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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL

PUBLIC WORKS • TENDERS •
ADVANCE INFORMATION •
AND MUNICIPAL PROGRESS

EVERY THURSDAY

This paper reaches every week the Town and City Clerks, Town and City Engineers, County Clerks and County Engineers, Purchasers of Municipal Debentures and leading Contractors in all lines throughout Canada.

Vol. 6. NOVEMBER 14, 1895 No. 41.

THE CANADIAN CONTRACT RECORD,
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as an Intermediate Edition of the "Canadian Architect and Builder."
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CONTRACTS OPEN.

HATZIC, B. C.—J. W. Wells will erect a fish and fruit cannery here.

ARNPRIOR, ONT.—The site is being prepared for the new post-office.

LINDSAY, ONT.—C. L. Barker is putting in the foundations for a new dwelling.

ST. SCHOLASTIQUE, QUE.—A scheme is on foot to build a waterworks system here.

ST. HYACINTHE, QUE.—A new post-office to cost \$14,000, is about to be erected here.

KINGSTON, ONT.—The extension of the waterworks system to the outer depot is being agitated.

CHESLEY, ONT.—A by law will be submitted to raise \$10,000 for a new public school building.

VERNON, B. C.—The city engineer of Vancouver, will report on a waterworks system for this village.

PAKENHAM, ONT.—The erection of a wing to St. Mark's church to be used as a Sunday school is being strongly urged.

PICTON, ONT.—The new post-office will be built on the Barker property. Work will probably be commenced this fall.

ALEXANDRIA, ONT.—The Council will submit a by-law to the ratepayers authorizing the raising of \$6,000 for electric light.

LONDON, ONT.—Wm. D. Eckert has taken out a building permit for a residence on Dundas street east, to cost \$1,700.

TORONTO JUNCTION, ONT.—The superintendent of the electric light works has been authorized to purchase 10,000 carbons.

HALIFAX, N S.—The City Engineer in his annual report just presented, recommends the use of asphalt for street pavements.

PORTAGE LA PRAIRIE, MAN.—The proposed new Presbyterian church will cost \$15,000, subscriptions for which are being liberally received.

HINTONBURG, ONT.—The School trustees have decided to erect a new separate school house. It will be of brick and will cost \$2,000.

STRATFORD, ONT.—Mr. W. F. Van Buskirk, C. E., has been appointed superintending engineer of the system of main sewers to be put in by the city.

ST. JOHN, N. B.—The school trustees have purchased a site for the new High School building, but work will not likely be commenced until next spring.

GLENCOE, ONT.—A market place is to be built in the spring, and the construction of a waterworks system is advocated.—R. R. McKellar will build a brick stable, to accommodate 60 horses, and to cost \$3,000.

DORCHESTER, N. B.—Tenders for plumbing for the new hotel are invited until the 18th inst. Plans may be seen at

the office of R. C. J. Dunn, architect, St. John.

MOUNT FOREST, ONT.—The construction of a waterworks system is under consideration, but no definite action has as yet been taken. W. C. Perry is town clerk.

EGANVILLE, ONT.—H. J. Beatty, of the firm of Purvis & Beatty, civil engineers, has recently been appointed engineer for the municipalities of Bromley and Hagarty.

JOLLIETTE, QUE.—The Chamber of Commerce is discussing the project of an electric railway between that locality and Lanoraie, to connect with the St. Lawrence navigation.

GODERICH, ONT.—A company of citizens contemplate the construction of a belt line of electric railway through the county of Huron, with the town of Goderich as the chief centre.

HULL, QUE.—Mr. Hibbard, C. E., has prepared a statement showing that waterworks extension in wards 2, 3, 4 and 5, can be carried out for \$26,319.—The issue of \$144,000 of debentures has not yet been placed upon the market.

SEBRINGVILLE, ONT.—A by-law was passed on the 7th of October providing for the issue of over \$3,000 of debentures for improving and extending the North Black Creek drain, in the township of Ellice. John Pearson, of this place, is township clerk.—Andrew Gourlay is preparing to build a residence.

BRANTFORD, ONT.—The Brantford Electric Light & Power Co. are offering for sale the Brantford canal level and electric lighting and power plant, consisting of land, dams, buildings, engines and boilers, arc dynamos, generators, etc., together with the company's franchises. Tenders close on the 26th inst. and are to be addressed to John McGeary, sec-treas., or Wilson & Watts, solicitors.

NEWMARKET, ONT.—A syndicate has been formed to purchase the Newmarket track and convert it into a race course. A grand stand, bicycle track and hotel to accommodate 200 guests will be erected and accommodation for 400 horses will be provided. It is the intention of the syndicate to start building the hotel in January. Upwards of \$75,000 will be spent on the industry.

