, 250 feet Dressed Curbing, Dimension Heads, Sills, Bridge Blocks, Derrick, Blacksmith Shop, Tools.

WM. IRVING,
Limehouse, Ont.



TRENT CANAL

TRENTON AND FRANKFORD DIVISION

NOTICE TO CONTRACTORS

Sealed tenders addressed to the undersigned, and endorsed "Tender for Trent Canal," will be received at this office until noon on SATURDAY, 30th DECEMBER, 1899, for the construction of about nine miles of canal between Trenton and Frankford.

Plans, specifications of the work and forms of contract can be seen at the office of the Chief Engineer of the Department of Railways and Canals at Ottawa, or at the Superintending Engineer's Office, Peterborough, where forms of tender can be obtained on and after Thursday, November 30th, 1899.

In the case of firms there must be attached the actual signatures of the full name, the nature of the occupation and place of residence of each member of the same, and, further, an accepted bank cheque for the sum of \$25,000 must accompany the tender. This accepted cheque must be endorsed over to the Minister of Railways and Canals, and will be forfeited if the party tendering declines entering into contract for work at the rates and terms stated in the offer submitted. The accepted cheque thus sent in will be returned to the respective parties whose tenders are not accepted. The lowest or any tender not necessarily accepted.

By order,
L. K. JONES, Secretary

Department of Railways and Canals,
Ottawa, 24th November, 1899.

Newspapers inserting this advertisement without authority from the Department will not be paid for it.

TENDERS FOR BRIDGE

Sealed tenders, addressed to George Stewart, Esq., County Clerk, Peterborough, will be received up to TUESDAY, JANUARY 23rd, 1900, at four o'clock p.m. for

Floating Bridge and Approaches

over Chemong Lake. Bulk and separate tenders received.

Plans, etc., may be seen at the office of J. E. Belcher, Esq., County Engineer, Peterborough. An accepted cheque for five per cent. must accompany each tender. The lowest or any tender not necessarily accepted.

(Sgd.) E. HAWTHORNE,
Warden.

BRIDGE TENDERS WANTED

Sealed tenders (marked "Tenders for Bridge") for the SUPERSTRUCTURE of a

Steel Bridge

over the South Nation River at Lemieux, on the boundary line between Prescott and Russell. O. C. will be received by the undersigned up to the 22nd JANUARY next, inclusive (1900).

Separate tenders for the construction of the ABUTMENTS of said Bridge will be received by the undersigned up to the 20th DAY OF JANUARY next, inclusive.

Plans and specifications of said Bridge (Iron Work and Masonry) may be seen and further information obtained at the office of the undersigned, in the Court House, in the Village of L'Orignal.

The lowest or any tender not necessarily accepted.
E. ABBOT JOHNSON,
Clerk United Counties of Prescott and Russell.
L'Orignal, Dec. 12th, 1899.

CONTRACTS OPEN.

KLEINBURG, ONT.—Jas. Murray purposes building a brick house next spring.

HIGH BLUFF, MAN.—John Dilworth has decided to rebuild his grain elevator.

BARRINGTON PASSAGE, N. S.—Brill & Fletcher purpose building a summer hotel here.

DIGBY, N. S.—O. F. Oakes purposes establishing a knitting factory at this place.

KENTVILLE, N. S.—The Presbyterian congregation intend building a new church.

LOWER NORTHAMPTON, N. B.—It has been decided to build a new Methodist church.

KAMLOOPS, B. C.—Improvements will be made to the heating apparatus at the provincial home.

WOLSELEY, N. W. T.—The Lake of the Woods Milling Co. will build an elevator here next spring.

SYDNEY, C. B.—It is said that Rhodes, Curry & Co., of Amherst, will build work shops here.

ARNPRIOR, ONT.—R. McCormack and G. E. Neilson will erect a double store on Madawaska street.

NANAIMO, B. C.—On the 23rd inst. the ratepayers will vote on a by-law

granting a bonus to Berry & Thurston to assist them to extend their boot and shoe factory.

THURSO, QUE.—E. J. Taylor purposes making extensive alterations and improvements to his saw mill.

ALMONTE, ONT.—Notice has been given of a proposed by-law to raise \$10,000 for street improvements.

RAT PORTAGE, ONT.—A number of prominent men purpose building a large hotel on the Shadwick property.

KINCARDINE, ONT.—The town will grant a bonus to Henry Colman to establish a pork packing factory here.

