

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.

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FEBRUARY 4, 1903

No. 51

THE CANADIAN CONTRACT RECORD, PUBLISHED EVERY WELDNESDAY

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TENDERS

for the different trades required in the erection of a Presbyterian Manse in the Village of Woodbridge, Ont., will be received by the undersigned up to SATURDAY, FEBRUARY 14th. Plans and specifications may be seen at the office of John Nattress, Woodbridge. The lowest or any iender not necessarily accepted. DONALD MACKENZIE, Chairman Building Committee, Woodbridge, Ont.

BRIDGE TENDERS

will be received by the undersigned up to 6 o'clock on MONDAY, FEBRUARY 1671, for the superstructure of a Steel Bridge with foot walk over River Thames in the Town of St. Mary's, Ont., 178 feet long. Plan of bridge must accompany tender. Plan and specifications of piers and abutments may be seen or had from L. HARSTONE, Town Clerk. St. Mary's, Ont., Jan. 2371, 1903.

TENDERS

300 TO 600 TONS OF ASPHAL

Sealed tenders, addressed to the Chairman of the Committee on Works, for the supply of from 300 to 600 tons of Asphalt for street paring for the City of Winnipeg, will be received at the effice of the undersigned up to 8,30 p. m. on TUPEDAY, MARCH 3rd, 1003.

Specifications and forms of tender may be obtained upon appheation at the office of Col. H.N. Ruttan, City Engineer, Winnipeg.

Each tender must be accompanied by an accepted cheque or each deposit for the sum called for in the form of tender supplied, which will be subject to forfeiture in case of failure on the 14th of the contractor to enter into a written contract if called upon to do so.

The city reserves the right to reject any or all tenders or to accept any bid which appears advantageous to the City of Winnipeg.

C. J. BROWN, City Clerk.

City Clerk's Office,

C. J. BROWN City Clerk's Office, Winnipeg, January 29, 1903.

GONTRACTORS, BUILDERS AND
MECHANICS
will be needed in Regina, N. W. T., for the coming season which will open about the last week in March. High wages and constant employment. For further particulars apply to Wa. TRANT. Secretary Board of Trade, Regina, N. W. T.

TENDERS

Scaled tenders will be received for the erection of a Methodist church at Harriston, Ont., until TUESDAY. FEBRUARY 17TH.
Plans and specifications may be seen at W. Beatty's store, Harriston, or at the office of the architect, London. Tenders to be addressed to J. I. Eddy, Esq., Secretary of Trustee Board, Harriston, Ont.
The lowest or any tender not necessarily accepted.

H. C. McBRIDE, Architect, London, Ont.

CONTRACTS OPEN. ST. PETER'S, N. S .- Steps have

been taken to build a town hall here.

KALADER, ONT .- Mr. Godfrey, of Cloyne, intends building a residence.

ST. JOHN, N.B.-The City Council has decided to procure plans for a new steamer.

OAK LAKE, MAN .- James Flanagan is about to build a new hotel and three stores.

LEAMINGTON, ONT.-It is likely that steps will be taken shortly to build a new school.

BURLINGTON, ONT. — Mrs. E. Penton will erect a fine residence on Nelson avenue this spring.

CARLETON PLACE, ONT.-The by-law to grant \$8,000 for a new school building has been defeated.

EARDLEY, QUE.—The Dowd Milling Company are about to build a 20,000 bushel elevator here.

GRIMSBY, ONT. — A by-law to assist James A. Hewitt in rebuilding his planing mill was defeated last week

WOODSTOOK, ONT. - Mayor White is endoavoring to form a company to build a number of residences. .

OTTAWA EAST, ONT .- The present council is in favor of taking immediate steps to install a waterworks system.

DUTTON, ONT.—The question of building a new church for Knox congregation is still under consideration.

BRANDON, MAN. - The Manitoba Government is having plans prepared for a \$60,000 addition to the asylum here.

CHEPSTOW, ONT.—New tenders are being taken by Rev. F. A. Zeitler up to 7th inst. for erection of R. C. church

SHERBROOKE, QUE.-It is the intention to build a new church in St. Jean Baptiste pansh in East Sherbrooke, to cost about \$80,000.

