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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. JULY 16, 1896 No. 24.



## THE CANADIAN CONTRACT RECORD,

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## CONTRACTS OPEN.

LISTOWEL, ONT.—David Sanderson will erect a new residence.

ELORA, ONT.—J. Mundell & Co. will rebuild their furniture factory.

KASLO, B. C.—A system of waterworks will be constructed, at a cost of $30,000.

SARNIA, ONT.—James King has decided to rebuild his flour mill recently burned.

PERTH, ONT.—John A. McLaren is replacing his store with a three-storey stone edifice.

COLLINGWOOD, ONT.—The construction of several cement walks has been petitioned for.

DESERONTO, ONT.—Wm. Saunders will build a brick residence, 21x26 feet, with kitchen 14x15 feet.

HARROW, ONT. Mr. Straith, of Windsor, will probably rebuild on his lot opposite Clark & Bell's store.

CRYSTAL CITY, MAN.—It is reported that Premier Greenway is preparing to erect a large residence here.

HUNTSVILLE, ONT.—Wm. Proudfoot is preparing plans for a young ladies academy to be erected here.

GRIMSBY, ONT.—Marshall Hopkins, C. E., of Hamilton, will report on a system of waterworks for this village.

THREE RIVERS, QUE.—The St. Maurice Tool and Axle Works Co. will erect offices, sample and warerooms.

WOODSTOCK, ONT.—The Dominion Cold Storage Co. propose erecting a warehouse here, to cost $70,000.

GANANOQUE, ONT.—The Board of Management of Grace Church are inviting tenders for enlarging the building.

ST. MARYS, ONT.—Mr. Moore, C. E., of London, is preparing plans for the proposed waterworks system for this town.

GUELPH, ONT.—G. R. Bruce, architect, will receive tenders until the 20th inst. for the brick and stone, carpenter, painting, plumbing, tinsmithing and plastering

work required in the erection of a residence for Robert Strachan, on Waterloo avenue.

STURGEON FALLS, ONT.—The question of securing a system of waterworks and electric light is under consideration.

UXBRIDGE, ONT.—J. J. Gould will probably make an offer to the town for the construction of a system of waterworks.

TILBURY, ONT.—J. R. Palmer will build a brick addition to his bakery, and Henry Wilson will probably construct a brick block.

SWEETSBURG, QUE.—It is stated that the Stadacona Water Works Co. will take steps at once to construct a waterworks system for this village.

BERLIN, ONT.—The English Baptist church congregation, lately organized here, has purchased a site on which to erect a new church.—The sum of $2,000 has been subscribed for a new orphanage.

GRAND FALLS, N. B.—The Grand Falls Water Power Co. have taken steps to develop the water power here. Mr. C. Le B. Miles, the company's resident engineer, is making a survey of the route of the proposed canal.

VANCOUVER, B. C.—A by-law is to be submitted to the ratepayers exempting the B. C. Iron Works from taxes for a term of years, as an inducement to the company to extend their works by an expenditure of $250,000.

FORT WILLIAM, ONT.—J. G. King has purchased a large lot, corner of Donald and Syndicate streets, and intends building thereon.—The congregation of St. Luke's English church purpose building an addition of forty feet.

HINTONBURG, ONT.—The ratepayers are moving in the direction of securing a high school building. Messrs. Andrew Holland, R. Bullman, R. Reid, J. L. McDougall, and D. Maclean have been appointed a committee to consider the question.

CHARLOTTETOWN, P. E. I.—J. W. Morrison, Secretary Public Works, will receive tenders until the 19th inst. for the construction of the proposed addition or annex to the hospital for the insane, Falconwood. Plans may be seen at the office of C. B. Chapelle, architect, of this city.

ST. CATHARINES, ONT.—Vaughan Roberts, C. E., is making surveys and preparing plans and profiles for the construction and development of the power of the Welland Power and Supply Canal Co.'s canal from the Welland river to Lake Ontario.—The question of rebuilding the opera house is still under consideration.

MONTREAL, QUE.—E. Mann, architect, is preparing plans for two houses at Westmount.—W. E. Doran, architect, is calling for tenders for alterations of a house on St. Dominique street for Mde. J. P. Cuddy.—P. W. St. George, City Surveyor, will receive tenders until Wednesday, the 29th inst., for the construction of a sewer on Drolet street, from the end of the existing sewer to Duplaix street.

OTTAWA, ONT.—A. Bailey, architect, has taken out a permit for a brick terrace, north side of Gilmour street, to cost $8,000.—The Board of the Collegiate Institute have under consideration the erection of an addition to the building.—The Hull & Aylmer Electric Railway Co. will build a large trestle down the centre of Albert street, at Hull, to the ferry landing. In addition to this there will be erected a double elevator to carry passengers up to the grade of the street, with a similar one at the foot of the lot.

VICTORIA, B. C.—T. C. Sorby has drawn the attention of the council to a plan for deepening the inner harbor and reclaiming its marginal lands. His plan is to close the harbor temporarily with dams, pump out the water, and excavate to a depth of 30 feet. He has suggested that the work be undertaken by a harbor board, and estimates the cost of construction at $2,500,000.—The City Council will ask aid from the local government towards building a steel and stone bridge across the arm from Telegraph street to the Indian reserve.