ST. JOHNS, QUE.—Gay & Mallory have purchased the Dewolfe carriage factory and intend remodelling the building.

THORNBURY, ONT.—A company has reported that a system of waterworks on the gravitation plan will cost \$25,500.

BOCABEC, N. B.—R. B. Hamson, of this place, purposes building a saw mill at the mouth of the Magaguadic river.

PHOENIX, B. C.—J. A. Coryell, C. E., is taking levels for the waterworks system to be installed by the Phoenix Water Co.

QUEBEC, QUE.—It is understood that another offer will be made to the Quebec legislature for the construction of an abattoir.

WATERLOO, QUE.—The Stanstead, Shefford & Chamblay Railroad Co. are considering the extension of their road to Coaticook.

CORNWALLIS, N. S.—Mrs. Huff, of New York, has purchased the residence of De Los Holmes in Pereaux and intends remodelling it.

VICTORIAVILLE, QUE.—The Department of Public Works at Ottawa are calling for tenders for the erection of a post office here.

WALLACEBURG, ONT.—The council has passed a by law to raise \$1,000 by the issue of debentures for the purchase of a public park.

COLLINGWOOD, ONT.—Plans of a sewerage system have been submitted to council. The cost of the work is estimated at \$65,000.

INGERSOLL, ONT.—W. R. Smith, town clerk, invites offers up to Wednesday 20th inst., for purchase of \$10,726.26 local improvement debentures.

GRANBY, QUE.—The Granby Enamel Ware Works Co., at the head of which are McDonald & Large, are erecting five buildings of various sizes.

MEAFORD, ONT.—By-laws were carried last week granting bonuses to the G. T. R. for an extension and to another company for the erection of an elevator.

FORT WILLIAM, ONT.—Only two offers have been received for site for post office and custom house. These have been referred to the government.

SEAFORTH, ONT.—A committee of the county council has recommended that tenders be invited for building a bridge over

the Maitland river, on boundary between Morris and West Wawanosh.

PARRY SOUND, ONT.—A party is negotiating for the erection of a wood-working factory here, to cost about \$30,000. Name of promoter has not been learned.

WATERDOWN, ONT.—The Lake Medad Cement Co. intends to expend about \$120,000 in establishing cement works, and has asked for a bonus of \$8,000.

WOODSTOCK, ONT.—At meeting of council held last week it was decided to submit the question of the establishment of a municipal electric light plant to a vote of the property owners only.

CHATHAM, ONT.—The county council of Kent has passed a by-law to raise \$12,000 debentures for the purpose of assisting to build a steel bridge over the river Thames at the Moravian site.

ST. CATHARINES, ONT.—At next session of the legislature incorporation will be asked for the Queenston, St. Catharines and Port Dalhousie Electric Railway Co. T. D. Cowper is solicitor for the company.

NIAGARA FALLS, ONT.—It is said that the government will object to the proposed dam above the Niagara river, on the ground that its construction will cause the lower lands in Essex and Kent counties to be submerged.

LITTLE CURRENT, ONT.—It is understood that J. & T. Conlon will install an electric light plant in their saw mill at Pic-Nic Island.—L. Smith, of Blenheim, is considering the putting in of an electric light plant at this place.

SHAWVILLE, QUE.—A. Ferguson, solicitor for the Pontiac Pacific Junction Railway Co., will apply to the Dominion parliament for an act authorizing the construction of a railway from this place to Pembroke, with branches.

HALIFAX, N. S.—Mr. Mitchell, C. E., has commenced a survey of the Hervey railway from Halifax to New Germany.—The city engineer has recommended the extension of the water service on a number of streets, at a cost of about \$6,000.

NEW WESTMINSTER, B. C.—The Pacific Coast Lumber Co., of this city, have applied for foreshore rights on the extreme west boundary of Vancouver. It is understood to be the intention of the company to build a saw mill on the property, although this may not be done immediately.

KINGSTON, ONT.—A. Newlands, architect, has recommended a hot water heating system for the city hall, at a cost of \$1,600.—H. P. Smith, architect, is taking tenders this week for alterations and additions, including heating and plumbing, to residence on University avenue for A. B. Cunningham.

LOUISBURG, C. B.—Col. Alton, manager of the Canso & Louisburg Railway Company, has concluded arrangements with a New York firm of contractors for the construction of the entire line from Port Hawkesbury to this place, with a branch at Arichat. A bridge will be built over the Inhabitants river.

