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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. 7.

JANUARY 21, 1897

No. 51.

## THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY THURSDAY

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## TO ARCHITECTS

The Town of Walkerton is prepared to receive estimates from architects for plans and specifications for the erection of a Town Hall, to cost not more than \$10,000 when completed, with no cost to the Corporation unless plans and terms are accepted.

All information supplied on application to Patrick Heffernan, Chairman Property Committee. Applications to be in by the 8th of February next.

W. S. GOULD,  
Town Clerk.

### CONTRACTS OPEN.

TICHBORNE, ONT.—Johnston Brown will shortly erect a new hotel here.

ROSEBERY, B. C.—Alex. McKay will likely build a saw mill at this point.

LONDON, ONT.—It is probable that the Dundas street sewer will be rebuilt.

STURGEON FALLS, ONT.—M. Brennan & Sons, of Hamilton, will erect a new saw mill here.

RAT PORTAGE, ONT.—It is stated that a company is being formed to erect a large hotel here.

PETAWAWA, ONT.—A Buffalo company is said to have decided to establish paper and pulp mills at this place.

CHATHAM, ONT.—Henry Smith, M. P., has made a proposition to dam the River Thames at this point.

FRANKTOWN, ONT.—It is said that H. T. Wilson will erect a saw and shingle mill here in the spring.

RENFREW, ONT.—The by-law to construct waterworks and sewerage systems was carried by the town.

HAVELOCK, N. B.—The Baptist congregation intend shortly to commence the erection of a new church.

ANNAPOLIS, N. S.—The Valley Telephone Company intend making extensions to their circuit in the spring.

MILLBROOK, ONT.—The town is said to have dispensed with its electric light service, owing to the poor light supplied.

PERTH, ONT.—The contract for the construction of a system of waterworks has not yet been signed by Mr. Charlebois.

PORT ARTHUR, ONT.—The Mayor advocates that arrangements be made to increase the power plant sufficiently to light the town.

ARNPRIOR, ONT.—The School Board has decided not to erect a ward school, but an addition will be built to the present public school.

FREDERICTON, N. B.—The local legislature will be asked for authority to issue debentures for \$5,000 for putting in a fire alarm system.

DARTMOUTH, N. S.—Extensions will be made to the sewerage system.—The sum of \$5,000 will be borrowed for sidewalk improvements.

SAULT STE MARIE, ONT.—A company is seeking authority from the Dominion government to construct a bridge over the St. Mary's river. The capital is \$500,000.

ROBERVAL, QUE.—The Sisters of the Ursuline Convent have decided to immediately construct a new convent to replace the one recently destroyed by fire.

LEAMINGTON, ONT.—Mr. Crasper has purchased property at the corner of Talbot and Elliott streets, on which he will erect a residence.—Mrs. Wigle will erect a brick block on the south side of Talbot street.

ST. CHARLES, MAN.—Frank Hess, secretary-treasurer of the municipality, will receive offers until Tuesday, February 2nd, for the purchase of \$3,200 of debentures.

KINGSVILLE, ONT.—Tenders are asked until the 3rd of February for the purchase of \$18,290 of natural gas twenty year 5 per cent. debentures. Address W. A. Smith, clerk.

CHILLIWACK, B. C.—It is proposed to dyke the Coccoopel slough. The cost is estimated at \$1,750. Levels have been taken and drawings made by Mr. A. Driscoll, C. E.

ZURICH, ONT.—Benjamin Surerus, secretary-treasurer, will receive tenders until the 6th of February for erecting a brick school house in school section No. 12, Hay township.

PARRY SOUND, ONT.—A gentleman from Quebec recently examined the water power here with a view of ascertaining its adaptability to furnish power for the manufacture of pulp.

VANCOUVER, B. C.—It is generally considered that the by-law to grant a bonus of \$150,000 for the proposed smelter will be defeated. Mr. Selevor, of Portland, is the promoter.

HALIFAX, N. S.—At a meeting of the residents of Central Hants a resolution was adopted urging the local legislature to take steps at once to secure the construction of the Midland railway.

HARWICH, ONT.—Tenders are asked by J. D. McPherson, Commissioner ward No. 3, for the construction of a stone arch bridge over Willow Creek drain, according to plans prepared by J. L. Wilson, architect, Chatham.

ROSSLAND, B. C.—A company is being organized, to be known as the Union Smelting & Refining Company, to erect a smelter at Northport.—It is proposed to expend the sum of \$100,000 on buildings, machinery, flumes, etc.

NIAGARA FALLS, ONT.—The Village Council has lodged with the Ontario government a strong petition praying that the extension of time asked for by the Canadian Power Company for the beginning of work under their charter be not granted.