ST. JOHN, N. B.—There will be offered for sale by public auction at Chubb's Corner, on Tuesday, the 18th of August, the outstanding bonds of the Central Railway Co., of New Brunswick, amounting to $680,000.—The City Council will request the local government to dredge the harbor here.—The C. P. R. have presented the following estimate of cost of improvements to be carried out at Carleton, to provide berths for steamers: two warehouses, 70x320 feet, $11,515; wharf, $30,564; dredging, 63,000 cubic yards, $18,900; dredging, 85,000 cubic yards, $42,500; tracks, $21,000; cattle yards, $2,590. A committee has been appointed by the City Council to confer with the C. P. R. in connection therewith.

HAMILTON, ONT.—E. B. Patterson, architect, is preparing plans for a house on East ave. to cost $2,500. He has also under erection a double house on Hess street for S. C. Cochrane, to cost $1,900, and a stable for J. Benns, Cannon street, to cost $700.—New boilers will in all probability be placed in the city hospital, at a cost of $2,500. Mayor Tuckett and Messrs. Roach and Billings have the matter in hand.—The Finance Committee of the City Council have recommended the release of the bonds of the Hamilton, Grimsby and Beamsville Railway held as security for the continued operation of the road. Should the bonds be released, the company will be enabled to proceed with the extension of its line to Beamsville.—W. A. Edwards has taken out a permit for a brick stable on Hannah street west, to cost $1,800.—R. Clohecy, architect, has taken out a permit for a two-storey brick dwelling at the corner of Gore and John streets, to cost $1,500.

LONDON, ONT.—Arrangements have been concluded between the City Council and the Dominion Cold Storage Co., of Montreal, by which the latter will erect a warehouse in this city, to cost $125,000. The representative of the company is Mr. T. H. Rothwell.—Notice has been given by the City Clerk that it is the intention to construct an asphalt pavement on Wolfe street, between Wellington and Waterloo streets, at a cost of $4,592, and an artificial stone walk on west side of Talbot street, at a cost of $555.—A macadam roadway will be constructed on Dufferin avenue, between Wellington and Waterloo streets, at a cost of $1,576.—Tenders will be invited for improvements to Colborne street school, to cost $1,500. Herbert Matthews, architect.—Mr. H. Goodnough, sanitary engineer of Boston, will likely present his report this week on the proposed sewage system for this city. It is understood he will recommend a sewage farm on the low lands adjacent to the river, two miles below the city. The cost will probably be $150,000.

WINNIPEG, MAN.—The government purpose making alterations in St. Paul's industrial school. D. Smith, clerk of works, will have charge.—The Martin, Bole, Wynne Co. have decided on the erection of a large block, corner McDermott and King streets. The plans for the building have been prepared by Hugh McGowan, architect, and the estimated cost is about $25,000. It will be 33x91 feet, five stories and basement, solid brick on stone foundation. The first storey on King and McDermott will be faced with Selkirk stone, floors of cement. It will contain fire proof vaults, hot water heating, electric elevator, with offices in front. The same architect has prepared plans for a $7,500 hotel for Mr. J. A. Herron, of Cypress River, and a four room school in the same place, two stories, to cost $3,000.—Tenders are invited for the construction of sewers.—John A. McDonell, chief engineer of the local government, has recently returned from Brandon, where he located two new bridges over the Saskatchewan river in the vicinity of the town.

QUEBEC, QUE.—The question of the grant by the City Council of the land at Palais market for the erection of a church is still under consideration.—The Banque Nationale have decided to build a branch office at St. Francis de Beauce. Messrs. Tanguay & Vallee, architects, are preparing the plans.—The tenders for the Jeffery Hale hospital have been opened, but nothing has as yet been decided upon.—It is the intention of St. Donate Parish to build a new church at Rimouski. The plans will be prepared by David Ouellet, architect.—H. Staveley, architect, has been engaged by the authorities of the Anglican church to prepare plans for a small church on Harrington Bay, on the coast of Labrador. The same architect is also preparing plans for exterior alterations to the house of L. G. Baillairgé, St. Louis street, Quebec.—Building permits have been granted as follows: One ice house, brick, for Th. Dalmy. Contractor, M. A. Fackney, reparations of a house on Dominoque street for Mr. Gingras. Contractor, L. Magnan.—Mr. Baillairge, City Engineer, has prepared plans for the construction of the bridges over the St. Charles, connecting the Parent Park with St. Roch and St. Sauveur, and the consent of the government is now waited for. Work will be commenced in September.

