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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 THROUGHOUT CANADA.

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As an Intermediate Edition of the "Canadian Architect and Builder."

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TENDERS TO BUILDERS.

Tenders will be received by the undersigned up to 12 o'clock noon on FRIDAY, THE 1st FEBRUARY, for the Ironwork, Carpenter's, Plumber's, Painter's, Roofer's, Galvanized Iron and Mason's departments necessary in the erection of Auditorium Building, Refreshment Pavilion and Club House at Toronto Island.

For plans, specifications and for all information, apply to A. R. Denton, Architect, 20 King Street West.

The lowest or any tender not necessarily accepted.

R. A. SMITH, Secretary Toronto Ferry Co.
18 King St. West, Toronto.



Notice to Contractors

TENDERS FOR FENCE.

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to eleven o'clock a.m. on SATURDAY, FEBRUARY 2nd, 1895, for the construction of a

FENCE ON THE ROSEDALE RAVINE

through the St. James' Cemetery lands.

Specifications may be seen and forms of tender obtained at the office of the City Engineer, Toronto, on and after the 2nd day of January.

A marked cheque payable to the order of the City Treasurer, for the sum of 2½ per cent. on 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 of Committee on Works.

Committee Rooms, Toronto, Jan. 18, 1895.

G. E. Steacy, contractor, Orillia, Ont., has made an assignment.

J. T. Davidson, contractor, Toronto, has assigned to J. Dickson.

CONTRACTS OPEN.

AMHERSTBURG, ONT.—A dock 450 feet in length will be built here.

NORWAY, ONT.—Ira Bates intends erecting a new residence in the spring.

EASTMAN'S SPRINGS, ONT.—Contracts will shortly be let for a new Catholic church here.

CENTREVILLE, N. B.—The Baptist congregation have sold their parsonage and contemplate erecting a new one at once.

STRATHROY, ONT.—The Ontario Government has purchased a lot on Oxford street and proposes erecting thereon a dairy school.

CORNWALL, ONT.—The Toronto Paper Co., of this place, are desirous of purchasing a quantity of pulp wood, to be delivered during the winter of 1895-96.

ALEXANDRIA, ONT.—The Dominion Government will at once proceed to expropriate the land on which it is proposed to erect the new reformatory.

VICTORIA, B. C.—The Methodists are offering their mission church and property on Herald street for sale, and propose building in another part of the city.

CARLETON PLACE, ONT.—A petition is in circulation here asking the Lanark County Council to proceed with the erection of the proposed House of Industry.

DURHAM, ONT.—George Russell, Town Clerk, invites tenders on behalf of the corporation, until the 5th of February, for the purchase of \$4,000 of debentures.

GRANBY, QUE.—The plans of the proposed system of sewerage for the village will be submitted to the Council at a meeting to be held on the 4th of February.

SHERBROOKE, QUE.—The new buildings to be erected by the Jenckes Machine Company will cost upwards of \$60,000, and will be built near the G. T. R. station.

MIDLAND, ONT.—George Chew intends erecting a new residence near his saw mill.—The Council propose erecting a new brick fire hall and Council chamber in the spring.

COLCHESTER SOUTH, ONT.—Brush & McLean propose erecting a new grist mill in Harrow in the spring, to be frame 48 x 36 feet, sheeted with galvanized sheet iron, and built on a 10-foot stone foundation.

CHISELHURST, ONT.—Tenders are invited by John Glenn, of this place, until the 1st of February, for the erection of a brick school house in School Section No. 7, Hibbert. Plans may be seen at Mr. Glenn's residence.

CORNWALL, ONT.—The County Council resolved at its last meeting to petition the Dominion and Provincial Governments to each grant the sum of \$3000 towards the construction of the Hoople Creek drainage works, which are estimated to cost \$7,000.

GUELPH, ONT.—Tenders are invited by John Newstead until noon on Friday next for the supply of 10 or 12 inch pine sidewalk plank, cedar scantling, tamarac or

rock elm crossing plank, nails and sewer pipe, required by the Board of Works during the year. All particulars may be obtained from the City Engineer, James Hutcheson.—Tenders are invited until to-day (Thursday) for the erection of five houses on Glasgow street for Ald. J. A. McHardy. Plans may be seen at the office of George R. Bruce, 39 Oxford street.