KINGSTON, ONT.—Mr. Hugh Ryan, of Toronto, has subscribed \$500 for a Catholic college in this city.—W. Newlands, architect, has received tenders this week for the carpentry and tinsmith work required in the reparation of a building on Princess street.

HAMILTON, ONT.—Mr. Edward New, who has commenced the manufacture of fire bricks, contemplates organizing a joint stock company with sufficient capital to enlarge the works.—It has been decided to call for tenders for an elevator for the sewage disposal works.

ST. JOHN, N. B.—The time for receiving tenders for timber for wharves at Sand Point is extended until the 25th day of January. Address the City Engineer for

particulars.—The City Council are taking steps to secure the erection of a public library building, to cost \$20,000.

**WALKERTON, ONT.**—The town will submit a by-law to the ratepayers to raise by loan the sum of \$16,000, to be expended as follows: \$10,000 for new town hall; \$2,000 for sewers; \$4,000 for other expenses. Competitive plans from architects are being invited for the town hall.

**MIDDLETON, N. S.**—Several new buildings will be commenced early in the spring, among which will be a number of residences, an hotel and a brick and stone public building. It is also understood that the Commercial Bank of Windsor will erect a new building here shortly.

**CHATHAM, N. B.**—At a recent meeting of the Town Council a resolution was passed requesting Mr. Fairweather, of St. John, to visit this town for the purpose of selecting sites for the erection of public buildings.—A movement is on foot to form a company to construct a system of water works.

**EDMONTON, N. W. T.**—A resolution has been adopted by the Board of Trade requesting the government not to grant the extension of time asked for by the Calgary & Edmonton Railway Company unless they undertake immediately to construct their line across the North Saskatchewan to Edmonton.

**MELITA, MAN.**—Tenders will be received by W. F. Thomas, secretary-treasurer, until Saturday, the 23rd inst., for the erection of two pile bridges, one 76 feet long, over the North Antler Creek, and the other 80 feet long over the South Antler Creek. Plans may be seen at the Reeve's office in this town.

**VICTORIA, B. C.**—Application will be made to the Dominion parliament to incorporate the British Pacific Railway Company, to construct a road from Victoria to Winnipeg, with a branch to Hudson Bay.—Notice of application has been published for incorporation of a company to develop water power at Lemon creek and Spring creek, for the purpose of supplying power, light and heat in the west division of Kootenay and Yale districts.

**VERNON, B. C.**—The Finance Committee of the Council have recommended that the scheme for obtaining a water supply from Deep creek be adopted, and that the system can be constructed at a cost of \$30,000. The committee also recommended the purchase of a site on Barnard avenue, and the erection thereon of a town hall, to cost \$4,000.

**QUEBEC, QUE.**—George E. Amyot, proprietor of the Dominion Corset Manufacturing Company, has purchased property on St. Foye road which he purposes converting into a large modern residence.—The parish of Ste Elizabeth, county of Berthier, have passed a by-law granting a bonus to the Great Northern railway for the construction of a section of its road, the contract for which will probably be let this week.—David Ouellet, architect, is preparing plans for a sacristy and reparations at Tadousac church.—Jos. P. Ouellet has prepared plans for several reparations and alterations to buildings.

**PORTAGE LA PRAIRIE, MAN.**—The Town Council has passed a by-law to issue debentures to the value of \$40,000 for the construction of a dam on the Assiniboine river and to utilize the water power created. Mr. G. H. Webster, Chief Engineer of the M. and N. W. R., has reported favorably on the work, and it is understood Mr. Chipman, C. E., of Toronto, will be invited to revise the report and inspect the preliminary surveys, and if endorsing the plans, then application will be made to the provincial legislature and Dominion parliament for powers to proceed with the work.

**WINNIPEG, MAN.**—Over ten miles of macadam pavements will be constructed

during the present year.—Tenders are invited for the construction of a three-storey hotel at Wabigoon. All information can be obtained from Glines & Co., real estate and mining agents, 421 Main street, this city.—The Railway Committee of the Privy Council has given its consent to the construction of the proposed bridge across the C. P. R. tracks. The City Engineer will push forward the work early in the spring.—The by-law to provide funds for installing a civic electric light plant was defeated by the ratepayers.—The City Council are taking steps to provide a system of water supply. A motion has been passed in council providing that the sum of \$10,000 be appropriated for the purpose of engaging an expert to report on the most suitable system.—The city has offered for sale \$130,225 of local improvement debentures and \$100,000 of straight city debentures. Address, Alfred J. Andrews, Chairman Finance Committee.