TORONTO, ONT.—A Court of Revision will be held at the city hall on the 29th inst., for the hearing of appeals against the assessments for the following proposed improvements: Asphalt roadway on Brunswick avenue, from College street to Ulster street, cost $10,300; macadam roadway on Blevins place, from Sumach street to east end, cost $575.—The directors of the Industrial Exhibition Association have decided to apply to the Canada Life Association, which holds the mortgage on the property, to rebuild the one stable that was partially destroyed by fire, and apply the balance of the insurance money to repairing the machinery hall, the stove hall and other buildings.—The City Engineer is preparing specifications for the Queen street subway, and tenders for the work will be invited at an early date.—A syndicate, it is said, is being formed to convert Guinane Bros.' store on Yonge street, and an adjacent building, into a departmental store.—R. J. Fleming, chairman of the Board of Control, will receive tenders until noon on Thursday, the 23rd inst., for the following works: Supply of a number of garden seats for the parks and squares of the city; erection of fences in Queen's park and Riverdale park; painting the interior of the pavilion, (Horticultural gardens). Specifications may be seen at the office of the Park Commissioner, St. Lawrence Hall.—A building permit has been granted to Burke & Horwood, architects, for alterations to old drill hall for the Dominion Cold Storage Co., cost $7,000; also to the same architects for the erection of a building on Exhibition Park for the W. C. T. T. Union.

## FIRES.

The residence of E. E. Dodds, Hampton, Ont., was destroyed by fire on the 10th inst. Loss, $4,000; insurance, $2,000.—Francois Marquis' house at Seven Islands, Que., has been destroyed by fire.—The basket factory of Millen & Pyott, at Stoney Creek, Ont., was burned last week. The loss is estimated at $5,000, partly covered by insurance. The firm

will rebuild.—A brick residence about two miles from Simcoe, Ont., owned by H. Shuyler, was burned on the 9th inst. Insurance $1,000.—The cooper shop of Hamilton Ramsey, London West, Ont., has been destroyed by fire. Loss $1,200. —A double frame tenement house at Hastings, Ont., owned by Andrew L. Nelson, of Otonabee, was partially destroyed by fire last week. Loss covered by insurance.—The Zurich woollen mill at Zurich, Ont., owned by Johnson Bros., has been burned. Loss, $10,000; no insurance.—Wm. Phelps' brick dwelling in Thurlow, Ont., was burned on the 14th inst. Loss $2,500.—The works of the Canadian Bridge & Iron Company, Montreal, were destroyed by fire on Tuesday last. Loss, $7,000.

## CONTRACTS AWARDED.

OTTAWA, ONT.—Odell Bros. are supplying the brick for a row of stores to be built on Sparks street.

MONCTON, N. B.—The contract for the new station here has been awarded to Rhodes, Curry & Co., of Amherst, N. S.

LUNENBURG, N. S.—Frank Powers, plumber and mechanical engineer, has obtained a $15,000 contract in Victoria, B. C.

STRATFORD, ONT.—The tender of H. O'Hara & Co., of Toronto, has been accepted for $8,000 of debentures. Price $8,221.

LONDON, ONT.—The Rogers Electric Co. have been awarded the contract for wiring the new House of Refuge at Sarnia.

GUELPH, ONT.—The contract for an electrical fire alarm system has been awarded to the Bell Telephone Co., of Montreal.

ST. BENOIT, QUE.—J. L. Fateaux has been given the contract for building an addition 45x56 feet, to St. Mary's convent at Vanleek Hill.

BURK'S FALLS, ONT.—Knight Bros., of this place, have the contract of supplying the Gravenhurst sanitorium with kiln dried birch flooring and sheeting.

WEST BAY, N. S.—The tender of the Bras d'Or Marble Co. has been accepted for supplying marble for Mr. Wright's new building, corner Prince and Barrington streets, Halifax.

BROCKVILLE, ONT.—James Taylor has the contract for a three-storey boat-house for. Geo. T. Fulford.—Messrs. Brown & Semple have been awarded the contract for the plumbing and heating at the new James street school.

HAMILTON, ONT.—Contracts for sewers have been let as follows: D. Newlands, Alanson street, 40 cents per foot; E. C. Murton, Peter street, 23 cents; Nelson street, 27 cents; William Spence, Macauley street, 35 cents; York street, 76 cents.

ST. THOMAS, ONT.—Neil Darrach, architect, of this city, has awarded the contracts as below for the erection of a Presbyterian manse at Belmont, to cost $2,500: Carpentry, George Garrow; masonry, Mark Bowey; plastering, S. Peters.

TRURO, N. S.—The Merchants' Bank of Halifax has awarded the contract for erecting their branch building here, the plans for which were prepared by Elliott & Hopson, to James Reid, of Dorchester, N. B. The first story of the building will be of red sandstone and the upper stories of buff brick and terra cotta.

CHARLOTTETOWN, P. E. I.—Benjamin Rogers is erecting a large building on Gratton street, to be used for warehouse purposes. It will be 120x40 feet, three storeys, built of brick and stone. The architects are Lowe Bros. and the contractors for the brick work Jenkins & Gormley.

WINNIPEG, MAN. — Ex.-Alderman Wyatt has let the contract for his new block on Main street to P. Burnett, at a price about $20,000. It will be built of white brick and native stone, 120 feet frontage, three storeys high, with basement.—M. Bull, manager of the Royal Soap Company, has let the contract to excavate a cellar and place a stone foundation under the Royal Crown factory on King street, to Philip Burnett, the price being in the neighborhood of $3,500.