OWEN SOUND, ONT. -- Robert Stoddart is asking for tenders by 16th inst, for erection of double brick house on corner of Hill and Pell streets.

WIARTON, ONT.—J. H. Fielding has purchased a piece of land opposite the Bank of Commerce and will erect a block of stores in the spring.

WINCHESTER, ONT .- An agitation is on foot among the farmers of Culross and Greenock to have the Mud river dredged; estimated cost, \$10,000.

SEAFORTH, ONT. - A plan has been adopted for remodelling the First Presbyterian church; estimated cost, \$10,000. Rev. Mr. Larkin is pastor.

FERNBANK, ONT.—E. Boyd will receive tenders up to 14th inst. for all trades fer erection of Presbyterian church at North Mornington. Plans by W. E. Binning, architect, of Listowel.

EAST TORONTO, ONT.-Mr. Chandler, carriage maker, intends building a shopon Main street.—Mr. Brown, grocer, corner Main and Gerrard streets, has purchased a lot on which to build a brick store.

SARNIA, ONT.—Arrangements have been completed for erection of a 500,000 bushel elevator here. The parties interested are the G. T. R., Northern Navigation Company and H. F. Mooers & Company.

ST. THOMAS, ONT .- It is the intention of the promoters of the Middlesex & Elgin Interurban Railway Com-pany to build an electric railway from Lambeth to Port Stanley. Dr. McKay, of Ingersall, is interested.

GALT, ONT .- The plans of G. R. Mellish, architect, have been accepted for proposed Carnegie library building. Work will be commenced immediately.

The town council will call for tenders tor a single-arch steel bridge over Main street.

GODERICH, ONT .- The question of remodelling the Central school, at a cost of \$5,000, or erecting an entirely new building, is under consideration by the School Board.—It is the intention of the G. T. R. to build new and modern freight shed here.

COLLINGWOOD, ONT.—The congregation of the First Presbyterian church have decided to build a second church in the west end.—The machine shops of the Collingwood Shipbuilding Company will be built this spring, also several fine residences.

TORONTO JUNCTION, ONT.— The Nordheimer Piano Company purpose erecting another addition to their factory recently completed.—The Gold Medal Manufacturing Company will establish an industry on Weston Road for the manufacture of sand-cement bricks.

NIAGARA FALLS, ONT.—C. N. Clendenning, manager of the Niagara Falls Planing Mills, is about to build a

fine residence on River Road.—Mr. Silverthorne, of Niagara Falls, N. Y., has purchased four lots at corner of Cookman street and Inskip avenue on which he will build in the spring.

DALHOUSIE, N.B.—A committee of citizens has been appointed to take steps to provide waterworks and electric light systems. Particulars from R. Y. Blackhall.

PRINCE ALBERT, SASK.—William Knox, Chairman Fire, Water and Light Committee, invites tenders until March 11th for electric light plant. Specifications may be seen at the office of the CONTRACT RECORD.

HESPELER, ONT.—A. J. Brewster, Secretary Public School Board, desires tenders by 21st inst., on masonry, brickwork, plastering, steam heating, carpenter work, painting and glazing, eavetrough and iron work for addition to school.

FREDERICTON, N. B.—C. H. La Billois, Commissioner of Public Works, invites tenders up to March 2nd for re building Harvey bridge over Nash's Creek in Restigouche County, and Reed's bridge over the north branch of the Charl. River in the same county.

NIAGARA FALLS, ONT. — The Niagara Falls Machine & Foundry Company intead building an addition to their foundry, to be 55x95 feet.—The Imperial Bank of Canada will erect a new banking building on the corner of Bridge street and Clifton avenue, at a cost of \$25,000.

CHATHAM, ONT,—At the annual meeting of the Chatham Mineral Water Company last week, it was decided to erect either a large hotel or an addition to the sanitarium. About \$40,000 is available for the purpose.—J. L. Wilson & Son, architects, are preparing plans for a brick residence for William Holmes, near Comber.