**MONTREAL, QUE.**—Mr. W. E. Doran, architect, is calling for tenders for two houses, four tenements, to be built on Henderson street for W. H. Cunningham.—Messrs. Wright & Son are inviting tenders for the Hotel Carlslake, to be erected on St. James street for Mrs. G. Pallascio. Tenders will be received by the architects up to Monday next, the 5th inst.—The congregation of St. Mathias church, Westmount, are taking steps to secure the erection of a new edifice. A committee has been appointed to obtain estimates of cost, etc.—The government will be asked to construct a new bridge at Atwater avenue, from plans prepared by Mr. St. George, City Surveyor. It will also be requested that several of the present structures be enlarged.—The Chateaugay & Northern Railway Company desires to build a bridge in order to extend its road through L'Assomption and Montcalm counties, the cost of which is estimated at \$225,000. The Quebec government is asked for \$50,000.—At the annual meeting of the congregation of Melville Presbyterian church, the building committee was given power to purchase the lot in rear of the church for the purpose of erecting a new building thereon.—The City Surveyor has submitted a report on the distribution of the \$117,000 voted by the Provincial Legislature for permanent work. It is recommended that the money be distributed as follows: Notre Dame street west, paying half the street, \$50,000; De Levis street sewer, \$34,500; permanent sidewalks, \$20,000; permanent crossings, \$5,000; repairing wood blocks on Craig street, \$5,000; asphalt paving on St. James street, \$2,500.

**OTTAWA, ONT.**—A number of local druggists are considering the question of establishing a wholesale drug store. It is proposed to form a joint stock company, with a capital of \$100,000, and to purchase or erect a suitable building.—The Department of Public Works invites tenders until February 5th for sheet piling at Owen Sound and Kincardine, also for the reconstruction of the approach to the wharf at L'Original.—Mr. M. Cohen, special agent in this city for the Sun Life Assurance Company, states that the company have fully decided to erect a building on their property here. No plans, however, have as yet been prepared.—The plans for the new Hartney building on Sparks street have been completed. The building will be three stories high, built of pressed brick and Nova Scotia sandstone. The ground floor will be divided into two stores and the upper flats into offices.—The E. B. Eddy Company are inviting tenders for eight 5 x 14 tubular boilers, to be used as auxiliaries to their present water and steam power plant.—It is probable that the Baptists will erect a new church in the southern portion of the city.—The aldermen are interesting themselves in the plans for a system of drain-

age, and steps will be taken to secure the execution of the work at an early date.—Alderman Grant has suggested the laying of a scoria block pavement on York street.—A joint stock company has been formed, with a capital of \$100,000, to manufacture bicycles and horseless vehicles. M. J. Lorne Currie, a director, is looking after the purchase of machinery for the purpose.—The Department of Railways and Canals will receive tenders up to the 2nd March, for 1,000 tons of 50 lb. steel rails, to be delivered on the Prince Edward Island railway wharf at Summerside, Prince Edward Island, and for 3,000 tons of 67 lb. steel rails to be delivered on the Intercolonial railway (Princess pier) wharf at Levis, opposite Quebec, early in the month of July, 1897.—It is probable that M. R. Heing, of New York, will be engaged to report on the proposed main drainage scheme.—The resigned members of the medical staff of the Protestant hospital intend going ahead with the construction of a new hospital in the city, and have given notice that a charter will be asked for.—The Odd-fellows hall, corner of Bank and Sparks street, is to be remodelled in the spring.—Sir William Van Horne, president of the Canadian Pacific Railway, states that a site has not yet been selected for the proposed new depot.

**TORONTO, ONT.**—Several of the residents of Gladstone avenue are desirous of securing the construction of a new pavement on that street.—It is reported that a New York architect has been commissioned to prepare plans for a new building to be erected for Mr. John Ross Robertson, of The Telegram, at the corner of Bay and Melinda streets.—In the report of the City Engineer presented to the Board of Works on Monday last, the construction is recommended of a 24 foot cedar block pavement on Harbord street, at an annual cost per foot frontage of 20.2 cents. A motion was passed by the board that the City Engineer be instructed to report at the next meeting the cost of constructing a level crossing bridge over the Don at Queen street, also to submit the plans and specifications for the work.—The James Bay Railway Company will apply at the next session of the Dominion parliament for power to extend their proposed line from its southern terminus, Parry Sound, to Toronto. The promoters of this company are Messrs. George A. Cox, William McKenzie, George Bertram and others.—Bristol & Cawthra are solicitors for the Seine River Foley and Fort Francis Telegraph & Telephone Company, which proposes constructing lines from Bonheur station to Saw Bill Lake, Sturgeon Falls and other places.—Mr. Kivas Tully, engineer of the Harbor Commissioners, advocates that the Don river be diverted into Ashbridge's bay, as arranged by the Board and the City Council in 1892.—Mr. M. S. Robinson, the lessee of the Bijou theatre on Yonge street, has closed negotiations with the executors of the McGee estate for the lease of the present premises. It is Mr. Robinson's intention to erect thereon a new theatre with a seating capacity of from 1,600 to 1,800 persons. The plans will be prepared by Mr. Richard Waite, architect, of Buffalo, and the cost will be about \$25,000. The auditorium will be 70 feet in width and 80 feet deep. The work will be carried out during the coming summer.—It is said that the Board of Control are making arrangements for the carrying out of several public works at the earliest possible date in the spring. At the first meeting of the Board a number of works of construction will be authorized, and tenders invited immediately thereafter.—Mr. William G. McWilliams, solicitor, gives notice of application to parliament for an act to incorporate a company to construct a steam or electric railway from Toronto northerly to