TRENTON, ONT.—On January 1 the ratepayers will vote on a by-law to grant \$5,000 to Miller & Co. for the extension of their canning factory, and \$5,000 to Thos. Bell, of Wingham, and H. A. Wilder & Co., of Montreal, to establish a furniture factory in this town. It is proposed to raise the money by the issue of debentures.

BRANTFORD, ONT.—Geo. Ballachey, secretary of the Farmers Co-Operative Packing Co., is taking tenders this week on excavating and grading for the proposed building.—Arrangements are said to have been completed by which the Buffalo Malleable Iron Co. will take over the G. T. R. shops in this city for the purpose of a branch establishment.

BERLIN, ONT.—Bowly & Clement, barristers, of this place, have made appli-

cation to the Ontario Legislature for the incorporation of the Wahnapitae and Metagamishing Lumber Co., to carry on a lumbering business, construct a canal between Lakes Wahnapitae and Metagamishing, in the district of Nipissing, the necessary dams, slides and booms connected therewith, and at the head of Sturgeon river.

VANCOUVER, B. C.—Local architects are said to have in course of preparation plans for a large number of residences to be erected next spring.—Ald. Wood has introduced a by-law in council to grant a charter to a company for the operation of a district telegraph service.—W. S. Gore, Deputy Commissioner of Lands and Works, invites tenders up to January 3rd for the construction of a wagon road from Hastings street to Barnett.

ORILLIA, ONT.—Capt. McInnes is endeavoring to form a joint stock company for the purpose of controlling a number of summer hotels. He has obtained an option on the Couchiching Beach Park, and if purchased will undertake extensive alterations next spring.—The Orillia Lumber Co. is negotiating with the council with a view to establishing a factory to manufacture wooden specialties. J. B. Tudhope and J. H. Lavalee are interested in the company.

NELSON, B. C.—A by-law will shortly be submitted to the ratepayers to raise \$5,000 for repair of the city wharf.—A. McDonald & Co. have had plans prepared for a two storey and basement warehouse to be built at this place.—Ewart & Carr, architects, have prepared plans for a two-storey and basement warehouse to be erected by A. McDonald & Co.—The government will be asked to grant an appropriation of \$10,000 for the erection of a high school.

HAMILTON, ONT.—The shareholders of the Brant Hotel Co. have authorized the directors to proceed at once to let contracts for the new hotel at Burlington Beach.—E. B. Patterson has been granted a building permit for brick addition to whip factory on Mary street for the Hamilton Whip Co., cost \$3,000.—It is definitely announced that the National Cycle & Automobile Co. will locate in this city, and that they will erect a permanent factory near the Canada Screw Co.'s works, to cost \$65,000. It is expected that the contracts will be let and the foundation laid this winter.

FREDERICTON, N. B.—It is understood that Peters & Sons, whose tannery at St. John was burned recently, will rebuild their industry in this town.—The New Brunswick Telephone Co. has decided to build a line from this place to Chatham.—Mr. Davis, of Portland, Maine, was in town last week with plans of proposed knitting factory to be built at this place.—Several large subscriptions have been received towards the proposed engineering building in connection with the university.—It is stated that operations will be commenced next spring in connection with the proposed street railway.

HULL, QUE.—The council of East Hull has decided to rebuild the Alonzo Wright bridge, at a cost of about \$6,000.—It is understood that E. Benoit, of the fire brigade, will recommend the purchase of ladders and the construction of more commodious quarters.—On Monday last the ratepayers sanctioned a by-law to borrow \$55,000 for waterworks improvements. The estimates for the work to be done, as prepared by the city engineer, Mr. Farley, are as follows: Improvement of Brewery creek, \$2,500; clear water pipe, \$7,000; excavations, flumes, wheels, pit, building, etc., \$13,000; pumps, water wheels, gates, etc., \$26,500, making a total of \$49,000.

VICTORIA, B. C.—It is understood that the Congregationalists will build next spring.—J. G. Tiarks, architect, has purchased property on Esquimalt road on

which it is intended to build several residences.—F. C. Gamble, inspector of dykes, will receive sealed proposals up to January 6th for furnishing and installing two pumps of 16,000 imperial gallons capacity at the Matsqui dyke.—Application will be made to the legislature for an act to incorporate a company to operate tramways in the districts of Kootenay and Yale.—J. G. Tiarks, architect, is about to invite tenders for a brick and stone building to be built on Yates street, three residences at Esquimalt, and one at Oak Bay.