ST. MARY'S, ONT.—J. Humphris and J. Wiederhold, architects, are getting out plans for several buildings to be commenced in the spring.—Tenders close February 10th for construction of the Park street bridge.—It is likely that an engineer will be engaged to furnish plans for proposed bridges and street invprovements, on which about \$60,000 will be spent this year.

VICTORIA, B.C.—Increased school accommodation is required. A new school of ten rooms in Victoria West and a larger school in the central portion of the city has been suggested.—W. J. Dowler invites bids on behalf of the corporation up to Monday, 16th inst., for purchase of \$200,000 4 per cent. debentures.—Lemon, Gonnason & Company contemplate extending their planing milis.

STRATFORD, ONT.—R. T. Orr, architect, has prepared plans for the Mooney biscuit and candy factory, four storeys and basement, 65 x 160 feet, with elevator and engine room 40 x 60 feet, to be built of white brick. Contracts will be let immediately.—The City Engineer estimates the cost of constructing a first-class pavement on Ontario, Downie and Wellington streets at \$75,000. The Dominion Government will be petitioned to build a \$25,000 drill shed here.

PETERBORO, ONT.—Tenders have been taken for excavating for addition to Ontario Bank in this town. Bond & Smith, of Toronto, are the architects.—The County Council will request the Dominion Government to make a grant towards building a pier 40 feet square in connection with the Lake bridge.—Tenders will be invited by the County Council for erection of the new Payne's Bridge over Indian River.—A movement has been started to build a house of refuge for the county.

HAMILTON, ONT. — T. Beasley, city clerk, is taking tenders up to 4 p.m. of the 4th inst. for waterworks supplies, including cast-iron pipe, castings, hydrants, valves, lead pipe, pig lead, stop cock boxes, service brass work, etc.—The managers of the Central Presbyterian church are talking of erecting a mission building at corner of Sherman avenue and Barton streets.—It is probable that a by-law will be submitted to the ratepayers to raise \$27,000 for a new high level reservoir and about \$50,000 for permanent street improvements,—The city clerk is asking for tenders up to February 13th for supply! of sewer pipe, Portland cement, spikes, gravel and lumber required during the year.

LONDON, ONT.—It is probable that a new central fire hall will be built this year.—The city engineer estimates the cost of a steam fire engine of 800 gallons capacity at \$4,500, and that of a chemical engine at \$2,000.—At the annual meeting of St. Andrew's church last week, a committee was appointed to report on the question of a Sunday School building. — Mr. Campbell, real estate agent, has sold 20 lots in a new survey south of the G. T. R., and several of the purchasers will build houses in the spring —H. C. McBride, architect, has prepared plans for a new building to be used as headquarters of the Liberal Association of Western Ontario; four storeys, pressed brick front, stone foundation and stone facing.

OTTAWA, ONT. — The Board of Works have decided to apply to the Railway Committee of the Privy Council for power to compel the widening of the Somerset street bridge by the different railway companies.—F. Gelinas, secretary Department of Public Works, wants tenders by 9th inst. for construction of a wharf at Cross Point, Bonaventure County, Que. Plans at above department, on application to postmaster at Cross Point, and at office of P. Beland, post office, Quebec.—The Department of Railways and Canals is asking for tenders by February 10th for supply of 1,500 codar poles required for the Welland canal.—Tenders are being taken this week for erection of new home on Richmond Road for the Sisters of Mercy, estimated cost \$80,000. Charles Brodeur, of Hull, is architect.—It is reported that the Westinghouse Company, of Pittsburg, are negotiating with a view to the utilization of the power at Chats Falls, on the Ottawa river, for establishing a new enterprise.—Plans have been accepted for the enlargement of St. Luke's Church, at estimated cost of \$2,500. The rector is Rev. W. M. Loucks.