Gravenhurst, thence to the Muskoka lakes and Parry Sound, with power to construct telegraph and telephone lines, docks, wharves, piers, elevators, etc.

### FIRES.

The large grist mill and elevator of the Consolidated Milling Co., at Peterboro', Ont., were completely consumed by fire on Tuesday last. The loss will total between \$60,000 and \$70,000, with an insurance of about \$55,000.—The Grand Theatre at Winnipeg, Man., including the offices below, was destroyed by fire last week. Loss \$40,000; half covered by insurance.—Two frame houses at Hamilton, owned by John Ronan, have been burned.—The loss to the Betty block at Wallaceburg, Ont., which was referred to in our last issue, is estimated at \$80,000, and is partially covered by insurance.—The establishment of Doswell Bros., at Hamilton, Ont., was damaged by fire on the 13th inst. to the extent of \$4,000. The loss to the building was \$1,500.—Crathern & Caverhill's hardware warehouse on Colborne street, Montreal, was completely destroyed by fire on Thursday of last week. The total loss is about \$300,000. The building was insured for \$20,000.—Three dwelling houses on Metcalfe street, Ottawa, Ont., were burned last week. Loss \$15,000; small insurance.

### CONTRACTS AWARDED.

**OTTAWA, ONT.**—The contract for three new boilers for the eastern block of the Parliament Buildings has been let to William Campbell, of this city.

**FREDERICTON, N. B.**—The contract for a road plant will be let to either the Austin Company, of Chicago, Ill., or the Climax Company, of Philadelphia.

**QUEBEC, QUE.**—Contracts for the annex to the Montmorency Electric Co.'s works have been let as follows. Woodwork, Alex Cummings; masonry, Mr. Sharpe.

**OSHAWA, ONT.**—The Pedlar Metal Roofing Company, of this town, are putting an imitation stone front in Charles McGinn's property on Pleasant street, Halifax.

**WINNIPEG, MAN.**—The Provincial Department of Public Works have awarded the contract for construction of a bridge over the Assiniboine river at Le Clare to D. F. Patterson, of Birtle.

**CORNWALL, ONT.**—The contract for building the new general hospital was let last week by the executors of the estate of the late John Purcell. The contractor is J. C. Johnstone, of this town, and the contract price \$18,000. The hospital will be a brick structure, three stories high, and fitted with all modern improvements.

**HAMILTON, ONT.**—The contract for the supply of lumber for the city has been awarded to the Reid Company, of Toronto, at \$12.57 per thousand feet, and cedar posts at 8 cents. The other tenderers were: W. J. McAllister, lumber, \$12.69, posts, 8 cents each; M. Brennan & Sons, lumber, \$12.75, posts, 7½ cents; R. Thompson & Company, lumber, \$13.25, posts, 8 cents.

### BUSINESS NOTES.

W. D. Coates, carpenter and builder, Amherst, N. S., is reported to have assigned.

The Canadian Bridge & Iron Company, of Montreal, has gone into liquidation, Mr. J. W. Ross being appointed liquidator. The liabilities are about \$100,000, and assets nominally the same.

### REDUCTION IN WIRE NAILS.

The Canadian nail manufacturers held a four days' session in Toronto last week, and one result of their deliberations is a revision of the discounts. These have been advanced nearly 10 per cent., which means, of course, a corresponding reduction in the price of nails. The discounts in the various provinces are now as follows:

Ontario, 80 per cent., delivered in 10 keg lots or over.

Quebec, 80, and 2½ per cent. f. o. b. Montreal.

Maritime Provinces, 80 per cent., delivered in 10 keg lots or over.

British Columbia, 80, and 2½ per cent. f. o. b. factory.