OTTAWA, ONT.—The Carleton Law Association have requested the county council to build an addition to the court house.—It is probable that the authorities of St. Patrick's Home will erect a new building at Hog's Back, adjacent to the city.—The directors of the Canadian Institute are raising funds with which to erect a new building, to cost about \$25,000.—J. R. Booth states that the proposed central depot will be commenced as soon as the militia stores are removed.—E. F. E. Roy, secretary Department of Public Works, invites tenders up to Wednesday, January 3rd, for construction of post office building at Victoriaville, Que. Plans at above department and at office of J. M. Porrier, notary, Victoriaville.—It is expected that arrangements will be completed at an early date for the erection of a Presbyterian church in the Glebe, with Rev. J. W. H. Milne as pastor.—Carleton county council has decided to replace the bridge over the Castor river, between the townships of Russell and Osgoode by an iron and stone structure.

MONTREAL, QUE.—The corporation of McGill University is discussing the question of improving the gymnasium.—David Seath, secretary Harbor Commissioners, invites tenders up to Tuesday, 26th inst., for a supply of cut stone, broken stone, Portland cement and sand. Specifications from John Kennedy, chief engineer.—The Mount Royal Park Incline Railway Co. have appointed a committee consisting of Messrs. Mann, Valance and Turner, to confer with electrical companies as to conversion of the power plant from steam to electricity.—It is reported that the Reinhardt Co., of Toronto, intend establishing a branch of their brewery in this city, the plant to cost about \$100,000.—R. A. Waite, is preparing plans for the elevators to be built in this city by the Connors Syndicate, of Buffalo. The plans as being prepared provide for elevators of a capacity of from two to three million bushels, one to be 330 x 600 feet and the other 700 x 275 feet.—The annual report of the Protestant Board of School Commissioners again calls attention to the necessity of a new building in which pupils who have completed the public school course may receive advanced training in English and commercial subjects.

TORONTO, ONT.—W. J. Clark, solicitor for the Grand Valley Railway Co. will make application at next session of parliament for authority to build a railway from Goderich to Stratford, and to construct telephone and telegraph lines for commercial purposes.—At the annual meeting of the National Sanitorium Association held last week a resolution was passed in favor of purchasing twelve acres of land from the Toronto University as a site for the proposed institution in this city.—Building permits have been granted as follows: A. Bradshay & Son, alterations to 25 Wellington street west, cost \$7,000; York County Loan & Savings Co., two-storey and attic brick and stone dwelling, Marion street, cost \$2,500.—S. Frenkel, wholesale jeweller, has leased the building at 53 Yonge street and purposes putting in a large vault and making other improvements. Contracts will be let within a few days for an extension to the east of Milloy's wharf at foot of Yonge street. It will be built by W. & R. Freeland and will

be 325 feet long.—The city clerk has received a petition against the cedar block pavement on Manning avenue from College to Bloor street.—The Provincial Secretary will shortly visit Oxford county to inspect the site selected for the proposed reform school for boys.—The city engineer has reported that it will require two years for the street commissioner to do the necessary filling to make an embankment to take the place of the present Crawford street bridge, and three years more for filling in the Shaw street bridge.—The following local improvements have been recommended: Asphalt pavement, Brunswick avenue, Bloor to Wells, cost \$15,440; brick pavement, Front street, from York to Simcoe, cost \$8,820; macadam roadways, John street, from Queen to Grange, cost \$2,185; Grange road, from Beverley to McCaul, cost \$1,280; concrete walks, Bay street, east side, from Temperance to Queen, cost \$715; Yonge street, east side, Alexander to Maitland, cost \$642; Beverley street, east side, Queen to College, cost \$2,504; Huron street, east side, College to Russell, cost \$451.

WINNIPEG, MAN.—The by-law authorizing the council to establish a crematory was carried by the ratepayers last week.—The district superintendent of the Bell Telephone Co. in this city invites tenders up to January 1st for the supply of 7,000 cedar poles, 25 feet long, to be delivered at points between Winnipeg, Brandon, Portage la Prairie and Neepawa not later than May 31st, 1900.—The question of building a bridge over the Red river in the north end of the city is again being discussed.—A large delegation last week interviewed Hon. Clifford Sifton, Minister of the Interior, regarding the proposed improvements to St. Andrew's Rapids. Mr. Sifton stated that Parliament had appropriated only \$150,000 towards the work, which would cost \$700,000. He expected, however, that plans would be prepared and tenders invited at an early date for a portion of the work, and that at next session a grant necessary to cover the cost would be made.