VANCOUVER, B.C.—Emil Guenther, architect, has prepared plans for machine shop for S. Hollander, to be 40 x too ft., two storeys.—The plans of J. J. Honeymoon, architect, have been accepted for new church and Sunday School for St. John's Presbyterian church; estimated cost, \$8,000. The Sunday School room will be built first.—Braid & Co. will commence work about April 1st on a warehouse building to be built on Hastings street.—Theodore Ludgate has finally secured possession of Deadman's Island adjoining this city, and will proceed at once to build a large saw mill.—The sum of \$16,000 has been pledged towards a Y. M. C. A. building. The secretary of the association is K. C. Dryer.—The Board of School Trustees will be obliged to take steps this year to provide increased school accommodation. Negotiations are said to be in progress through a local real estate agent for the erection of a larger summer hotel on the shore of the inlet, between Hastings and Barnet. No further particulars are yet available.—The erection of a new high school is

spoken of.—William Braid & Company, wholesale tea importers, are having plans prepared for a new building adjoining their present premises, to have a frontage of 50 feet and to cost about \$40,000.

MONTREAL, QUE. — The plans prepared by G. B. Pest, architect, of New York, for the new Stork Exchange building, show a structure of light stone, with handsome Corinthian columns supporting the portico. Edward & W. S. Maxwell will be supervising architects. — The students of McGill University have raised upwards of \$1,000 towards the proposed gymnasium building. — The Montreal Bridge Company will apply to Parliament for power to change the location of the bridge and for further time to complete it.—Ste. Cunegonde Council has decided to build a new fire station, at a cost of \$12,500.—The Provincial Bank of Canada will build a branch at the corner of Ontario and Desery street, at a cost of \$20,000.—It is the intention of the governors of the Royal Victoria Hospital to completely remodel the operating theatre.—The Fire Committee will ask for funds to purchase three new fire engines and to erect three fire stations, one central station to cost \$30,000.—The Montreal Rolling Mills Company purpose enlarging their plant on Notre Dame street west.—The congregation of St. Bartholomew's church, Beaver Hall Hill, are negotiating for the sale of their church with the object of erecting a new edifice up town.—Contracts have been let for some of the trades for erection of the new Olivet Baptist church, corner Dorchester and Guy streets. The building will be 97x150 feet, with school building in rear 40x64 feet; red pressed brick, sandstone trimmings, leaded glass, tile floors, fan system of heating and ventilation, etc.

WINNIPEG, MAN.—The Rat Portage Lumber Company will commence the erection of their proposed saw mill in this city early in the spring.—Tenders are wanted by 10th inst. for erection of a three-storey brick building on Main street. Plans at 567 Main street.—Darling, Pearson & Over, architects, are this week taking tenders on residence, corner Broadway and Furby street. — The Church of Christ coegregation have purchased a site, corner of Kate street and McDermot avenue, and intend erecting a commodious church edifice this year. — Plans have been prepared for a new church to be built next summer by the First Lutheran congregation on corner of Nena street and Bannatyne avenue; brick on stone foundation, cost about \$18,000. The pastor is Rev. J. Bjarnason.—The Winnipeg Street Railway Company will extend their present car barn.—The new land titles office for the local government, which will be built this year, will cost \$60,000.—Mr. Rosenthal, of the Bankrupt Stock Purchasing Company, is



calling for tenders for erection of hotel and store building on corner of Main and and store building on corner of Main and Rubert streets, three storeys, brick and stone, cost \$25,000.—The Eastern Townships Bank have had plans prepared for alterations to the Burland block.—S. Hoover will spend \$10,000 in improving the Foulds block.—James Brown will erect a twostorey printing office on Garry street.—Darling, Pearson & Over have prepared plans for the new building for the Bank of British 1.01th America, which will be an expensive structure.—New warehouses will be built this year by the Marshall Wells Company, Sutherland & Campbell, Bole Drug Company and Foley Bros.—D. Sprague and Brown & Rutherford will build additions to their mills.—I. Bennetto will erect a to their mills.—I. Bennetto will erect a business block on the south side of Portage avenue, and E. F. Hutchings will erect a new factory on Market street.

-W. Chesterton, architect, is calling for tenders for erection of a residence on Roslyn Place, Fort Rouge, for Douglas Clark.—It is reported that the Manitoba Clark.—It is reported that the Manitoba Government is having plans prepared for a new Normal school in this city.—The plans of H. S. Griffith, architect, have been accepted for the new Carnegie library building.—James Greenfield, architect, is taking tenders on a brick house on Edmonton street.—The City Clerk desires tenders by March 3rd for the plant of from 200 th 600 tons of asphalt supply of from 300 to 600 tons of asphalt.