WINNIPEG, MAN.—Merrick, Anderson & Co. have had plans prepared by George Browne, architect, for a brick and frame warehouse, which they contemplate erecting on Market street east, in the spring.

J. C. Sproule, Chairman Committee on Works, invites tenders until the 14th of February for the supply of 2000 cords of cedar paving wood. Particulars may be had from the City Engineer, H. N. Ruttan.—The City Council is considering the repaving of Main street. The City Engineer estimates the cost of the different pavements as follows: cedar blocks, \$53,400; macadam, \$113,400; asphalt, \$138,600. No definite action has as yet been taken by the Council.

HAMILTON, ONT.—At a meeting of the Jail and Court House Committee of the City Council held on Friday last, it was resolved that the committee ask power from the City Council to procure plans for a new jail, and estimates of the cost of maintaining the same. Crerar, Crerar & Bankier, of this city, have made application to the Provincial Legislature for the necessary powers to build an electric railway, to be known as the Hamilton, Valley City and Waterloo Railway. The route of the road will be through the townships of Barton, Ancaster, West Flamboro' and Beverley, Wentworth county, to Waterloo, with a branch line from West Flamboro' or Beverley to Guelph. Plans are said to have been prepared for a passenger station for the Hamilton Radial Railway Company. The building is to be erected on Cannon, James and McNab streets, with a frontage on the first-named street of 440 feet. It will have a waiting room 50 x 150 feet, and will be built of Credit Valley brown stone.

OTTAWA, ONT.—The Department of Public Works is receiving tenders until the 1st of February for the construction of a pier at Hnasua, on the west side of Lake Winnipeg. Plans may be seen at the above department in this city and on application to C. H. West, at West Selkirk.—At a meeting of the County Council held last week, Deputy-Reeve Bocque, of Gloucester, moved that plans be prepared for a new bridge across the Rideau river, to replace the structure known as Hurdman's bridge. But the motion was withdrawn until an inspection of the old bridge had been made by the Roads and Bridges Committee.—The Ottawa and Porcelain Carbon Co. have purchased a block of land on the west side of Elgin street on which to erect their proposed factory. It will be 200 by 150 feet, and three stories high.—The City Council has given notice that a by-law has been passed providing for the issue of debentures to the amount

of \$50,000 for the construction of a main sewer for the drainage of Dalhousie ward.

According to surveys recently made by the Department of Railways and Canals of the Peterboro and Lakefield division of the Trent Valley canal, it seems probable that the Otonabee river route, plans of which are now being prepared, will be adopted. Tenders for the proposed new route will be called for within the next few weeks.

MONTREAL, QUE.—The Methodists of Westmount, formerly Cote St. Antoine, have in contemplation the erection of a new church at the corner of Lansdowne and Western avenues. The building will cost from \$9,000 to \$12,000, and will accommodate about four or five hundred persons. Operations will be commenced early in March. The Bell Telephone Company have purchased a site for a new building at the corner of Notre Dame and St. John streets. The depth of the lot is 120 feet, with frontages of 35 feet on Notre Dame street, and 75 feet on Hospital street. The building to be erected thereon will be specially adapted to the requirements of the telephone business. It will probably be five or six stories in height, and will be made fire proof. It is understood that Mr. Edward Maxwell, of this city, will be the architect. The promoters of the Atlantic and Lake Superior Railway, amongst whom are Hon. Senator Thibaudeau, A. I. Gault, Dr. Berquin, M. P., and others are reported to have recently completed financial arrangements for the commencement of the work in the spring. The contract for the road between Longueuil and Levis is said to have already been awarded to Nicholas and Michael Armstrong, and an additional 20 miles, known as the Baie des Chaleurs section, will be put under contract early in March. The proposed bridge across the St. Lawrence for which plans and estimates are now invited, is to be built in connection with the undertaking. The bridge alone is estimated to cost \$6,000,000.

TORONTO, ONT.—The City Council has been requested to petition the Dominion Government to grant a bonus of \$3,200 per mile for the extension of the Toronto, Hamilton and Buffalo railway to Toronto.