FIRES.

Peter Campbell's elevator at Glenboro, Man., totally destroyed; insurance, \$5,000.—Brick residence in Deer Park, near Toronto, owned by Col. Sweny; loss, \$10,000.—Residence of D. D. Campbell, at Listowel, Ont., damaged to the extent of \$5,000.—Owen Sound Iron Works, Owen Sound, Ont., partially destroyed.—Brick residence at Welland, Ont., owned by Thos. Gordon, badly damaged.—Boarding house at Norman, Ont., owned by Hugh Cameron.—Residence of A. G. McDonald, at Bloomfield, Ont., entirely destroyed.—Victoria Granite Works, at St. George, N.B., damaged to the extent of \$10,000.—Dry kilns of the Shearer & Brown Co., at Seigneurs street, Montreal; loss about \$20,000.

CONTRACTS AWARDED.

GREENWOOD, B.C.—Dam for Granby Smelting Co.: Porter Bros., contractors.
HINTONBURG, ONT.—\$60,000 of water-works debentures have been disposed of, at \$61,006.75.
LONDON, ONT.—The contract for painting and decorating the interior of the Talbot street Baptist church has been let to H. & C. Colerick.
NEW WESTMINSTER, B.C.—Brick and stone hotel: John Coughlan & Co., contractors; cost \$19,000. J. G. Trarks, of Victoria, is architect.
TORONTO, ONT.—W. J. Maguire & Co. have secured contracts for heating and plumbing of Lever & Co.'s soap factory; Sprout & Rolph, architects.
VICTORIA, B. C.—The directors of the Lenora mine at Mount Sicker have let a contract to John Haggarty, of this city,

for the construction of a horse tramway from the mine to the railway, a distance of four miles.

JOINTS FOR IRON PIPE.

To make petroleum joints for common iron pipe a writer in Cassier's Magazine says a very good system is to heat both the male and female threads sufficiently to dissipate every trace of oil. Then make the joint up with thick shellac varnish, which may be combined with ordinary dry vermilion or even Venetian red. A joint of this kind I have found to stand well. A very good joint can also be made with ordinary yellow bar soap rubbed into the threads of the pipe; the grease first being removed. Turpentine, honey, glue, mucilage, or glycerine are quite petroleum proof. For a stuffing box, ordinary wicking saturated with common yellow bar soap may be safely employed. Canvas, saturated with shellac varnish, makes a good washer, but soft metallic washers are better. A very good flexible diaphragm for a regulator may be made of closely woven cotton fabric, varnished on both sides with a compound of gelatine and glycerine. About equal parts by weight make a very tough and elastic compound. Wooden vessels, bags, etc., may also be made petroleum tight by saturating or varnishing with this compound. As a rule, all substances which are soluble in water are quite insoluble in petroleum. For stuffing boxes for standing both water and petroleum, castor oil may be employed, as this peculiar oil seems quite insoluble in either."

GLASS AS BUILDING MATERIAL.

Consul Warner (U.S.A.) writes from Leipzig:—"Under the name of 'keramo, a new building material, composed principally of glass, and manufactured at Penzig, Silesia, has been placed on the market. As far as known, this material is made from powdered glass waste, which is hardened by a special devitrifying process, and combined by means of strong pressure.

"In this way the transparency, brittleness and fragility of the glass are destroyed, but other prominent properties—extraordinary hardness, stability against exposure to the weather, non-conduction of heat, non-inflammability, insensibility to oil, grease, acids, etc.—are retained in this new material.

"Keramo can be used for wainscotings in the interior of buildings, for covering floors in houses, kitchens, washing-rooms, verandahs, balconies, etc., for rough-casting of walls exposed to the weather, as well as for staircases which are to be fireproof. The color depends upon the color of the glass used in the manufacture. The price of keramo is about 6s 6d per square yard, and so far the trials which have been made with this product have been most successful."

DATE OF PUBLICATION.

Architects, Engineers, Municipal Authorities and others are reminded that the CONTRACT RECORD is printed every Tuesday afternoon, and that advertisements should reach the office of publication not later than 2 o'clock p.m. on that day to ensure insertion in the issue of the current week. Advertisements are frequently received too late for insertion, to avoid which special attention is directed to this announcement.

The Silica Barytic Stone Co., of Ingersoll, Ont., have constructed over \$11,000 worth of walks this year in the town of Ingersoll, Ont.