PETERBORO', ONT.—Mr. W. Blackwell, architect, wishes to receive prices for a tubular steam boiler capable of heating 344,000 cubic feet of space in a hotel building. Price to include front and all ironwork complete.—A new Y. M. C. A. building will be built next spring, out of the bequest of \$20,000 left by a will. Plans will be prepared this winter. It is the intention of the Peterboro' Light & Power Co. to erect next spring a new building, with new machinery and boilers, at a cost of \$50,000.

WOODSTOCK, ONT.—The disposal of the sewage of this town was discussed by the Provincial Board of Health on Tues-

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NOTICE TO CONTRACTORS

Tenders for Annual Supplies

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to 11 o'clock a. m. on SATURDAY, NOVEMBER 23, 1895, for the following supplies for the year ending December, 1896:

- | | |
|---------------------|----------------|
| Lumber, | Hardware, etc. |
| Pit Gravel, | Wire Nails, |
| Sand, | Sewer Pipe, |
| Cedar Paving Posts, | Horse Feed, |
| | Castings. |

Specifications may be seen and forms of tender obtained at the office of the City Engineer, Toronto, on and after the 16th November, 1895.
A marked cheque, payable to the order of the City Treasurer, Toronto, for 5 per cent. of the amount tendered for, must accompany each and every tender, otherwise it shall be ruled out as informal.
The lowest or any tender not necessarily accepted.

DANIEL LAMB,
Chairman Committee on Works.
Committee Room, Toronto, Nov. 11th, 1895.

day last, and the following recommendations were passed: (1) that the plans and details of the proposed system and the disposal of the sewage for the north part of the town as set forth in the report of Mr. W. M. Davis, the engineer in charge, be approved of and (2) that the sewage from the south side of the town be pumped, so that it can be used in filtering beds similar to that from the watershed at as early a date as possible.

PETROLEA, ONT.—Excavating has begun for J. A. Johnston's, Brantford, new hotel near the M. C. R. station. It will be 80 x 125 feet, 3 stories, brick, with all modern improvements and accommodation for 75 guests. Anderson & Dillion will build at once a new hotel, next the Johnston house, brick, to accommodate 40 guests.—The by-law to construct a waterworks system will shortly be voted on. Mr. Wilks Chipman, C. E., recommends the Lake Huron scheme.—Mr. Gordon will shortly install a new engine, boiler and alternator for his electric light plant.

VANCOUVER, B. C.—Costello & McMorran, cannery, have decided to build a four-story hotel with basement, on the corner of Cambie and Hastings streets. The basement will contain billiard room, baggage rooms, bar, lavatories, etc., and on the three upper floors will be 60 bedrooms. The building will be of cut stone and pressed brick, with carved capitals and arches, electric light and gas, steam and water pipes, fire escapes and roof of galvanized iron. The architect is Mr. Blackmore. The work of excavating for the foundations of the new block has already been commenced, but the building will not be erected immediately.

HAMILTON, ONT.—R. O. and A. B. McKay are considering the advisability of constructing a 1,200 ton freight boat of steel or composite, at a cost of about \$60,000.—Building permits have been granted as follows: Milne & Lyall, two story bk. dwelling on Hilton street, cost \$1,000.—The Hamilton, Grimsby and Beamsville Electric Railway Co propose to erect a station north of the reservoir.—E. A. C. Pew, the railway promoter, had an interview with the Council regarding his proposition to bring electric power to Hamilton by a waterway from the Grand River, and stated that as soon as a franchise was granted work would be proceeded with.

MONCTON, N. B.—Mr. D. Pottinger, general manager Intercolonial Railway, invites tenders until Wednesday, the 27th inst. for the supply of ties and switch ties required by the railway for renewals. 340,000 will be required, between the following points: Halifax and Stellarton, 40,000; Windsor Junction and Windsor, 10,000; New Glasgow and Port Mulgrave 30,000; Truro and Painsac Junction, 40,000; Point du Chene and St. John, 40,000; Moncton & Newcastle, 34,000; Newcastle and Campbellton, 30,000; Campbellton and St. Flavie, 38,000; St. Flavie and River du Loup, 17,000; River du Loup and Ludlow, 30,000; Oxford Junction and Pictou, 20,000; Point Fupper and Sydney, 9,000.

QUEBEC, QUE.—Hon. P. Garneau, President of the Great Northern railway, has stated that if the city loan of \$250,000 is put in legal shape without further delay the company will place additional sections of the road under contract. They will also build a number of freight cars in Quebec during the coming winter and will arrange to construct car shops here so as to build all the rolling stock in the city.—The Women's Christian Association have decided to build an addition to their building for young women, and to convert the present building into a home for old ladies. The cost of the improvements is placed at \$10,000, for which subscriptions are being received.—P. E. Danjou in-

tends to erect a new residence and store in the spring.—Thos. Raymond, architect, has prepared plans for the erection of an ice tower for the approaching winter carnival.