Winnipeg, 75, and 5 per cent. f. o. b. Winnipeg.

At the present price it is said that wire nails cannot profitably be imported into Canada from the United States. The manufacturers say that at the present price of wire nails in Canada very little margin is left for profit. The chief reductions are on nails of the small sizes. No change was made in the price of galvanized and plain wire and cut nails.

### CANADIAN SOCIETY OF CIVIL ENGINEERS.

The eleventh annual meeting of the Canadian Society of Civil Engineers was called to order at 10 o'clock, a.m., Tuesday, January 12th, 1897, Mr. Herbert Wallis, president, in the chair.

Among those present were Messrs. Herbert Wallis, president; C. H. McLeod, secretary; E. P. Hannaford, Montreal; Thomas Breen, Quebec, Armitage Rhodes, Quebec; C. H. Rust, Toronto; G. E. Robertson, Cardinal; Ernest Mareau, Montreal; L. S. Parizeau, St. Johns; Alfred Brittain, Montreal; Stuart Howard, Montreal; Charles J. Armstrong, Montreal; J. M. McCarthy, Montreal; Charles E. Goad, Toronto; Robert Surtees, Ottawa; C. H. Pinney, Ottawa; R. B. Kenrick, Lachine; Jas. A. Douglas, Montreal; G. B. Papi-neau, Montreal; C. Beaudry, Montreal; Thomas Drummond, Cariboo, B. C.; T. H. White, St. Thomas, Ont.; J. Ewing, Montreal; Duncan McPherson, Montreal; John Heckman, Montreal; C. de B. Leprohon, Montreal; T. W. Lesage, Montreal; A. R. Dufresne, Montreal; C. H. Keefer, Ottawa; S. M. Lovelace, Montreal; W. Chase Thompson, Montreal; J. M. Shanley, Montreal; W. G. Warner, Toronto; W. T. Jennings, Toronto; E. Berryman, Montreal; Henry Holgate, Montreal; W. McNab, Montreal; E. A. Hoare, Quebec; St. George

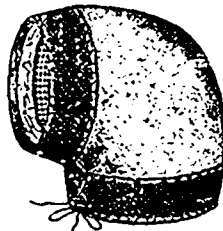
Boswell, Quebec; H. Carry, Nelson, B. C.; E. H. Drury, Sherbrooke; A. L. Hertzberg, Toronto; Chas. Baillarge, Quebec; H. J. Cambie, Vancouver.

Prof. McLeod read the minutes of the last annual meeting, after which Mr. Wallis read a telegram of congratulation and good wishes from the Earl of Derby, and a letter from Sir Casimir Gzowski, A.D.C. The following scrutineers were appointed.—For election of officers and council—Messrs. W. Angus, W. C. Thompson, and Garden, for election of nominating committee—Prof. Umney, Messrs. Crompton and Berryman; for balloting on amendment to by-laws—Messrs. Duff, Copeland and Smith. The members then drove out to Lachine to inspect the works of the Lachine Rapids Hydraulic and Land Company, where they were entertained by Messrs. W. Davis & Sons, the contractors. Brief addresses were made by Messrs. W. H. Davis, G. B. Burland, W. McLea Walbank, John Crawford, and others.

In the evening a member's dinner took place in the Windsor Hotel, which was presided over by the retiring president. The dinner was well attended by members, a notable feature of the attendance being the presence of five of the six living past presidents of the society, namely, Messrs. T. C. Keefer, John Kennedy, E. P. Hannaford, P. A. Peterson, Thomas Munro.

Upon re-assembling on Wednesday morning, the report of the council was read. The chairman, Mr. Herbert Wallis, drew attention to the references with regard to the status of members of the profession. At the last session of the Quebec Legislature, a bill which aimed to make the society a close corporation was introduced, but before it could be put through the House was prorogued. He thought that this measure could be made to fit the requirements of the measure if the new council was given authority to push the matter, and it might then be once more presented at Quebec, and also in the Legislative Assemblies of the other provinces. By the terms of this proposed bill it is intended to prohibit from practice those who are not corporate members of the society, or who are entitled to practice by some act of the Dominion or Provincial parliament, unless such persons who are not at present members shall become members within a term of twelve months.

It also provides for the formation of a board of examiners, who shall meet every six months to grant certificates to those wishing to be permitted to study, and those who have in due course rendered themselves fit to commence practice. A great deal of discussion followed, many little difficulties being shown. One of these was the question of reciprocity between the recognized professional men of different provinces who might wish to practise in cities or towns outside their



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own province, and another was the matter of expense. On the motion of Mr. Percival St. George, seconded by Mr. H. George Boswell, it was finally resolved that the council be given the necessary authority to act as it might see fit.