To make a good durable red stain for brick, mix Indian red, or Venetian red, with a solution of good Portland cement, regulating the color by adding a little Spanish brown if necessary. Mix with this fine sand, washed clean and dried, before being added to the solution. Cement and sand may be used in equal proportions. The mixture is to be a little thinner than ordinary paint. It must be stirred while being used, and applied with a brush.

The Hamilton Bridge Works Company has just completed for the South Grimsby council a magnificent steel bridge. It is an 88 foot span, with a 16 foot driveway, and has a sidewalk on one side four feet wide in the clear. It is of the Warren truss riveted type, and is pronounced by experts and others to be the best bridge in the county. The contract was taken by R. Maitland Roy, the company's engineer, and is a credit to his ability as a designer of highway bridges.

Hydraulic engineers often experience considerable difficulty in obtaining a cement capable of resisting the action of salt water. Dr. Michaelis, an Austrian authority on cements, has announced that his investigations have led him to the opinion that a mixture of Portland cement, puzzolana (volcanic tufa), and granulated blast furnace slag is better than Portland cement alone where structures are to be exposed to salt water. The puzzolana beds in the province of Syria, Greece, might profitably be developed in this direction.

CEMENT

We make only one Brand of Portland Cement and it is the Highest Grade. It is used by the Government in Public Works and by the Leading Contractors in the Provinces. Write us for prices of our SAMSON BRAND.

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BRIDGE SUB-STRUCTURES, WATER POWER DAMS, CANAL WORK
and CAISSON FOUNDATION a Specialty

MUNICIPAL DEPARTMENT

GOOD ROADS CONVENTION.

Upon the invitation of the York county council, upwards of fifty persons from various parts of Ontario, mostly members of some municipal body, gathered in the court house, Toronto, on Monday, December 11th, for the purpose of discussing the good roads problem.

The particular feature under discussion, and one in which the York County delegates have particular interest, is the assumption by counties of the construction and maintainance of certain main travelled roads in the country, the funds to be raised by general taxation or by debentures.

Mr. W. C. Lundy, chairman of the special committee of the county council,

who had the matter in hand, was elected to the chair, while county clerk Ramsden was chosen secretary. Mr. Lundy, in his opening address, after thanking the delegates for the honor conferred upon him, briefly stated the history of the road question in York county, from the toll gate days to the present, when the municipalities charged with their maintainance have failed to keep them up. At the June session of the council it had been proposed to take over some of the roads again. A committee was appointed to collect information, but so much had been received that it was felt advisable to hold a convention to discuss it.

Mr. A. F. Wood was called upon to address the assembly upon the system of road making adopted by the county of Hastings. The address of Mr. Wood largely supported the idea of county maintainance of leading roads. At least, after trial of the toll roads, plank roads, roads kept up, in sections of five miles each, and many other systems, it had been found that the only uniform and satisfactory way of keeping up the roads was the adoption

of a recognized system. A system for which he was largely responsible was one of first appointing a gravel road committee of seven men, chosen from those parts of the county paying the greatest amount of taxation. This was supplemented by the appointment of a superintendent of roads and the appointment of foremen with squads of workmen, who are paid monthly. It is the duty of the superintendent to report to the gravel road committee at least once a month. This committee orders work to be done by recommendation to council. The council pays all accounts. Mr. Wood estimated that it cost the council \$2,000 per mile to make a good road, and \$16,000 was spent annually over the 500 miles in the county. The speaker was quite aware of the fact that good roads cost money; but good roads stimulated local enterprise, and the benefit to farmers was felt in the fact that they could draw 75 bushels on a load, where with poor roads only 50 could be drawn.

In answer to a question, Mr. Woods thought gravel better than broken stone, where procurable, because, in wet weather,