MONTREAL, QUE.—A new building, to cost \$20,000 is to be erected at the corner of St. James street and Victoria Square, upon the property of Mr. Alexander McDonald. The building will be three stories, constructed of pressed brick, 78 feet on St. James street and 85 feet on Victoria Square.—Notice has been given by the Road Department that it is proposed to construct a sewer on Concord street, from end of existing sewer westward.—The Road Committee has resolved to pave Notre Dame street east with asphalt.—The North Nation Valley Colonization Railway Co. will apply to the Provincial Government for incorporation to build a railway from Montebello or Papineauville in a northerly direction, passing through the townships of Ripton, Hartwell, etc., and forming a junction with the prolongation of the St. Jerome branch of the C. P. R. Among the promoters are: W. Owens, of Montebello; Jos. Bourque, of Hull, M. Joubert, of Ripon, and S. R. Poulin, C. E., of Montebello.—The owners of the old Erskine church property have completed arrangements for the building of a three storey store at the corner of Peel and St. Catharine streets, to be used as a piano establishment for C. W. Lindsay. It is to be completed by May next.—J. A. Chausse, architect, is calling for tenders for alterations of premises, 137 and 139 Cascade street.

TORONTO, ONT.—The T. Eaton Co. are said to have purchased the property at the southwest corner of James and Louisa streets, the intention being to erect a large publishing house thereon.—The Fire Underwriters' Association has offered to lower the rates of insurance if the city will construct a 24-inch main on Front street.—A sub-committee of the Industrial School Board appointed to report on needed improvements, have recommended among other things, that the Ontario Government be requested to purchase the institution, and that the purchase money obtained from the Government be utilized in the erection of suitable buildings for the indigent poor of the city.—A site for the proposed consumptives hospital is said to have been selected by Dr. Bryce and W. G. Gage. It will be located near Gravenhurst, that town offering a bonus of \$8,000 and a free site. A by-law will at once be submitted to the ratepayers of Gravenhurst to raise the amount, after which work will be commenced.—The recommendation of the City Engineer to the Board of Works, presented on Monday last, that a new steel intake pipe be constructed to replace the present wooden conduit across the bay, was passed by the Board, and the Council will be asked to place the amount of \$75,000 in the estimates next year, to cover the cost of the work. The recommendations for water mains on Springhurst avenue and on North Drive were also passed.—Building permits have been granted as follows: F. L. Napolitana, 2 storey bk. dwelling, 13 Elm st., cost \$1,200; W. F. Petry, 8 St. Mary st., pr. s. d. 2 storey and attic bk. dwellings, 25 and 27 St. Joseph st., cost \$5,000; J. A. Summers, mansard roof and additions to store 151 King st. e., cost \$2,500.

OTTAWA, ONT.—A new custom house will probably be erected in this city at an early date. Mr. Joseph Kavanagh, president of the Board of Trade, is said to have been informed by one of the ministers that the government would place in the estimates this session an amount sufficient to cover the work, which it is estimated will cost about \$200,000. The plans have already been prepared, and work will likely be commenced next spring.—John Davidson has

purchased a lot at the corner of Metcalfe and Waverley streets.—Architect Alexander has prepared plans for a solid brick block containing six stores on Dalhousie street, between Murray and St. Patrick streets. The block will be three stories high, with 99 feet frontage on Dalhousie street, and 33 feet depth on Murray street, and the upper flats will be fitted up for dwellings. Every alternate store will have basement and cellar, which will be 9 feet deep, 7 feet of which will be blasted out of solid rock. The store fronts will consist of ornamental brick and plate glass windows. Tenders for the work will be invited early in January next.—The City Council have decided that the main drainage scheme be laid over until next year, and that in the meantime the services of competent engineers be obtained to consult with the city engineer.—The petition has been presented to Council for a syenite pavement on Sussex street, from Rideau to St. Patrick streets.—The Upper Ottawa Improvement Co., invite offers until the 18th inst. for the purchase of 20 debentures of \$3,000 each. Address G. B. Greene, secretary.—The Building Committee of the Protestant hospital is called to take immediate action for the erection of the new wing.—An influential deputation of citizens recently waited on the government asking assistance towards the construction of the Montreal, Ottawa and Georgian Bay canal. The proposed canal will form a waterway from Lake Huron to Montreal, and the work necessary would be the cutting of a canal through the height of land between the Mattawa river and Lake Nipissing, some improvements on the French river and improvements on the Ottawa river, where it is too rapid for purposes of navigation. The total estimate of the cost of the work is \$15,000,000. The company has asked the Imperial Government for a grant of \$3,000,000. The Dominion Government have not as yet taken any action in the matter, but promised consideration.—The Dominion Government has decided to make an offer to the corporation of Ottawa to pay two-thirds of the cost of the proposed new bridge over the Rideau canal at Maria and Rideau streets. The bridge, it is said, will be a substantial steel structure resting upon solid mason work abutments. The estimated cost will be in the neighborhood of \$30,000 and work will be commenced at the earliest possible date, after plans have been prepared and the agreement entered into with the city.—The City Council will make application to the government for a special act by which permanent pavements can be laid under the local improvement by-laws, the city engineer having recommended the paving of a number of streets.