TORONTO, ONT.—The Gold Medal Manufacturing Company are about to build an addition, 160 x 98 feet, to their factory, corner of Van Horne and Bartlett streets. The foundation will be commenced this week.— Bond & Smith, architects, have prepared plans for alteraarchitects, have prepared plans for alterations and improvements to the Ontario
Bank at Peterboro.—It is reported that a
large financial institution will erect a
modern building on the site of the
Marshall block, King street west, near
Bay.—The time for receiving tenders for
superstructure of R. C. church at Chepstow, Ont., has been extended to 7th
inst. Plans at office of A. W. Holmes,
architect, 170 Spadina avenue, this city. architect, 170 Spadina avenue, this city.-The architect for a pair of brick and stone dwellings on St. George street for C. H. Wilson is George R. Harper, instead of C. Parker as stated in last issue. Mr. Parker is the contractor for the work.— Dr. Sheard will recommend to the Board of Health that the city establish a public abattoit.—Hon. H. S. Blake has offered to donate the sum of \$2,000 towards the erection of a new home for deaconesses

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A. D. CREASOR, Sec'y-Treas. Head Office, Owen Sound, Ont

in connection with the Church of England. — The Ontario Government has passed an order in council granting a franchise for the devolopment of power at Niagara Falls to the Toionto syndicate headed by Frederic Nicholls, William Maclenzie and Lieut. Col. H. M. Pellatt. The company propose to commence operations as soon as possible and expect to spend about \$5,000,000. - Andrew Carnegie has offered to donate the sum of \$350,000 to the city of Toronto for the erection of a central public library and three branch libraries.—C. H. Bishop, superintendent of school buildings, has presented his estimates for the year, which includes the following for enlargements: Kew Beach, three rooms, \$13,000; Withrow avenue, one room, \$2,000; Borden street, reconstruct front of build-Borden street, reconstruct front of build-

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ing, \$8,000; Essex street, one additional toom, \$2,000.—The City Engineer has recommended the purchase of another sand pump, at a cost of \$3,000. The construction of the following pavements and sidewalks is recommended: Pavements-Beachell street, Eastern avenue to Front street, macadam, \$1,420; Sim-coe street, King to Front street, esphalt, \$13,780; Mechanics' avenue,

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Building permits have been granted as \$264; Em, Sherbourne to Dunbar, \$328. — Building permits have been granted as follows: W. A. Murray & Co., alterations and additions, 14 King street east, cost \$10.000; G C. Craig, two brick and stone dwellings, Boor street, near St. Clarens avenue, cost \$3 200; Charles Moulds, two storey brick store and dwelling, corner Royce and Perth avenues, cost \$2,500; Dona'd McArthur, four two-storey and attic brick and stone dwellings 36 to 42 McGill street, cost \$10,000; B. 36 to 42 McGill street, cost \$10,000; B. G. Austin, two-storey stone and brick residence, 339 Margueretta street, cost \$1,800, Eckardt Casket Company, alterations to wavehouse, 66 Esplanade street west, cost \$1,700.

CONCRETE CONSTRUCTION.

.Mr. H. F. Duck has called our attention to certain errors in our report of his remarks on concrete construction made at the recent meeting of the Engineers' Club. We therefore publish below a revised report:

That portion of the first paragraph, after the word "concrete," 13th line, and prior to the word "Mr" 25th line, should be eliminated, and the following substituted therefor, viz :-

"In his opinion care should be taken in the proportions used of cement, sand and broken stone, and in order to ascertain these proportions, the voids in the broken stone and in the sand should be calculated by some correct method, one of which he gave. By this particular method, with stone broken in size from two inches down to say one quarter inch, with graded, clean, sharp sand, the proportions would be about 1, 3 and 7 of cement, sand and stone respectively, thus forming a basis upon which to ascertain the proper proportions for the special class of concrete work desired. In itself, the proportion of 1, 3 and 7 if well mixed and tamped in place would make a good concrete for filling purposes. Facing concrete for dams and work of like character should be in much richer proportions and only the best quality of hard graded sand should be used.