Mr. Rust stated that the Ontario government permitted the secretary of the Provincial Board of Health, who was a medical man, to pass judgment upon plans submitted by engineers on behalf of municipalities in the province. He did not think this was altogether right, and proposed that a committee from the society be appointed to wait upon the Ontario government. A committee was named, which included Mr. Rust and Mr. Jennings, the proposer and seconder of the resolution.

The chairman announced that the Gzowski medal for the best paper of the year had been awarded to Mr. E. Mohun, M.C.S.C.E., for his paper on "Sewerage of Victoria, B. C."

The committee appointed at the last annual meeting on standard measures presented its report. The report pointed out that measurements made in the ordinary course of engineering work with measures not having the stamp of the Department of Weights and Measures were illegal; that no sufficient means existed at present for the standardizing of engineering measures, and recommended that such standards as might be found satisfactory for the standardizing of tapes and chains should be recognized by the department as local standards for the purpose of issuing authorized standards of length; that engineers should only be required to possess one standard of not less than fifty feet length, from which from time to time to compare their working measures. Standards or comparators of the character required have already been established at McGill University, Montreal, and the School of Practical Science, Toronto, in addition to one established for the purposes of the Dominion Land Surveyors at Ottawa.

The report of the scrutineers declared the following to be elected the nominating committee for the election of officers for 1897.

Province of Quebec—Messrs. H. Irwin and C. H. Duggan.

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Provinces outside of Canada—Mr. J. M. Shanley.

In addition to the above elected members of the committee, the four last surviving past-presidents are also members of the committee:—Messrs. E. P. Hannaford, P. A. Peterson, Thos. Munro and Herbert Wallis.

The election of officers for the ensuing year resulted as under:

President—Mr. Thomas C. Keefer, C. M.G., Ottawa.

Vice-presidents—Messrs. Henry T. Bovey, Montreal; W. T. Jennings, Toronto; W. G. Thompson, St. Catharines.

Treasurer—Mr. K. W. Blackwell, Montreal.

Secretary—Mr. C. H. McLeod, Montreal.

Librarian—Mr. W. McNab, Montreal.

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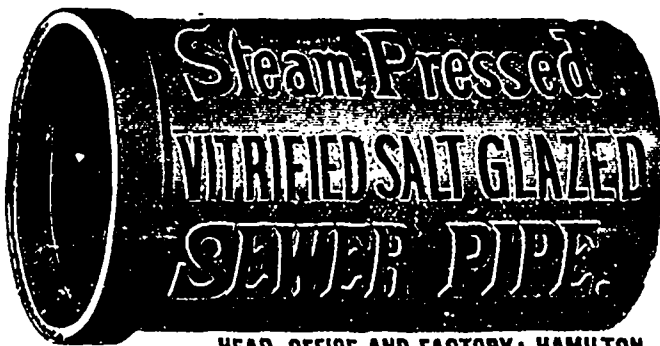
cillors—Col. Sir Casimir Gzowski, A.D. C., K.C.M.G., Toronto; John Kennedy, Montreal; E. P. Hannaford, Montreal; P. Alex. Peterson, Montreal; Thomas Munro, Coteau Landing, P. Q.; Herbert Wallis, Montreal.

Council—Messrs. St. George Boswell, Quebec; M. J. Butler, Napance; G. C. Cunningham, Montreal; C. E. W. Dodwell, Halifax; G. H. Duggan, Montreal; H. Irwin, Montreal; E. H. Keating, Toronto; G. A. Keefer, Victoria; D. H. Keeley, Ottawa; D. Macpherson, Montreal; A. Macdougall, Toronto; E. Marceau, Montreal; M. Murphy, Halifax; H. Peters, St. John, N. B.; H. N. Rutan, Winnipeg.

The newly elected president, Mr. T. C. Keefer, upon taking the chair thanked the society for the honor conferred upon him.

The retiring president, Mr. Herbert Wallis, delivered a very interesting address on the consumption of coal in locomotive practice, a synopsis of which we hope to give in a later issue. The usual votes of thanks to the retiring officers, to railways and others were passed. The meeting adjourned at 1.30 p.m.

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# MUNICIPAL DEPARTMENT

## TO MUNICIPAL OFFICERS.

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

## THE USE AND MISUSE OF WATER.\*

Every member of the British Association of Waterworks Engineers is concerned with the use and misuse of water, and while every member desires to promote the public health by encouraging the use of water for every legitimate healthy and sanitary purpose, I take it that he is very anxious to prevent as far as possible the waste of water.