MONTREAL, QUE.—M. V. Lacombe, architect, has awarded the contract for reparations of a house on St. Catharine street for C. A. Bisset, to Alfred Delorme. —*L. R. Montbriant, architect, has in* charge the erection of three houses on Beaudry street, one stable and one ice house for Edm. Morin, the whole to be done by day labor.—C. E. Fournier, architect, has let contracts as below for one three-storey building for M. C. Field: Masonry, Nap. Guilbault; carpenter and joiners' work, Severe Beaudoin; roofing, Montreal Roofing Co.; plumbing, Carson & Galarneau; brick, Narcisse Major; plastering, Alderic Beauchamp; painting and glazing, Bolduc & Landry; iron work not let.—The Lachine Rapids Hydraulic Co. have awarded the following contracts: Power and dynamo houses—stone, Wm. Davis & Sons; wood, James Shearer & Co.; brick, Eamos Cowen; painting, L. Z. Mathieu; steel work, Dominion Bridge Co.; roofing not let. Crib and dam work—Wm. Davis & Sons, contractors. The contract for 10,000 barrels of cement will be let this week.

## BUSINESS NOTES.

Forde & Casey, builders, Montreal, have dissolved partnership.

C. Lafontaine & Frere, contractors, Montreal, have formed new co-partnership.

George Howe, paints, Ottawa, who assigned recently, is offering 23 cents on the dollar, secured, payable in four and eight months. His liabilities are $10,000.

## CHIMNEY BUILDING.

*All who sell heating and cooking* apparatus have more or less trouble from bad chimneys, due not so much to poor workmanship as to improper shape. Some chimney builders hold the opinion that if the area of the flue is sufficient the form is of small importance. A little consideration, however, will discover the fallacy of this statement. It is not open to question that air when heated rises with a curling spiral movement. Consequently, the flue best adapted in shape for conveying it in its natural state or mingled with smoke or gases would be a round flue, says a writer in the Metal Worker. The conclusion of many students of the subject is that the smallest dimension of a flue, rather than its cross area, gives the correct basis for calculating its capacity. They agree that a square flue has practically no advantage over a round flue of the same diameter. Though a 9 x 9 inch square flue has an area of 81 inches, a 9 inch round flue with an area of but 63 inches is considered to be more desirable where a good draft is needed In some cases, in order to avoid a breast in a building, a chimney 4 x 20 *inches has been built, with the idea that* the area gives the required capacity, while in fact such a flue is very discouraging in operation. The diameter of the largest circle that could be inscribed in it would only be four inches, and the working capacity of such a flue would not greatly exceed in effect the work of a 4 inch round flue. Friction is a very prominent factor that must be considered, and a 4 x 20 inch flue would present a surface of 48 inches against 36 inches for a 9 x 9 inch flue and 28¼ inches for a 9 inch round flue. The excessive friction surface of the oblong flue will be readily understood to be a serious drawback when it is considered that a 9 inch round flue is about equal in working capacity to a 9 inch square flue, though the latter has a greater area. Another factor which is said by some to be important is the depth to which the friction affects the current. They say it influences the current through a *layer of at least ½ inch on each side,* leaving only 8 inches of the current in a 9 inch flue unaffected by friction. It thus reduces a 9 x 9 inch flue to 8 x 8 inches and a 4 x 20 inch flue to 3 x 19 inches, showing that the oblong suffers severely in the application of this method of calculation. Those who have not followed this course of reasoning to discover the cause of dissatisfaction with oblong flues can recall instances in their experience which will corroborate the conclusions. They will know that a heating apparatus of ample capacity has been condemned as inadequate, because the chimney could not develop its full power even when an excessive quantity of fuel was run through *it in the attempt. With such information,* a heating contractor should not allow the owner of a building in course of construction to become the victim of a bad flue through the ignorance of the builder or through a desire to avoid the obstruction of a breast. The chimney must have diameter rather than area to have working capacity.