FIRES.

The Georgian Bay Box factory at Midland, Ont., was completely destroyed by fire a few days ago. Loss, \$7,000; insurance, \$5,000. The carriage shop of S. F. Andress, at Caintown, Ont., has been burned. No insurance.—Thompson & Smith's livery and feed stables at Minnedosa, have been burned. John Cada's flour mill at Pike Creek, Ont., on the shore of Lake St. Clair, was burned to the ground on the 9th inst. Loss about \$20,000; insurance, \$5,000.—Urlin Bros.' store at Dutton, Ont., was burned last week.—James Brown's saw mill, on the Kent Northern Railway, five miles from Kent Junction, N. B., was destroyed by fire last week.—Gardner's hardware store, the Salvation Army barracks and the County Clerk's office at Rapid City, Man., were burned recently. The building was owned by Mr. J. M. Hall.—The storage warehouse of J. W. Hill, corner William and Queen streets, Montreal, was damaged by fire last week to the extent of \$100,000; the loss being principally on

the contents and covered by insurance.—The Ottawa house at Port Arthur, Ont., owned by Captain Survais, was gutted by fire on the 7th inst. Loss, \$10,000.—On Sunday morning fire at Hanover, Ont., destroyed the north building of the Hanover Spring Bed and Mattrass Factory Co.'s works.—Loss, \$2,400; insurance, \$1,400.—Alex. Wilson's entire block of frame buildings at Oil Springs, Ont., has been destroyed by fire.

CONTRACTS AWARDED.

SUSSEX, N. B.—Wallace Bros. have been awarded the contract of building the caretaker's residence on the military grounds.

AMHERSTBURG, ONT.—The successful tenderer for the new Michigan Central railway depot is A. Ellison, of St. Thomas. Contract price, \$3,040.

QUEBEC, QUE.—The contract for the erection of Francois Langelier's new house on Grand Allée has been let to Mr. Breton.—The following contracts have been awarded by the Council in connection with the new city hall: electric light fittings, Montmorenci Electric Power Co., \$2,400; electric bells, etc., Mr. Picard, \$1,800; furnishing the interior, Mr. Valliere.

HAMILTON, ONT.—The Finance Committee have accepted the tender of the Bank of Hamilton to purchase \$50,000 of debentures. Their offer was \$51,187.50. Osler & Hammond, of Toronto, were the next highest tenderers.—The tender of the Silica Barytic Stone Co., of Ingersoll, has been accepted by the Board of Works for cement sidewalks on James and King streets. The following are the tenders: Kraemer Irwin Company, \$1.29 per square yard; Silica Barytic Stone Co., \$1.20 per square yard; Guelph Paving Co., 19 cents per square foot.

MONTREAL, QUE.—The contract for plumbing in connection with the new Canada Life Assurance building in this city, has been given to the Bennett & Wright Co., Ltd., Toronto, at \$15,298. Between the successful tender and the next lowest tender, which was that of Purdy, Mashinter & Co., of Toronto, there was a difference of only \$2.—W. McLea Walbank, has awarded the contracts for alterations and additions to a building on St. Gabriel st. as follows: stone work, Nicholson & Stewart; wood work, John Allan; ironwork, Dominion Bridge Co.; plumbing, Howard & Connell. Also for an extension to Montreal Park Incline railway buildings to Nicholson & Stewart, general contractors.—J. A. Chausse, architect, has awarded the contracts for a three-storey tenement building for P. Picotte as follows: masonry and brick, P. Picotte; painting, Desautels & Larin.

NEW COMPANIES.

WELLAND, ONT.—The Power, Rope and Belting Co., seeking incorporation; capital \$20,000.

MONTREAL, QUE.—Montreal Hydraulic Wheel Co., applying for incorporation; capital \$100,000.

PORT PERRY, ONT.—The Huron and Ontario Railway Co. will apply to Parliament next session for incorporation, to construct an electric railway from this town to Kincardine.