### FALSE IDEAS WITH REGARD TO WASTE.

People frequently leave their taps open under the impression that it is good for the drains. The idea is quite a wrong one. Small droplets of water can have no cleansing effect upon drains, but a thousand taps left open for this purpose would have a material effect upon the water supply of a town, and enhance the difficulty of the local authority in dealing with it at the outfall works.

### QUANTITY OF WATER REQUIRED.

It is difficult to fix a quantity of water per head which shall satisfy the requirements in the several towns, because so many factors enter into the consideration of such a question. For instance, w.c.'s and baths are becoming general in some towns, and in the future there is every probability that the artisan will want his bath—and why should he not have it? The author has measured the consumption of water at different sized houses, and whilst admitting that no two towns are alike nor any two houses for the matter of that, some idea of the quantities generally used may be gathered. Meter readings showed the consumption of water in cottages to vary from four to seven gallons per head; in larger houses seven, eight, ten and sixteen gallons. In houses with two w.c.'s it often came under 20 gallons.

The question arises: How much water per head for domestic use must be

\* A paper by R. E. W. Berrington, C. E., F. G. S. (Wolverhampton) read at the Nottingham Meeting of the British Association of Water Engineers.

allowed for in the future? The demand for manufacturing purposes must, of course, depend upon local circumstances. During the last few years it has become apparent that a water carriage system of drainage will be universally adopted in all populous towns, and this means that the waterworks engineers must allow for the general use of w.c.'s. With a view of minimising the consumption of water for sanitary purposes, the sink and other waste water is being effectively used in w. w. closets. In the opinion of some engineers, these appliances are not considered economisers, but it is certain that the three-gallon flush direct from the tipper is not effectual in its work, and in most cases the waste water is quite sufficient, and therefore clean water is unnecessary. A modern w.c. is cleaner than a w.w. closet, and is the only appliance applicable to outdoor use. Another increase in the future consumption of water must be looked for in the fixing of automatic flushing tanks both in connection with main sewers and private drains of public institutions. Public baths are also increasing, and there is much more street watering than formerly. There is little doubt that, under strict supervision, an efficient supply for domestic purposes may be given with ten to fifteen gallons per head. The amount of water going to waste in the course of a year in this country must be enormous, and if a monetary value were placed upon it we would view such waste as a "national calamity."

### HOW AND WHERE WASTE OCCURS.

A good percentage of the waste occurs underground, and therefore its tendency is to produce damp subsoils, wet basements and ill health. In colliery districts mains are subject to sudden subsidences, and although a special form of joint has been adopted it is not always successful. Service-pipes should be laid sufficiently deep to protect them from frost, and in doubtful ground should be surrounded with a soil known to be harmless to such pipes.

A frequent source of waste arises from defective ball-taps, and as there are hundreds of overflows which still communicate with the drainage system by unseen channels, it is only by careful inspection that these leakages are discovered.

Much waste often results from the ball-tap being insufficiently fastened down, and as the water in the cistern rises it lifts the ball-tap, and the water passes down the overflow for hours together. Of course, this could not happen in a properly-fitted modern cistern.

### SYPHON CISTERNS.

There are still some bad types of syphon cisterns in the market, and careful selection of the best is necessary to prevent waste of water.

### TWO OR THREE GALLONS?

What is to be the future discharging capacity of w.c. cisterns? Given a well-laid drain, a properly-made closet basin, a cistern not less than 5 ft. or 6 ft. above

the basin, a down-pipe of not less than 1 1/4 in. diameter, and then a two gallon flush will effectually do the work, but the work will be much better with some basins than with others. I do not include the wash-out basin so much in use a year or two ago amongst good basins. I do not believe that anything less than a three-gallon discharge will flush a wash-out with any degree of certainty. The syphon system is a most unsatisfactory appliance for a hotel, lodging house, offices, or indeed, for any position where the basin is much used. Although a two-gallon flush is sufficient, I believe a three-gallon flush will ultimately become general, because in sanitary matters nothing short of absolute certainty and entire reliability is acceptable. Everybody would feel confidence in the efficiency of a three-gallon flush, but there are many cases where a two-gallon would not inspire such confidence.

### SEVERE FROSTS.

Perhaps one of the greatest enemies to the waterworks engineer is a severe frost, and the winter of 1894 must have cost the country thousands of pounds in damage to mains, services, meters, &c. In the author's opinion, the practice of shutting off the water or reducing the pressure at nights is the cause of much injury to the local authority or company as well as to the consumers, and it is a retrograde step in the matter of public health. There can be no doubt that taps in open courts or other exposed positions cause endless worry, but the tendency now is to provide a tap for each house, and if care be exercised in laying the service, and if the consumer be taught to see that—at all events where the works are the property of the local authority—he is an interested party, we may expect good results. Even in a severe winter, with a judicious use of stop-taps and gas-jets, one can neatly, if not quite, get through without a burst pipe, and of course I mean without wasting water.