## SOLDERING.

A list of thirty-two kinds of solder has recently been compiled as follows. 1. Plumber's solder, lead two parts, tin one part. 2. Tinman's solder, lead one part, tin one part. 3. Zinc solder, tin one part, lead one to two parts. 4. Pewter solder, lead one part, bismuth one to two parts. 5. Spelter solder, equal parts of copper and zinc. 6. Pewterer's soft solder, bismuth two, lead four, tin three parts. 7. Another, bismuth one, lead one, tin two parts. 8. Another pewter solder, tin two parts, lead one part. 9. Glazier's solder, tin three parts, lead one part. 10. Solder for copper, copper ten parts, zinc nine parts. 11. Yellow solder for brass or copper, copper 32lb., zinc 29lb., tin 11lb. 12. Brass solder, copper 61.25 parts, zinc 38.75 parts. 13 Brass solder, yellow and easily fusible, copper forty-five parts, zinc fifty-five parts. 14. Brass solder, white copper 57.41 parts, tin 14.60 parts, zinc 27.99 parts. 15. Another solder for copper, tin two parts, lead one part. When the copper is thick, heat it by a naked fire, if thin, use a tinned copper tool. Use muriate or chloride of zinc as a flux. The same solder will do for iron, cast iron, or steel. If the pieces are thick, heat by a naked fire or immerse in the solder. 16. Black solder, copper two, zinc three, tin two parts. 17. Another, sheet brass 20 lb., tin 6lb., zinc 1lb. 18. Cold brazing for fire or lamp, fluoric acid 1oz., cxymuriatic acid 1oz., mix in a lead bottle. Put a chalk mark on each side of where you want to braze. This mixture will keep about six months in one bottle. 19. Cold soldering without fire or lamp, bismuth ¼oz., quicksilver ¼oz., block-tin filings 1oz., spirit salt 1oz., all mixed together. 20. To solder iron or steel to brass, tin three parts, copper thirty-nine and a half parts, zinc seven and a half parts. When applied in a molten state it will firmly unite the metals first named to each other. 21. Plumber's solder, bismuth one, lead five, tin three parts. 22. White solder for raised brittania ware, tin 100lb., hardening 8lb.. antimony 8lb. 23. Hardening for brittania, to be mixed separately from the other ingredients, copper 2lb., tin 1lb. 24. Best soft solder for cast brittania ware, tin 8lb., lead 5lb. 25. Bismuth solder, tin one, lead three, bismuth three parts. 26. Solder for brass that will stand hammering, brass 48.26 parts, zinc 17.41 parts, silver 4.33 parts, add a little chloride of potasium to the borax for a flux. 27. Solder for steel joints, silver nineteen parts, copper one part, brass two parts, melt all together. 28. Hard solder, copper two parts, zinc one part, melt together. 29. Solder for brass, copper three parts, zinc one part, with borax. 30. Solder for copper, brass six parts, zinc one part, tin one part, melt all together well, and pour out to cool 31. Solder for platina, gold with borax. 32. Solder for iron. The best solder for iron is good tough brass with little borax. In soldering, the surfaces to be joined are made perfectly smooth and clean, and then covered with sal ammoniac, resin, or other flux; the solder is then applied, being melted on and smoothed over by a tin soldering iron. In soldering fluid take 2oz. of muriatic acid, add zinc until bubbles cease to rise, and add half-teaspoonful of sal-ammoniac.

## DEFINITION OF "PARTY WALL."

Builders will be interested in a point of law relating to the definition of a "party wall" which recently came up for argument in the English courts. A firm of storekeepers were summoned to appear in court on the charge of having violated the London building law by piercing openings in a party wall, the section of the law bearing on the case reading as follows: "Every party wall shall be carried up of a thickness in a building in the warehouse class equal to the thickness of such wall in the topmost storey above the roof flat or gutter of the highest building thereto to such a height as will give a distance of at least 3 feet measured at right angles to the slope of the roof." The wall in question divided one portion of the defendants, warehouse, one storey in height, from another portion, five stories in height. The defendants contended that only the portion of the wall to the height of the one-storey part of the warehouse could properly be classed as a party wall, and that above this height it should be classed as an exterior wall. The court sustained the defendants in this contention.

TO REMOVE PAINT OR VARNISH.—The following recipe for removing old paint or varnish is from the Beyerische Gewerbezeitung, a German publication: Two parts of ammonia are shaken up with one part of spirits of turpentine, forming a permanent emulsion, which is applied to the paint to be removed. In a few minutes, it is stated, the paint will be so softened that it can be scraped or rubbed away.

*MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS*

In his new general specifications for steel railroad bridges and viaducts, Mr. Theodore Cooper, the well known New York engineer, entirely abandons the use of wrought iron for railway superstructure. Another noticeable feature is the wide spans for which plate girders are specified, pin-connected trusses, on the other hand, being used only when the opening to be spanned exceeds 120 ft. Up to spans of 20 ft., Mr. Cooper provides for the use of rolled beams, from 20 ft. to 75 ft. for plate girders, from 75 ft. to 120 ft. for either plate girders or rivetted lattice girders, whilst from 120 ft. to 150 ft. either lattice girders or pin-connected trusses may be used, and beyond that the pin-connected trusses only. Timber flooring may, he specifies, be strained up to 1,000 lbs. per square inch. As for expansion rollers, the smallest size now allowed is 2⅞ in. in diameter, which is still small to British ideas, and the permissible working stress on such rollers is put at 300 D lb. per lineal inch where D is the diameter of the roller in inches.

# MUNICIPAL DEPARTMENT

## THE FINANCIAL MANAGEMENT OF WATER WORKS.*

At the annual convention of the Association in 1894 questions were asked in regard to the management of municipal water works as follows: First, are municipal water works systems self-supporting, or will the annual receipts meet the annual expenditures for maintenance, interest and depreciation? Second, are water rates sometimes lowered to a point that renders the works incapable of producing enough revenue to meet the expenditure? Third, is the bonded indebtedness expended for purpose other than those of legitimate construction? Fourth, should not extensions of pipe lines and laying of services and similar construction be classed as maintenance and be paid for from the yearly revenue as is the policy of private companies? Fifth, as an inference from the foregoing questions, are water works rates as high as they should be.