Tenders are invited until tomorrow (Friday) for carpentering, painting, plumbing, plastering and hot water heating of a detached house. Plans may be seen at the office of C. Booth, architect, 226 Davenport road.—Preparations are being made for the reconstruction of the buildings on Melinda and Jordan streets destroyed by the recent fire. Jas. W. Woods, owner of the Osquoddy building, is having the old walls torn down and will erect a building of the same size as the one destroyed, at a cost of \$40,000. Work will be commenced about the 1st of March. Mr. L. B. Jarvis, architect, has already commenced to restore the McKinnon building, which will be erected from the same plans. The cost will be about \$60,000. The building occupied by Harry Webb is owned by Alex. Manning, who

intends to rebuild as soon as possible. The interior of this building was gutted, but the walls are still standing, and reconstruction will be comparatively light. Nothing has as yet been decided on regarding the Globe building.—Messrs Post & Holmes, architects, are preparing plans and specifications for enlargement of R. C. church at Walkerton, Ont.—Building permits have been granted as follows: W. Stitt & Co., mansard roof and additions near 9 and 11 King st. e., cost \$3,000; Geo. Pears, additions to dwellings, 3, 5 and 7 Caer Howell st., cost \$3,000.

FIRES.

The store and dwelling of G. J. Manning at Lefroy, Ont., was burned on the 27th inst.—James Bell's brewery at Portage la Prairie, Man., was destroyed by fire last week. Loss \$15,000; insurance, \$6,300.—Mr. Palmer's hot house at Corleyville, Ont., was burned recently. Loss \$1,500.—The Bird block on Main street, Winnipeg, owned by J. A. McKeracher & Co., has been completely gutted by fire. The loss is about \$15,000 and the insurance \$8,000.—David Bell's residence at Leskard, Ont., was burned on the 23rd inst., loss, partially covered by insurance. The workshops and engine house connected with Anderson & Nugent's furniture establishment at Lindsay, Ont., were last week completely destroyed by fire. Loss \$4,000. Building and machinery insured for \$1,300.—The Hudson Bay Co's store and Stewart's hotel at Manitou, Man., have been burned. Loss, \$20,000.—The Disciples' church at Aylmer, Ont., was destroyed by fire a few days ago. Loss, \$1,500; insurance, \$700.—The Mechanics' Institute building on St James street, Montreal, was almost totally destroyed by fire on Monday last. It was owned by the Mechanics' Institute, had recently been enlarged, and was valued at \$100,000. The loss is said to be covered by insurance.—The flouring mills of Joseph Pratt, at York Mills, Ont., were consumed by fire recently. No insurance.

CONTRACTS AWARDED.

TORONTO, ONT.—The contract for elevators for the new Union railway depot has been awarded to the Fensom Elevator Works, of this city.

LONDON, ONT.—The tender of Osler & Hammond, of Toronto, for the purchase of \$50,000 of waterworks debentures, has been accepted by the City Council.

BELLEVILLE, ONT.—Mr. Walter Alford, contractor for the new St. Andrew's church, has awarded to Mr. John Quinlan, of Montreal, the contract for the cut stone work on the building.

MONTREAL, QUE.—Mr. Chas. Bernier, architect, has awarded contracts for two three storey stores and dwellings for Mr. P. King as follows: masonry, Surocher & Parent; other trades, Kelly Bros.

BIDS.

TORONTO, ONT.—On Saturday last the Fire and Light Committee opened tenders for the supply of two steam fire engines. The following were the bids received: American Fire Engine Co., of Seneca Falls, N. Y.—capacity 1200 U. S. gallons per minute, \$5,800 for one, or two for \$11,500; J. D. Ronald, Brussels, Ont.—1000 Imperial gallon engine, weight 6850 pounds, \$5,000, or two for \$9,500; a 1200 Imperial gallon engine, \$6,000, or two for \$11,500; Merryweather Company, Greenwich, Eng., 3780 U. S. gallon engine, \$5,400, weight 2450 pounds; 960 U. S. gallons, weight 4700 pounds, \$6,000; 1200 gallon engine, weight 5550 pounds, \$7,000; 1680 U. S. gallon engine, weight 6,700 pounds, \$8,400; La France Fire Engine Co, Elmira, N. Y.—1000 U. S. gallon engine, weight 8,800 pounds, \$5,265, or two for \$10,530; Manchester Locomotive Works, New Hampshire,—900 U. S. gallon engine, weight 8000 pounds, \$6,220; 1100 gallon engine, weight 9,000 pounds, \$6,990, or two at \$6,550 each. The committee decided to refer the tenders to experts for a report.