WINNIPEG, MAN.—J. H. Harris, of this city, has formed a company in England to develop the Pipestone gold mining property, about twenty miles south of Rat Portage. The capital stock is £100,000. An English engineer will examine the claim.

TORONTO, ONT.—Huron and Ontario Railway Co., seeking incorporation; to build an electric railway from Port Perry to Kincardine, passing through the counties of Ontario, York, Simcoe, Card-

well, Grey and Bruce. Roaf, Curry, Gunther & Green, of this city, are the solicitors.

VANCOUVER, B. C.—Dominion Developing & Mining Co., incorporated; capital \$500,000; trustees, Dr. G. L. Milne, of Victoria, John McQuillan, J. J. Banfield, J. Millar and John T. Carroll, of this city.—Richmond Developing & Mining Co., granted incorporation; capital, \$120,000. Alexander McLeod is one of the trustees.

HAMILTON, ONT.—Hamilton, Brantford and Pacific Junction Railway Co., applying for incorporation; to build a railway, with telegraph or telephone lines, from a point on the T. H. & B. railway near Copetown to a point in East Flamborough, near Schaw Station. Teetzel, Harrison & McBrayne are the solicitors of the company.

The business of the British Columbia Pottery and Terra Cotta Co., Ltd., Victoria, has been acquired by J. Hunter and C. A. Vernon.

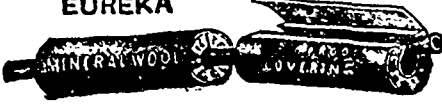
BUSINESS NOTES.

A demand of assignment is said to have been made on C. D. Maze, contractor, Montreal.

A demand of assignment is said to have been made on Blouin, Girard & Collard, plumbers and steam fitters, Montreal.

Judge Pelletier has rendered judgment in the case of Charles Berger, contractor, of Montreal, vs. the Local Government for a balance of \$167,000. Mr. Berger obtained a contract from the Mercier Government to complete some work on the Montreal court house for \$195,000. Mr. Berger drew money from Government on different occasions and filed an account for several extras. In 1893 Berger filed an account for the balance, \$167,000. The Government refused to pay and appointed a board of arbitrators, which granted Mr. Berger \$118,000 for his claims. The latter instituted proceedings against the Government, and Judge Pelletier granted Berger \$92,297 and part of the costs.

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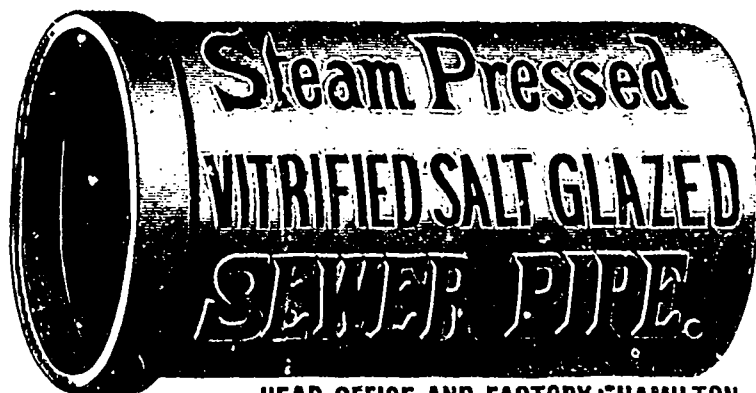
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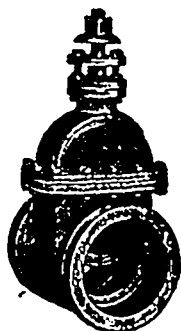
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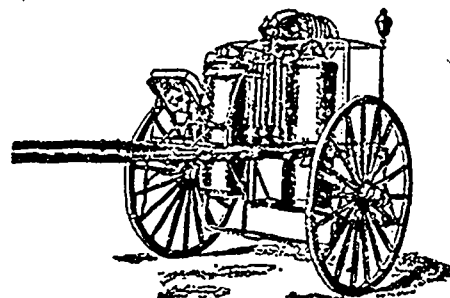
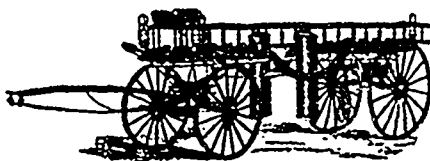
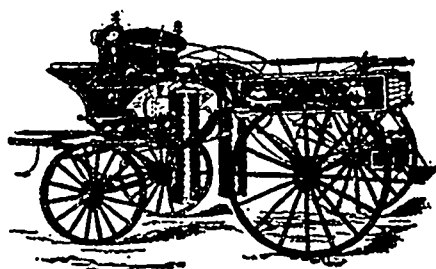
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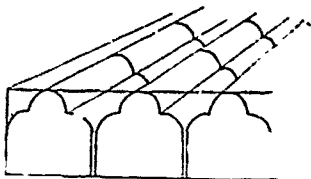
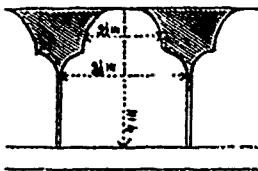
For reference address H. YOULDEN, Chief Fire Department, Kingston.