Barring those works which have adopted the form of statistics approved of by the Association, there seems to be no generally accepted system of financial management. Especial confusion seems to exist in regard to extensions of pipe lines and services. In some reports a part of the services are charged to maintenance and a part to construction, in one case 25 and 75 per cent. respectively. It has been claimed that as private companies make a practice of paying for ordinary extensions from current receipts, municipal works should do the same. Private companies differ from municipal ones in not setting aside a yearly sum for the depreciation of the plant or having the sinking fund.

A system adding to its construction account each year, but making no provision for paying the principal or for depreciation, will some day be loaded with debt and have a worn-out plant. This means insolvency or heavy taxes. This has led some to claim that all ordinary extension and construction should be classed as maintenance and paid for from current receipts, leaving only unusual expenditures to be met by an issue of bonds. This is unsatisfactory in leaving to arbitrary judgment the line between ordinary and unusual expenditures.

When a part of the revenues is set aside each year, that with accrued interest is amply sufficient at the end of the life of the works to renew them, all legitimate construction may be paid for by the issue of bonds, with the provision that for all such construction is provided a sum to cover its depreciation. This keeps the finances of the present and future in equilibrium, letting each do its share of the work, and bears no injustice if construction be not unwisely undertaken. This system will never place the works out of debt in the sense of paying all the bonds, but good business management does not require that if there are always assets in hand equal to the liabilities. This provision for depreciation should not be confounded with a sinking fund, although the provision for the latter usually provides for the former. A sinking fund provides a fund for the payment of the bonds in a certain limit of time. This period may or may not be identical with the life of the plant, but rarely extends beyond 30 years. Two per cent. of the cost set aside each year, with accrued interest at 3⅓ per cent. per annum, will meet the total cost in 30 years. Mr. Coffin believes 1½ per cent. paid each year with interest will amply cover depreciation. This percentage, with 3 per cent. interest, will equal the cost in 37 years; at 3½ per cent. interest in 35 years. A well-built plant, kept in fair repair, should have a life of at least 35 to 40 years. This percentage for depreciation, if correct, should be used in finding the total annual expenditure to be met from the revenues in running the works on a business basis. If the percentage for a sinking fund is used, and this sinking fund will equal the cost of the works in a shorter period than the average life of the plant, the difference is an asset of the system uncovered by liabilities and can well be paid by taxation if necessary. If 1½ per cent. is a fair estimate for depreciation and 2 per cent. is paid into the sinking fund, the value of this asset at the time the bonds are paid is one-fourth of their face or one-fourth the cost of the works. The above is not an argument against paying for extensions or other construction from current funds if possible. This latter practice, while desirable, is not necessary to sound business management or the solvency of the works, and it is doubtful whether it is good policy to increase water rates for that purpose.

Construction implies new work, something created, labor and material applied to the production of something that did not previously exist in that form or place. It would include all expenditures for increasing or improving the plant in order to secure new sources of revenue. Also all renewals of worn out or superseded parts of the plant. It would not include repairs, care, or minor improvements to existing structures. Under this head would come new pipe lines and services, new or additional water supplies, improvements of supplies such as filtration plants, cleaning mud from basins, draining swamps, new buildings, reservoirs and stand pipes, and renewals on account of deterioration or insufficiency.

Maintenance implies all expenses connected with operating and maintaining the works, keeping all parts of the same in good order and condition as far as can be done by repairs. Repairs would include the replacing of a minor part of a structure, but not the renewal of the whole; for instance, the renewal of a broken pipe, but not the relaying of a street line. It includes all expenditure necessary to maintain its revenues from present sources, but not for enlargements or additions to secure more revenue. Nor does it include the renewal of parts worn out or superseded provided for in the sum set aside for depreciation.

Among the items for maintenance should be placed salaries of permanent officials and employees, care and repairs of plant, and pumping expenses. These with the necessary amounts for interest and depreciation should constitute the total annual expenditures for operation, and should be met from the annual revenues and not by the sale of bonds.

Receipts for water from private parties being unquestionably part of the revenue, is the money paid by the municipality for water for public service and for fire protection a legitimate part of the revenue? If so, what relation to the whole expenditure does this item bear to be just to both consumer and taxpayer? A study in the increase in first cost of a water system chargeable to public and fire service shows that it may be said to average 75 per cent. For instance, the quantity and quality of the supply are not measurably affected, the pumping machinery is increased 100 per cent., pumping stations 33 per cent., pipe system 100 per cent., and reservoirs or standpipe 75 per cent. Similarly for maintenance the care and repairs of the pipe system are increased 100 per cent., pumping expenses 100 per cent., office expenses unaffected, and interest and depreciation about 75 per cent.; or an increase in the total annual expenditure of probably 50 to 75 per cent. This would make the additional expense due to fire protection from 23 to 43 per cent. of the total and should be paid by the taxpayer.

Viewing the subject from the standpoint of hydrant rental, as by private companies, the number of hydrants and the distance between them are important considerations, involving as they do the necessity of more or less hose when far apart. The present tendency is to put hydrants too far apart.