MUNICIPAL DEPARTMENT.

BEST METHODS OF BRIDGE INSPECTION.*

In my opinion the best method of bridge inspection is as follows:

PIN-CONNECTED SPANS.

1. Look over pins and see that they are not bent and fit perfectly
2. See that all connecting members also fit perfectly.
3. See that all rivets at all connections and inter sections are tight and not corroded, and at all other points where they are used as well.
4. Examine turnbuckle connections on counter- rods, for when not properly adjusted they are liable to strip.
5. Inspect painting.
6. Examine iron for defects
7. Inspect ties and rail fastenings.
8. Examine masonry or substructure, especially for some time after it is built to see if there is any undue settling

RIVETED SPANS.

1. Inspect rivets at all connections and the inter sections. As a usual thing loose rivets show a stain of rust.
2. Examine iron for defects
3. Inspect painting.
4. Examine ties and rail fastenings
5. Examine masonry or substructure.

PLATE GIRDERS.

1. Inspect rivets at lateral and brace connections.
2. Examine iron for defects.
3. Inspect painting.
4. Examine ties and rail fastenings.
6. Examine masonry or substructure.

HOWE TRUSS SPANS

1. Examine camber.
2. See if the top and bottom chords are in line.
3. Take off the nuts on top and bottom main roads, and see whether the threads fit the rods perfectly. I once saw a bridge that broke down on account of the thread in the nut stripping, the nut being too loose. I would however only advise this done once, and that just after completion.
4. See that the main rod have the proper tension.
5. See that all main and counter braces are in position.
6. Inspect timbers for defects.
7. Examine rail connections.
8. Examine masonry or substructure.

FRAME BENTS AND TRETTLES

1. Inspect ties and rail fastenings.
2. Inspect stringers and see that they have a fair bearing, observe knots, checks, and decays.
3. Examine caps for breaks and decays; also note bearing of caps on piling.
4. Examine frame bents closely—posts usually give way at the bottom.
5. Examine the sills.
6. When inspecting piles I dig the dirt away from around the piles for about 18 or 20 inches in depth, and if sap-rotted I move all decayed parts

*A paper by G. J. Bishop, General Foreman of Bridges and Buildings, Chicago, Rock Island, and Pacific Railway lines west of Missouri River, read before the Association of Railroad Superintendents of Bridges and Buildings, Kansas City, Mo., Oct., 1894

so that I can see at a glance how much sound timber remains.

7. Inspect superstructure for straw, grass, leaves and other matter carried there by birds for nests, which largely increases danger by fire.

8. In inspecting the trestles and pile bents, I have a fieldbook in which I make a sketch of each bridge, and marked each defective part, and when a certain percentage of defective parts are not safe I mark the structure for rebuilding. I mark all the members of the bridge or trestle that have been inspected, and have to be replaced, in less than six months with a certain mark that indicates the fact; less than one year with another mark; over one year and less than 18 months with still another mark which indicates the fact.

After pile or trestle bridges have been built four or five years, the timbers begin to decay and require constant watching and repairs in order to make them last the required time (seven to eleven years). The life of a bridge depends largely upon the location and traffic. Bridges on the eastern part of lines west of the Missouri River, where the physical features of the country are comparatively low and wet and traffic is heavy, have to be rebuilt from one to four years sooner than those near the mountains where the altitude is higher. In inspecting rivets I use a light hammer, for timbers, a small octagonal steel bar five-eighths inch diameter, 4 feet long, one end sharpened to a point, the other made like a punch bar. At members I sometimes bore with a half-inch bit.

My division is divided into six districts ranging from 140 to 220 miles in length, with a division foreman on each division, who is held responsible for the good condition of bridges and structures. The bridges are inspected by the foreman each month while he is working over his district with his men, and if not able to get over the entire district, he takes a velocipede car and runs over such parts as he has been unable to work over. It generally takes him from five to eight days, and I do not consider it economy for any road to have the foreman away from his gang that length of time, and would recommend a bridge inspector for all divisions over 500 miles long, especially where in that distance he may have 45,000 feet of trestle structure, as is the fact in my territory. A foreman in my opinion, should be with his gang and see that the work is properly done. In case he is away, and there should be a burnout, washout or derailment, where repairs must be made quickly, he may be 150 miles away, and considerable time would be lost on account of men not having the experience, and not being properly governed to make the necessary repairs.