### WASTE-WATER METERS.

The value of waste-water meters in detecting waste is beyond question. Other methods for detecting waste, however, must not be ignored or overlooked. Systematic house-to-house inspection followed up by the plumbers is very effective. The author some years ago undertook an inspection of this kind in a large town, and the consumption was reduced by three gallons per head as a consequence of one inspection. What might it have been if regular and continuous inspection had followed? The introduction of the Deacon meter has in several instances reduced the consumption 50 per cent., but it would more than justify its use if it reduced the consumption by 20 per cent. in any ordinary-sized town. It will be said that some towns have done much better than this with the meter, but in these the consumption was abnormally high to begin with. In new works it is easy to arrange for the waste-meter system, and it is desirable to make such provision.

(To be Continued.)

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Prices of Building Materials.

CONDITION OF THE MARKET.

TORONTO: In another column reference will be found to the reduction which has been made by the Canadian nail manufacturers in the price of wire nails. The difference will amount to about 10 per cent. of the cost. As a result, probably, of the reduction, there has been an improvement in the demand. In cut nails business is quiet. In general the metal trade shows little activity. A fair trade is reported in window glass, and prices are held firmly. Cement, firebricks and paints and oils have not changed.

MONTREAL: The spring business has not yet commenced to move, and consequently builders' supplies are quiet. A change has been made in prices for pure white lead. The cement market is featureless, and stocks ample to meet all requirements until the fresh arrivals in the spring. There is some inquiry on import account for tin and Canada plate, and a few scattering orders have been placed for glass, paints and oils, cut and wire nails, etc.

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Table with columns for item description, Toronto price, and Montreal price. Includes items like clear picks, Am ins., spruce culls, and various shingles.

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Table with columns for item description, Toronto price, and Montreal price. Includes items like mill cull boards, shipping cull boards, and various types of flooring.

B. M.

Table with columns for item description, Toronto price, and Montreal price. Includes items like in. flooring, dressed, B.M., and various types of shingles.

Toronto. Montreal.

BRICK—M

Table with columns for item description, Toronto price, and Montreal price. Includes items like Common Walling, Good Facing, Sewer, and various types of bricks.

SAND.

Table with columns for item description, Toronto price, and Montreal price. Includes item: Per Load of 1/4 Cubic Yards.

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Table with columns for item description, Toronto price, and Montreal price. Includes items like Common Rubble, Large flat Rubble, Foundation Blocks, and various types of stone.

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SLATE.

Table with columns for item description, Toronto price, and Montreal price. Includes items like Roofing (8 squares), red, purple, and various types of slate.

PAINTS. (In oil, 5 lb)

Table with columns for item description, Toronto price, and Montreal price. Includes items like White lead, Red lead, Vermilion, and various types of paint.

Toronto. Montreal.

CEMENT, LIME, etc.

Table with columns for item description, Toronto price, and Montreal price. Includes items like Portland Cements, German, London, Newcastle, and various types of cement.

HAIRDWARE.

Table with columns for item description, Toronto price, and Montreal price. Includes items like Cut nails, Steel, and various types of hardware.

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Table with columns for item description, Toronto price, and Montreal price. Includes items like 3d, per 100 lbs., 2d, per 100 lbs.

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Table with columns for item description, Toronto price, and Montreal price. Includes items like 12d to 30d, per 100 lbs., 10d, 8d and 9d, 6d and 7d, 4d to 5d, 3d, 2d.

FINISHING NAILS.

Table with columns for item description, Toronto price, and Montreal price. Includes items like 3 inch, per 100 lbs., 2 1/2 to 3 1/2, 2 to 2 1/2, 1 1/2 to 1 3/4, 1 1/2.

SLATING NAILS.

Table with columns for item description, Toronto price, and Montreal price. Includes items like 5d, per 100 lbs., 4d, 3d, 2d.

COMMON BARREL NAILS.

Table with columns for item description, Toronto price, and Montreal price. Includes items like 1 inch, per 100 lbs., 3/4, 3/8.

CLINCH NAILS.

Table with columns for item description, Toronto price, and Montreal price. Includes items like 3 inch, per 100 lbs., 2 1/2 and 2 3/4, 2 and 2 1/4, 1 1/2 and 1 3/4, 1 1/2.

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Table with columns for item description, Toronto price, and Montreal price. Includes items like 3 inch, per 100 lbs., 2 1/2 and 2 3/4, 2 and 2 1/4, 1 1/2 and 1 3/4, 1 1/2.

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