As a general rule a municipality could pay about 50 per cent. of the total annual expenditure as a return for fire protection without injustice to tax payers. A charge of $30 per year for a hydrant is suggested as a general basis, the number and spacing to be allowed consideration in particular cases. For other public purposes, such as water used in public buildings, fountains, street sprinkling, and sewer flushing, Mr. Coffin quotes Dexter Brackett's paper read before the American Society of Civil Engineers, in June, 1895, giving four or five gallons per capita as ample for these purposes. Mr. Coffin estimates that three gallons per capita might be allowed for all public purposes except fires, and this should be paid for at rates between 15 and 20 cents per 1,000 gallons. A system in which the receipts from the three sources of revenue—viz., private consumers, public purposes, and fire protection equals or exceeds the total annual expenditure, including interest on the cost and a proper sum for depreciation, is self supporting and run on business principles with no injustice to either taxpayer or consumer.

(To be Continued.)

* Abstract of a paper by Freeman C. Coffin, M. Am. Soc. C. E., read before the New England Water works Association at the annual convention at Lynn, Mass., June 1, 1896.

*ENGINEERS*

# INDEX TO ADVERTISEMENTS

In the "Canadian Architect and Builder."

# Prices of Building Materials.

CONDITION OF THE MARKET.

TORONTO: There can be no improvement reported in the demand for supplies on city account. Orders are coming in for some lines with a little freedom, but the situation shows no improvement. In cut nails there is a little more doing, while on galvanized iron an advance of 10 cents per 100 lbs. is announced. The demand for glass is light, and only for immediate wants. Paints and oils show more activity.

MONTREAL: Although no striking change has taken place, the condition of the building supply trade is more favorable. There is a moderate volume of orders being placed. Heavy metals remain unchanged, and advices from abroad report a marked firmness. The arrivals of cement for the past week were 1,850 barrels English, as against 5,950 English and 4,606 Belgian for the previous week, which makes a total to date of 31,870 English and 24,561 Belgian. The call is principally for small lots, but the tone of the market is steady and no cutting is indulged in.

## LUMBER.

CAR OR CARGO LOTS.

| | Toronto. $ | | Montreal. $ | |
|---|---|---|---|---|
| ¼ to 2 clear picks, Am ins | 33 00@36 00 | | 40 00@45 00 | |
| ¼ to 2 three uppers, Am ins. | 37 00 | | 40 00 | 45 00 |
| ¼ to 2, pickings, Am ins. | 26 00 | | 27 00 | 30 00 |
| inch clear | | | 40 00 | 45 00 |
| 1 x 10 and 12 dressing and better | 20 00 | 22 00 | 18 00 | 20 |
| 1 x 10 and 12 mill run | 16 00 | 17 00 | | 19 |
| 1 x 10 and 12 dressing | 20 00 | 22 00 | | 18 00 |
| 1 x 10 and 12 common | 13 00 | 14 00 | 8 00 | 10 00 |
| Spruce culls | 10 00 | 11 00 | 8 00 | 10 00 |
| 1 x 10 and 12 culls | 9 00 | 10 00 | | 9 00 |
| 1 inch clear and picks | 28 00 | 3200 | 35 00 | 40 00 |
| 1 inch dressing and better | 20 00 | 22 00 | 18 00 | 20 00 |
| 1 inch siding, mill run | 14 00 | 15 00 | 12 00 | 16 00 |
| 1 inch siding, common | 12 00 | 13 00 | 10 00 | 13 00 |
| 1 inch siding, ship culls | 11 00 | 12 00 | 10 00 | 11 00 |
| 1 inch siding, mill culls | 9 00 | 10 00 | 8 00 | 9 00 |
| Cull scantling | 8 00 | 9 00 | 8 00 | 9 00 |
| 1¼ and thicker cutting up plank | 24 00 | 26 00 | 22 00 | 25 00 |
| 1 inch strips, 4 in to 8 in. mill run | 14 00 | 15 00 | 14 00 | 15 00 |
| inch strips, common | 11 00 | 12 00 | 10 00 | 12 00 |
| 1¼ inch flooring | 16 00 | 17 00 | 12 00 | 15 00 |
| 1½ inch flooring | 16 00 | 17 00 | 12 00 | 15 00 |
| XXX shingles, sawn, per M 16 in | 2 30 | 2 40 | 2 60 | 2 60 |
| XX shingles, sawn | 1 40 | 1 50 | 1 60 | 1 70 |
| Lath | 2 00 | | | 1 50 |

YARD QUOTATIONS.

| | | | | |
|---|---|---|---|---|
| Mill cull boards and scantling | 10 00 | 10 00 | 12 00 | |
| Shipping cull boards, promiscuous widths | 13 00 | | 13 00 | |
| Shipping cull boards, stocks | 16 00 | | 16 00 | |
| Hemlock scantling and joist up to 16 ft | 11 00 | 12 00 | | 10 00 |
| Hemlock scantling and joist up to 18 ft | 12 00 | 13 00 | 12 00 | 13 00 |
| Hemlock scantling and joist up to 20 ft | 13 00 | 14 00 | 13 00 | 14 00 |
| Cedar for block paving, per cord | | 5 00 | | 5 00 |
| Cedar for kerbing, 4 x 14, per M | | 14 00 | | 14 00 |
| Scantling and joist, up to 16 ft | | 14 00 | | 14 00 |
| " " 18 ft | | 15 00 | | 16 00 |
| " " 20 ft | | 16 00 | | 16 00 |
| Scantling and joist, up to 22 ft | | 17 00 | | 17 00 |
| " " 24 ft | | 19 00 | | 19 00 |
| " " 26 ft | | 20 00 | | 21 00 |
| " " 28 ft | | 22 00 | | 23 00 |
| " " 30 ft | | 24 00 | | 25 00 |
| " " 32 ft | | 27 00 | | 27 00 |
| " " 34 | | 29 50 | | 29 50 |
| " " 36 ft | | 31 00 | | 31 00 |
| " " 38 ft | | 33 00 | | 33 00 |
| " " 44 ft | | 34 00 | | 36 00 |
| Cutting up planks, 1¼ and thicker, dry | 25 00 | 28 00 | 25 00 | 30 00 |