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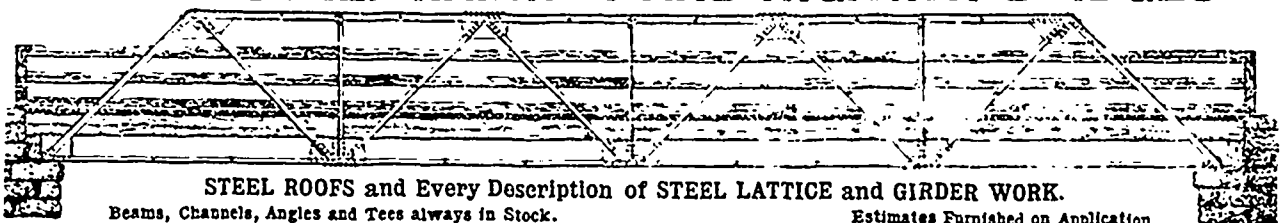
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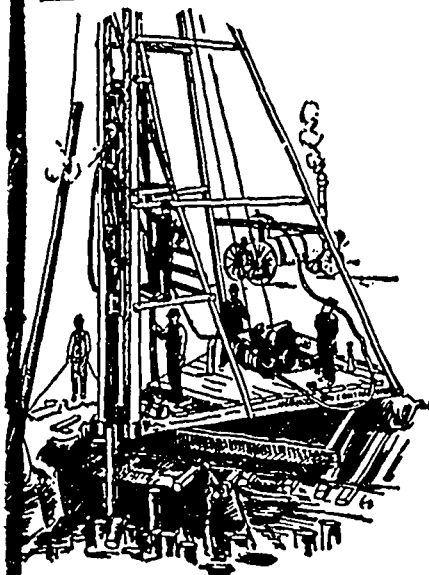
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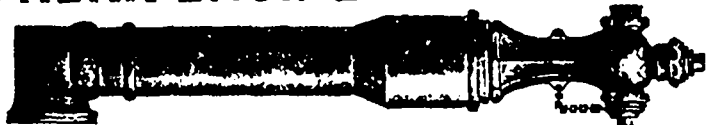
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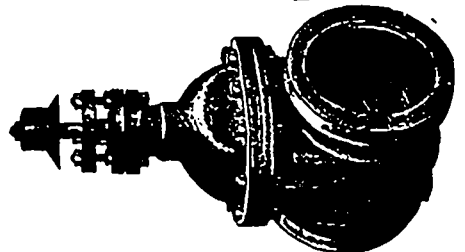
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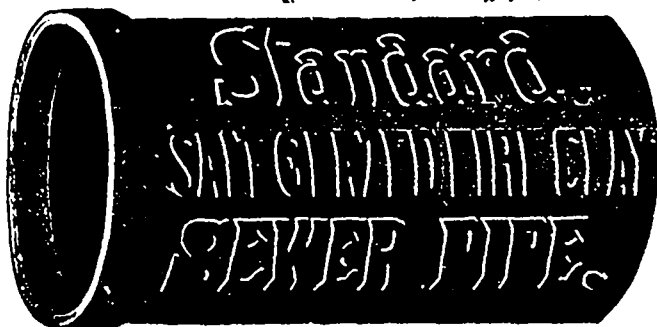


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the stone will give, and once a wheel cuts through the stone to the mud beneath, nothing can repair the bed without first taking it up again. Gravel, in which the larger stones were broken, had given the best satisfaction.

Mr. J. F. Beam of Black Creek gave an interesting paper on the good roads movement.

In the evening Mr. Andrew Puttullo, M. P. P., Woodstock, the organizer and first president of the Good Roads Association, gave a stirring address. The fact that so many representatives of the people, had gathered together, he said, was in itself a most hopeful sign for the success of the movement. It showed that public attention had been considerably aroused when these legislators met to seek information on this subject. The work of Mr. Campbell was appreciated at home, and now his reports were read and appreciated in other provinces and several European countries. Good roads were cheaper at any cost than bad roads. The transportation problem was the greatest one in Canada, and our duty now was to pay attention to our rural highways. He knew of no service or direction in which the councils could do so much good as to take hold of the management of the leading roads in their respective counties and employ trained men to keep them in proper state of repairs. Their example would be followed by the township councils. The present legislature was favorable to road improvement, and he suggested that the cause could be assisted by the Government guaranteeing the bonds by which the counties borrowed money for the purpose, whereby the latter could get funds at probably a half lower rate of interest. Statute labor ought to be abolished; it was a relic of barbarism. He favored optional legislation by which municipalities could, if they wish, abolish the system. In conclusion Mr. Patullo suggested that the convention adjourn instead of dissolving, and that its recommendations be sent to the municipalities to be discussed in the coming elections and also at January meetings of council, after which it would have a greater effect.

Mr. John A. Ramsden gave an instructive paper on "Reforestry." As result of the clearance of this country of the forest by the pioneers snow and dust were now free to fly over the roads rendering travelling disagreeable both winter and summer. The planting of trees both in rows and in blocks and belts would have a very beneficial effect in protecting the roads. Mr. Ramsden recommended that the attention of the Legislature be especially drawn to this matter.