MUNICIPAL DEPARTMENT

BRICK AND ASPHALT COMBINED FOR STREET PAVEMENTS.

One of the great needs of the present day is a substantial and cheap street pavement. The man who can combine the springiness of macadam, the smoothness of asphalt, the durability of granite and the cheapness of brick will have something with "millions in it." All sorts of things have been tried or suggested—iron, rubber, compressed paper, and even lead.

J. J. Jeter, of Kansas City, is the inventor of a paving scheme at least novel and original. It is to combine vitrified brick and asphalt, and obtain thereby a measure of cheapness and an ideal pavement. No tests of Mr. Jeter's pavement have been made, and it has not been passed upon by paving experts. Mr. Jeter proposes to make vitrified brick eight inches long, four inches thick and three and one-half inches wide at the base. Midway these bricks are beveled



to a narrowness of two and one half inches, leaving a narrow oval top surface. Each end is beveled in the same way, making each brick the shape of a black-board eraser. The idea is to lay these bricks on a concrete foundation and fill the interstices with asphalt. This would make a running series of molds from curb to curb two inches deep and one inch wide. The pavement would appear as a thread of brick running through an asphalt surface, each center of brick being three and one-half inches from the next. Mr. Jeter claims this pavement will not run, and therefore can be laid on steep grades; that the thread of brick provides a foothold for horses, and that two-thirds of the asphalt material is saved. He figures the pavement as profitable at \$2 a square yard. Asphalt in Kansas City is now \$2.60 a yard, and brick \$1.45.

An objection would be the rolling of the asphalt into the interstices, but Mr. Jeter is confident that the rolling can be accomplished. Another objection is the variance in the resistance of the vitrified brick and the asphalt, but he is equally confident on that score.—Kansas City Star.

WHAT DESTROYS OUR STREETS.

Without doubt the heavy cartage and drayage of modern times have much to do with the perishableness of modern pavements. The hardest rock itself cannot long withstand the continuous grind of heavy loads supported upon narrow tires. To this foolish and destructive fashion of building carts and drays designed for the transportation of great weights the bulk of failure in modern pavements is due. It must be remembered that the celebrated roads of antiquity were never subjected to similar tests, and that the smaller the surface called upon to sustain great weight the less naturally will be the resistance power offered, and the greater will be the pressure upon the point of contact. If anyone will take the trouble to ascertain the weight of an average load whose like is hauled by hundreds through all our chief cities daily, measure the width of the tire and then figure the pressure per square inch to which a pavement is exposed, based upon the fraction of a circle which touches a straight line, he will have a better idea of what road builders of the present day have to contend with. This width of cart wheels and tires should be regulated by law with a view of municipal economy, and each Commonwealth should endeavor by legislation to enforce honesty in the laying of foundations for every foot of pavement used.—Lippincott's Magazine.

RESERVOIR DAMS.

A series of articles on reservoir dams in *Le Génie Civil*, by M. A. Dumas, contains an account of the principal failures of which authentic records are available. So far as earthen dams are concerned, M. Dumas finds the catastrophe has always arisen from one of the five following causes: 1. Perviousness of the dam itself, or of the ground on which it stands. 2. Insufficient size of tee byewash leading to the water topping the bank. 3. The laying of pipes for drawing off the supply through the bank. 4. Wave action on the interior face of the dam, which in the case of large and deep reservoirs, exposed to strong winds, should be protected not merely by stone pitching, but by a bearing masonry wall on the inner slope. This wall should at the same time be made in comparatively small sections, so that unequal settlement shall not cause serious dislocations. 5. The use of unsuitable material in the core.

NOVEL ENGINEERING FEAT.

A novel method of bridge construction has been resorted to over the Brisbane river at Indooroopilly, in Australia. The main span was built on shore and launched like a boat. The steel span was put together, in line with the bridge, partly on the bank and partly overhanging the river. When completed, it was necessary to run it out into position, so that its southern end, running from the bank, should rest on the stone pier in the middle of the river. A strong tramway was laid down, which carried the northern end on massive trolleys; the southern end was

borne on a hulk of 1,000 tons, and two lumber trestles were built on her amidships, on the top of which rested the span. A powerful cable, attached to a steam winch, hauled the huge span into position, to the great satisfaction of the naturally anxious engineers.

DEFECTIVE FIRE APPARATUS.