(Continued on page 6.1)

(Continued on page 6.)

DEBENTURES

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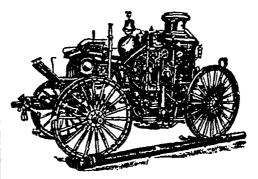


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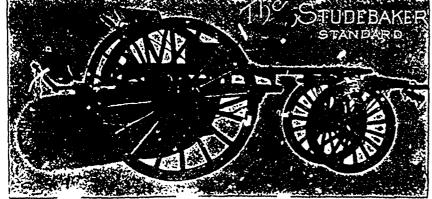
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He was not in favor of using lime or other stone direct from the crusher, when such stone in the process of crushing produced a large volume of dust, which said dust should be removed by screening. When, however, the process of crushing produced a broken stone graded from two inches down to a coarse sand, in his opinion it was perfectly safe to use it without screening. Field or bonder stone, granite and other hard stone, he considered as preferable for crushing purposes. Engineers differ greatly in opinion as to the quantity He was not in favor of using lime or other able for crushing purposes. Engineers differ greatly in opinion as to the quantity of water to be used in concrete mixtures,

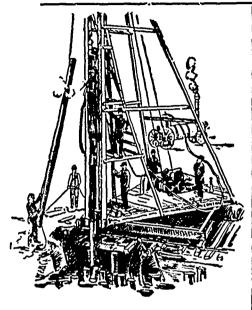
but his experience led him to believe that sufficient water to make the mixture of the consistency or damp loam of raw sugar,

before being placed in position or tamped, was good practise."

The whole of the ninth paragraph should be eliminated and the following substitut-

ed, viz:
"Mr. Duck said that there was no reason, as some supposed, why concrete weld not set in water, proper precautions being, of course, taken in depositing the concrete in place. Tests of certain piers in the Ottome Piers for the Course of the Ottome Piers for the Ottome Piers fo in the Ottawa River, from about one foot above high water mark to the footings, a distance of some fifty feet, had demonstrated that the concrete, all of which had been deposited in water, had set perfectly and was in excellent condition."

In the report which appeared in the last issue of this paper of the discussion on "Concrete" at the Toronto Engineer's Club, the name of Mr. J.T. Culverwell was erroneously mentioned instead of Mr. J. Alexander Culverwell as having participated in the discussion.



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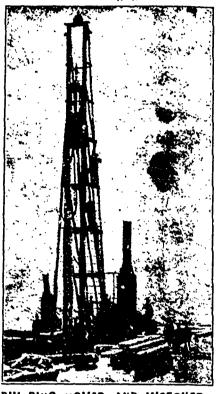
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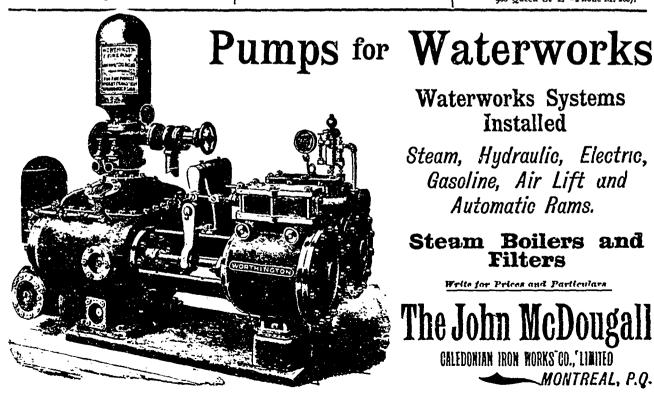
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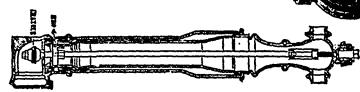
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The Canadian Society of Civil Engineers

The Canadian Society of Civil Engineers opened their seventeenth annual meeting in their rooms on Porchester street, Montreal, on Tuesday, January 27th.