SECOND DAY.

Hon. E. J. Davis, Commissioner of Crown Lands, who was present on the second day, delivered a brief address. After a reference to his early associations with the York County Council in the present building, he went on to say that they were there to discuss a question which was one of the most important matters in public affairs to-day. The question of transportation was one of the greatest of the age, and the farmer who could get the easiest and the cheapest from his barn door to the

markets would come out best in the competition of to-day. This was especially the case since the development of the butter and cheese industries, which occasioned so much travelling upon the highways. In the United States rural mail delivery was being experimented upon successfully, and if that is followed here the necessity of good roads will be even greater. Coming to the question of cost Mr. Davis said the expenditure of money was a matter that required very careful consideration. He ventured to say that the masses of the people would not readily approve of any scheme which would mean largely increased taxation upon them. He believed that the present expenditures could be put to a much better advantage than they were at present. In this connection, Mr. Davis recommended the scheme of Mr. Campbell to improve the present roads as a good one.

The proposal to take the control of the roads from the smaller municipalities was one which might arouse some opposition in the country. Mr. Davis urged very careful consideration of any request which might be made to the legislature, and concluded by saying that anything the Government could properly do in the interests of all the people of the Province to aid them in the work, they were prepared to do.

Mr. A. W. Campbell, the provincial

road instructor, dealt with the practical side of roadmaking, and told the delegates what could be done if they had the money for the purpose. He compared the roads of Hastings with the dreadful roads of York County, and went on to show that a large amount of money expended in roadmaking is absolutely wasted.

The afternoon was taken up in discussing the report of the committee on the resolution, which went through a great sifting process before being adopted. It inculcated the following principles when finally passed: (1) The assumption of main and leading highways by County Councils. (2) Provincial aid towards making and maintaining leading highways assumed by county councils in a leading road system. (3) Legislative supervision of electric railways, more especially with a view to enabling suburban railways to have access to markets or other destinations through cities or towns which have granted franchises to railroads.

These main principles will be enlarged by a committee appointed to prepare them for publication in pamphlet form. The Provincial Minister of Agriculture will be asked to bear the cost of printing, and the pamphlet is to be circulated among the municipal officers of the Province. This committee will consist of C. E. Lundy, York; M. Richardson, Flesherton; James Graham, Lindsay; D. H. Moyer, Lincoln; J. H. H. Funglesley, York; M. Buchanan, Ingersoll; and the Secretary, Mr. Ramsden.



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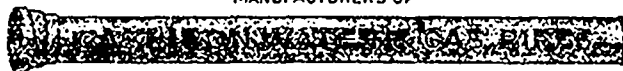
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Cut nails, 50d & 60d, per keg	2 65
Steel " " " "	2 75

CUT NAILS, FENCE AND CUT SPIKES.

40d, hot cut, per 100 lbs....	2 65
10 to 22d, hot cut.....	2 75
8d, 9d, " ".....	2 80
6d, 7d, " ".....	2 05
4d to 5d, " ".....	3 05
3d, " ".....	3 20
2d, " ".....	3 65

Cut spikes, 10 cents per keg advance. Steel Nails, 10c. per keg extra. Wire nails, 3.40 base price.

IRON PIPE:

Iron pipe, 1/2 inch, per foot..	6c.
" " 3/4 " " " "	7
" " 1 " " " "	8 1/2
" " 1 1/4 " " " "	12
" " 1 1/2 " " " "	17
" " 2 " " " "	24
" " 2 1/2 " " " "	30
" " 3 " " " "	43

LOAD PIPE:

Lead pipe, per lb.....	7c.
Waste pipe, per lb.....	7 1/2 cent.

GALVANIZED IRON:

ADAM'S—MAR'S BEST AND QUEEN'S HEAD AND OPOLLO:			
16 to 24 gauge, per lb.....	4 1/2c.	4 1/2c.	
26 gauge, ".....	4 1/2	5	
28 ".....	5	5 1/2	
GORDON CROWN—			
16 to 24 gauge, per lb.....	4 1/2	4 1/2	
26 gauge, ".....	4 1/2	4 1/2	
28 ".....	5	5	

Note.—Cheaper grades about 3/4c. per lb. less.

STRUCTURAL IRON:

Steel Beams, per 100 lbs....	2 75
" channels, ".....	2 85
" angles, ".....	2 50
" tees, ".....	2 80
" plates, ".....	2 55
Sheared steel bridge plate..	