The Secretary of the Fire Underwriters' Association has written to the mayor of St. Catharines, calling his attention to the extremely defective arrangements and equipment of the local fire department. Complaint was made that at the recent fire at the opera house, the hose was almost useless, and caused much delay by which much greater damage was done than would have occurred had the hose been in good order. It was also alleged that the hose has proved a failure frequently in that city. When the underwriters' complaints were submitted to the chief of the fire department, says the *Insurance Chronicle*, he had nothing to say in rebuttal, but praised the brigade for their excellent work. That, however, is not the point. It is bordering upon absurdity to have an efficient fire brigade, so far as the bravery and skill of the men are concerned, and to furnish them with apparatus which breaks down when required. In calling attention to the defects in the protection at St. Catharines, the underwriters have done the citizens a valuable service. The infrequency of fires in small cities and towns often leads to the hose being neglected. The mayors and reeves throughout the country should make it one of their duties to have the fire department tested at regular intervals, so that, when needed, the apparatus will be ready for prompt and efficient service.

SCRAPING SMALL WATER PIPES.

The *Engineering Record* of Aug. 24th has an article on this subject. During the fall of 1894 about 25,000 ft. of 3 in. water pipes in Geelong, Victoria, were cleaned at a cost of about \$840 by means of a scraper attached to a jointed rod made of pine sticks 20 ft. long and 1 1/4 in. square. The sticks were connected by screw couplings and made a rod stiff enough to drive the scraper through a tuberculated pipe for 500 to 600 ft. without objectionable flexure, although some of the pipes were badly obstructed. The scraping tool is made of a central spindle of 3/8 in. round steel about 2 ft. long, flattened to form a small boss near one end, through which a square hole is punched. In using the apparatus a trench about 12 ft. long and 2 1/2 ft. wide is opened on the line of the pipe to be cleaned, a portion of the pipe is cut out and the scraper with its attached rod is inserted, enough water being left running in the pipe to facilitate the action of the scraper.

A new ambulance carriage has been invented by Dr. Hong, of Berlin, which is propelled by cyclists, and consists of a kind of litter resting on a frame with five wheels, three in front in the form of a tricycle, and two at the back. The drivers, accordingly, sit one at each end of the litter, which is covered by a removable roof.

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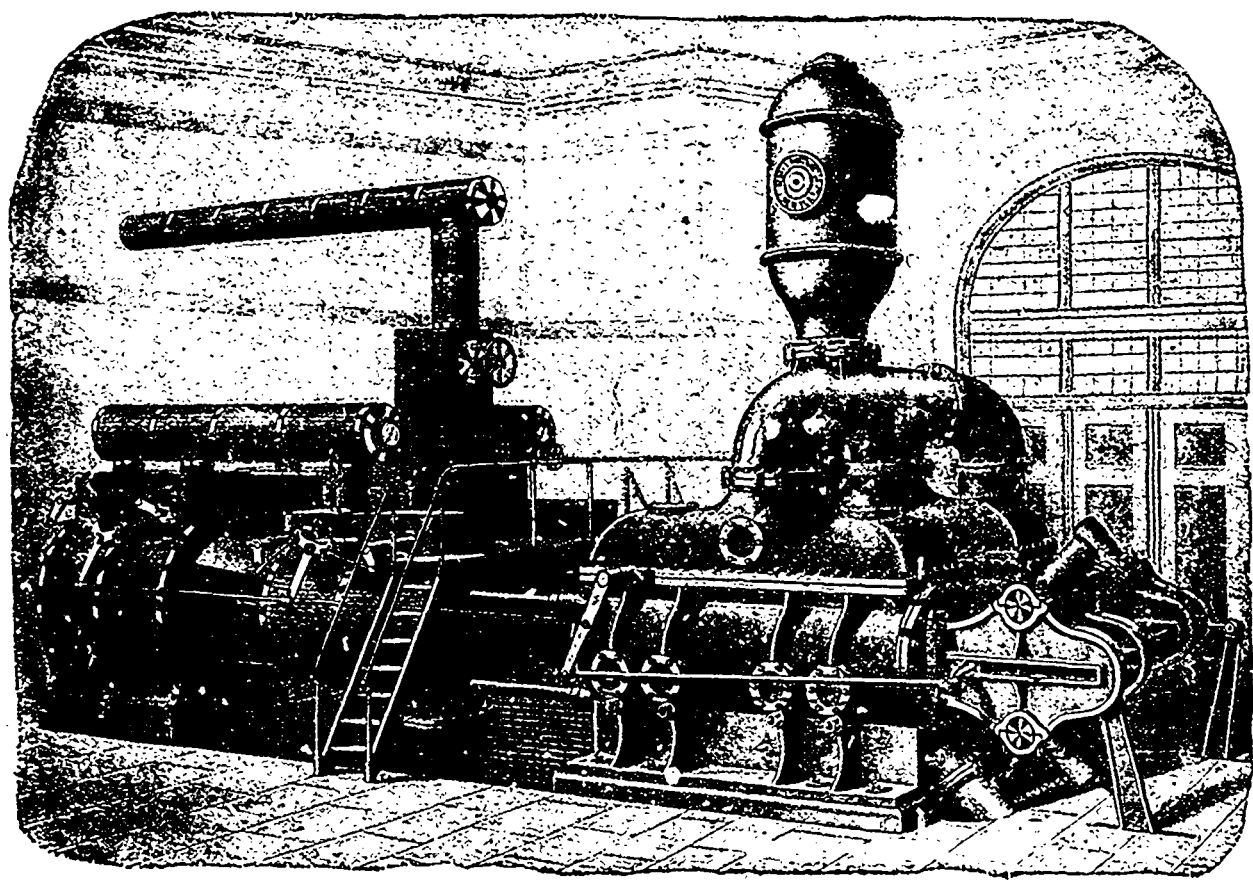
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Prices of Building Materials.