Dr. Martin Murphy, the president, was in the chair, and the morning session was devoted to formal business. The reports were read and adopted, that of the council showing a membership of 982, an increase of 90 over last year. The tre isurer's report showed the society to be in a flourishing condition financially, the balance carried forward from last year being \$1,024.06, as compared with \$941.48 the year before. The building fund has also risen from \$211.20 to \$7,42.51.

The legislation proposed by the society and supported by the University of Toronto, in Ontario, was dropped on acc unit of opposition. In Manitoba the incorporation of a society known as "The Manitaba Institute of Engineers and Architects," with exclusive rights to practise in the province, was defeated by the association, and there were some other minor legal enactments

was defeated by the association, and there were some other minor legal enactments secured in Quebec and Manitoba.

In the afternoon, by the kindness of Pro-

In the afternoon, by the kindness of Professor Cox, there was an exhibition of the Liquid Air plant in the Physics Building of McGill University.

Afterwards, by the courtesy of the Governors of the University, the members of the Society partook of an informal recepion and afternoon tea in the Macdonald Engineering Building and a demonstration was given in the testing laboratory.

In the evening Dr. Martin Murphy, the retiring president, delivered his annual address, and Mr. H.D. Bush, M. Am. Soc. C. E., M. Can. Soc. C. E., read a paper on "Some Problems in Connection with the Erection of the Miramuchi Bridge."

On Wednesday morning the election of

On Wednesday morning the election of officers was proceeded with, the result being as follows:

President, K. W. Blackwell, Montreal. Vice-Presidents, G.H. Duggan, Sydney, C.B.; E. Marceau, Montreal; G.A. Mountain, Ottawa.

Treasurer, H. Irwin, Montreal.

Secretary, Prof. C. H. McLeod, Mon-

treal.
Librarian, E.G.M. Cape, Montreal.
Councillors, C. H. Keefer, Ottawa; J.
Kennedy, D. Macpherson, S. Howard, W.
McL. Walbank, R.A. Ross, Montreal; C.
E.W. Dodwell, Halifax; W.B. Mackenzie,
Moncton; C B. Smith, Niagara Falls; R B.
Rogers, Peterboro; E. Mohun, Victoria;
J. Galbraith, Toronto; W.R. Butler, Kingston; St. T. J. Boswell, R. A. Vallee,
Ouebec. Quebec.

Nominating Committee, Maritime Provinces, C. W. Dodwell; Quebec, R.A Vallee, W. McL. Walbank; Ontario, W.P. Anderson, G. A. Mountain, C. H. Rust; Manitoba, H. J. Cambie; Outside of Canada, R. A. Ross.

A proposal was brought forward to drop the word "Civil" from the title of the socertain effect in deterring electrical, min-ing and mechanical engineers from becoming members. On the other hand it was maintained that the word "engineers" was not of itself sufficiently distinctive. The general impression was that a change of some kind was desirable, but finally the whole matter was left to the committee with instructions to report next year. Meantime the title will remain unchanged.

An important work done during the morning was the adoption of a committee to report on "Standard Portland Cement Tests." The report, which contains eight printed pages, fixes the standard for Portland cement, and its recommendations are expected to receive the general assent of

In the afternoon technical papers were read and discussed. Dr. W. Bell Dawson, engineer in charge of the tidal survey of

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Canada, described the work done by him in this department during the last eight years.

Mr. A.W. Robinson gave an account of the new 20 inch hydraulic dredge, "King Edward," that has lately been built for the rectification of the lower part of the Frazer river and other work on the Pacific coast.

Mr. H. M. Jaquays read a paper on The Economy of Small Gas Engines Using Montreal Illuminating Gas."

Mr. R. S. Lea read a paper on "The Flow of Streams," and Mr. E.G.M. Capt one on "The Industries of the Consolidated Lake Superior Company." The paper by Mr. Cape was illustrated by lantern projections jections.

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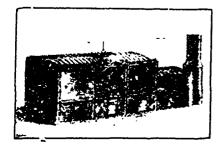
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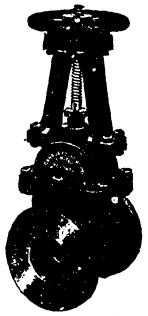
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