I make it a point, if possible, to be at all accidents or blockades. Once each year I inspect about one half of the bridges and structures on my division, and for those that are to be rebuilt I make a complete bill of material of each bridge showing length of piles and height of frame bents required. I number each bent in each bridge, commencing at the east end, 1, 2, 3, etc. I take the foreman and three men with me on a hand-car and give each bridge a very thorough inspection and decide what repairs are necessary for the year or immediate present, and then give my views on the work: also as to the best method to economically perform it. Our present mode of inspection costs about 9 cents per mile or 1 mill per lineal foot of bridge per month. In my opinion, particular care should be observed in inspection and maintenance of all structures in order to secure safety without regard to the practice of fictitious economy.

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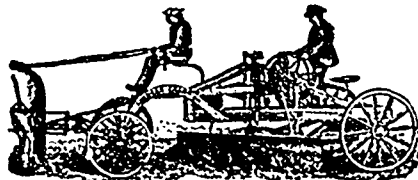
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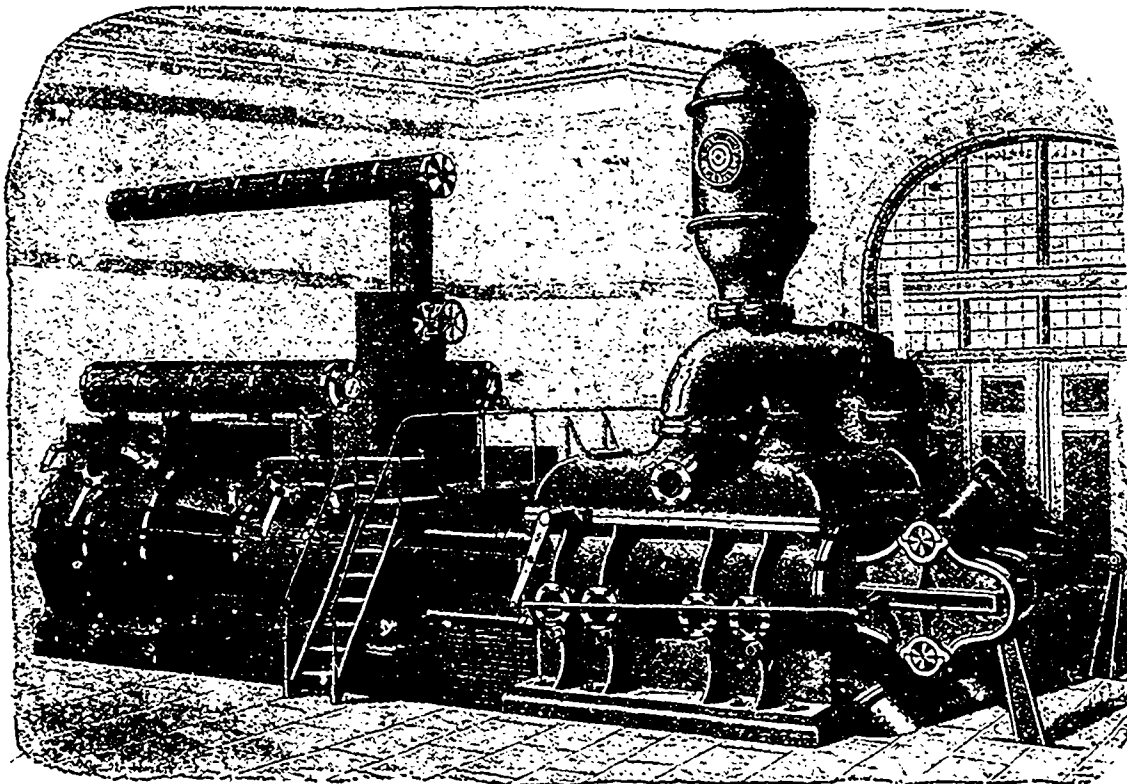
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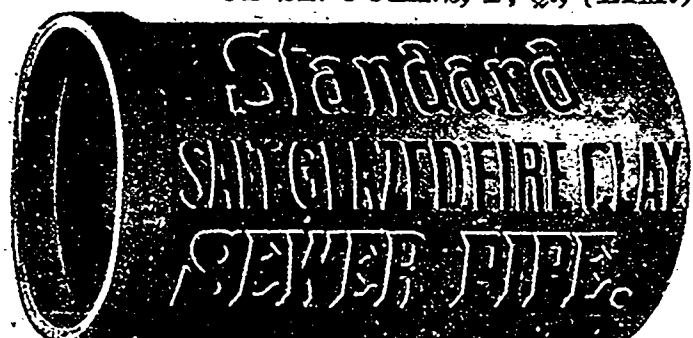
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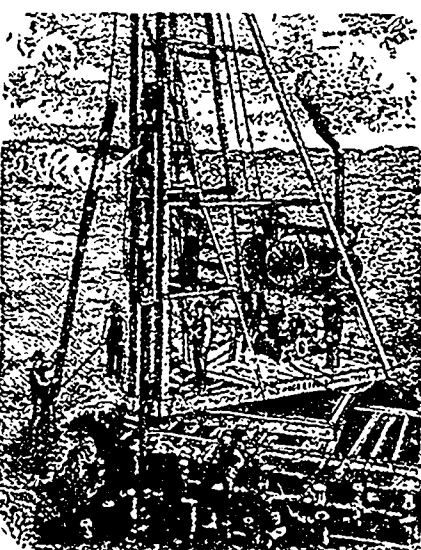
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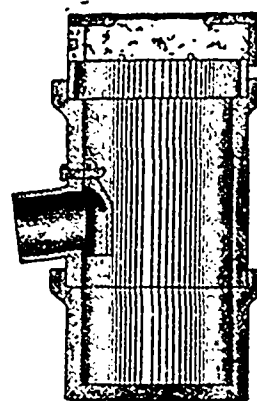
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Prices of Building Materials.