CONDITION OF THE MARKET.

TORONTO: The greatest interest is centered in the heavy metal trade, which is especially brisk, and manufacturers of galvanized iron are unable to supply the demand. Iron pipe is also moving freely, all sizes being asked for. An advance of 15 cents per box has been made on Canada plates. An improvement is noted in plumbers supplies.

MONTREAL: Although we quoted an advance in the price of glass last week, it seems probable that another upward move will shortly take place, the stock on hand being very limited. As in the case is Toronto, the iron and metal market is firm. Cement and firebricks are unchanged, and business is satisfactory.

LUMBER.

CAR OR CARGO LOTS.

Toronto. Montreal.

\$ \$ \$ \$

Table listing lumber prices for various types of wood, including clear picks, mill run, and shingles, with prices for Toronto and Montreal.

VAID QUOTATIONS.

Table listing quotations for mill cull boards, shipping cull boards, and various types of scantling and joist.

B. M.

Table listing lumber prices for dressed and undressed wood, including basswood, cherry, and black ash.

BRICK--M

Table listing prices for common walling, good facing, sewer, and pressed brick.

Toronto. Montreal.

Table listing prices for roof tiles, hip tiles, ridge tiles, and various types of bricks and ornamental tiles.

SAND.

Table listing price for per load of 1 1/2 cubic yards of sand.

STONE.

Table listing prices for common rubble, large flat rubble, foundation blocks, and various types of granite and freestone.

OHIO FREESTONE, FROM THE GRAFTON STONE CO.'S QUARRIES.

Table listing prices for various types of Ohio freestone, including Buff Promiscuous, Blue Promiscuous, and Saved Ashlar.

SLATE.

Table listing prices for roofing slate in red, purple, unslating green, and black.

PAINTS. (In oil, @ lb.

Table listing prices for various types of paint, including white lead, red lead, yellow ochre, and black lamp.

CEMENT, LIME, etc.

Table listing prices for Portland cements from Gernat, London, Newcastle, and Belgian sources.

Toronto. Montreal.

Table listing prices for Portland cements, including Belgian, Canadian, Roman, and Parian.

Table listing prices for hydraulic cements, including Thorold, Queenston, Napanee, Hull, and Ontario.

Table listing prices for Keene's Coarse Whites, Fire Bricks, Lime, Plaster, and Hair Plasterers'.

HARDWARE.

Table listing prices for cut nails and steel.

CUT NAILS, FENCE AND CUT SPIKES.

Table listing prices for various types of cut nails and spikes, including hot cut and cold cut.

FINE BLUED NAILS.

Table listing prices for fine blued nails.

CASING AND BOX, FLOORING, SHOOK AND TOBACCO BOX NAILS.

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

FINISHING NAILS.

Table listing prices for various types of finishing nails.

SLATING NAILS.

Table listing prices for slating nails.

COMMON BARREL NAILS.

Table listing prices for common barrel nails.

CLINCH NAILS.

Table listing prices for various types of clinch nails.

SHARP AND FLAT PRESSED NAILS.

Table listing prices for sharp and flat pressed nails.

STEEL WIRE NAILS.

Steel Wire Nails, 75 % discount from print. d list.

Iron Pipe:

Table listing prices for iron pipe of various diameters.

Toronto, 65 per cent. discount. Montreal, 60 to 65 per cent. discount.

Lead Pipe:

Table listing prices for lead pipe and waste pipe.

Galvanized Iron:

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

Structural Iron:

Table listing prices for structural iron, including steel beams, channels, angles, tees, plates, and sheared steel bridge plate.