Table with columns for LUMBER (CAR OR CARGO LOTS) and TORONTO, MONTREAL prices for various wood types like clear picks, pickings, and shingles.

Table with columns for VAID QUOTATIONS and TORONTO, MONTREAL prices for mill cull boards, shipping cull boards, hemlock scantling, and various types of planks.

Table with columns for TORONTO, MONTREAL prices for flooring (F.M. and B.M.), dressed and undressed, and various types of shingles.

Table with columns for BRICK - M prices for Common Walling, Good Facing, and Sewer.

Table with columns for Pressed Brick, Per M prices for Red, Buff, Roman, and Ridge tiles.

Table with columns for SAND prices for Per Load and Stone.

Table with columns for STONE prices for Common Rubble, Large flat Rubble, Foundation Blocks, and various types of granite and marble.

Table with columns for SLATE prices for Roofing and Ornamental Black Slate Roofing.

Table with columns for PAINTS (In oil, per lb.) prices for White lead, Zinc, Red lead, and various colors.

Table with columns for PAINTS (In oil, per lb.) prices for Yellow ochre, Yellow chrome, Green chrome, and various types of putty.

Table with columns for TORONTO, MONTREAL prices for Paris white, Litharge, Sienna, and Umber.

Table with columns for CEMENT, LIME, etc. prices for Portland, German, London, and various types of lime.

Table with columns for HARDWARE prices for Cut nails, Steel, and various types of nails.

Table with columns for CASING AND BOX, FLOORING, SHOOK AND TOBACCO BOX NAILS prices for various sizes and types.

Table with columns for FINISHING NAILS prices for various sizes and types.

Table with columns for SLATING NAILS prices for various sizes and types.

Table with columns for COMMON BARREL NAILS prices for various sizes and types.

Table with columns for CLINCH NAILS prices for various sizes and types.

Table with columns for SHARP AND FLAT PRESSED NAILS prices for various sizes and types.

Table with columns for STEEL WIRE NAILS prices for various sizes and types.

Table with columns for Iron Pipe, Lead Pipe, Galvanized Iron, and Structural Iron prices for various sizes and types.