| | B. M. | | | |
|---|---|---|---|---|
| 1¼ in. flooring, dressed, F M. | 26 00 | 30 00 | 28 00 | 31 00 |
| 1½ inch flooring, rough, B M. | 18 00 | 22 00 | 18 00 | 22 00 |
| 1¼ " dressed, F M. | 25 00 | 28 00 | 27 00 | 30 00 |
| 1¼ " undressed, B M. | 18 00 | 19 00 | 18 00 | 19 00 |
| 1¼ " dressed | 18 00 | 20 00 | 18 00 | 22 00 |
| 1¼ " undressed | 12 00 | 15 00 | 12 00 | 15 00 |
| Beaded sheeting, dressed | 20 00 | 35 00 | 22 00 | 35 00 |
| Clapboarding, dressed | | 12 00 | 8 00 | 12 00 |
| XXX sawn shingles, per M 18 in | 2 60 | 2 70 | | 3 00 |
| Sawn lath | 2 50 | 2 60 | 2 50 | 2 60 |
| Cedar | | 2 90 | | 2 90 |
| Red oak | 30 00 | 40 00 | 30 00 | 40 00 |
| White | 37 00 | 45 00 | 35 00 | 55 00 |
| Basswood, No. 1 and 2 | 28 00 | 30 00 | 18 00 | 20 00 |
| Cherry, No. 1 and 2 | 70 00 | 90 00 | 70 00 | 80 00 |
| White ash, No. 1 and 2 | 24 00 | 35 00 | 30 00 | 35 00 |
| Black Ash, No. 1 and 2 | 20 00 | 30 00 | 18 00 | 30 00 |
| Dressing stocks | 16 00 | 22 00 | 16 00 | 22 00 |
| Picks, American inspection | | 30 00 | | 40 00 |
| Three uppers, Am. inspection | | 50 00 | | 50 00 |

| | Toronto. | | Montreal. | |
|---|---|---|---|---|
| **BRICK—** ₱ M | | | | |
| Common Walling | | 6 50 | | 6 00 |
| Good Facing | | 8 00 | | 8 50 |
| Sewer | 8 50 | 8 00 | 8 50 | 9 00 |
| *Pressed Brick, Per M:* | | | | |
| Red, No. 1, f.o.b. Beamsville | | 16 00 | | |
| " " 2 | | 14 00 | | |
| " " 3 | | 9 00 | | |
| Buff | | 21 00 | | |
| Brown | | 24 00 | | |
| Roman Red | | 30 00 | | |
| " Buff | | 35 00 | | |
| " Brown | | 40 00 | | |
| Sewer | | 7 50 | | |
| Hard Building | | 6 00 | | |
| Roof Tiles | | 22 00 | | |
| Hip Tile (each) | | 20 | | |
| Ridge Tile " | | 60 | | |
| 1st quality, f.o.b. at Port Credit | | 14 00 | | 18 00 |
| 2nd " " " " | | 12 00 | | 15 00 |
| 3rd " " " " | | 8 00 | | 12 00 |
| Hard building brick | | 6 50 | | |
| Ornamental, per 100 | 3 00 | 10 00 | | |
| ***SAND.*** | | | | |
| Per Load of 1½ Cubic Yards | | 1 25 | | 1 25 |
| ***STONE.*** | | | | |
| Common Rubble, per toise, delivered | | 14 00 | | 14 00 |
| Large flat Rubble, per toise, delivered | | 18 00 | | 18 00 |
| Foundation Blocks, per c. ft. | | 50 | | 50 |
| Kent Freestone Quarries Moncton, N. B., per cu ft., f.o.b. | | 1 00 | | |
| River John, N. S., brown Freestone, per cu. ft., f.o.b. | | 95 | | |
| Ballochmyle | 80 | 90 | 65 | 75 |
| New York Blue Stone | | | | 1 05 |
| Granite (Stanstead) Ashlar, 6 in. to 12 in., rise 9in., per ft. | | | | 25 |
| Moat Freestone | | | 60 | 70 |
| Thomson's Gatelawbridge, cu. ft. | | | 75 | 80 |
| Credit Valley Rubble, per car of 25 tons, at quarry | | 8 00 | | |
| Credit Valley Brown Coursing, up to 10 inch, per sup. yard, at quarry | | 1 75 | | 3 25 |
| Credit Valley Brown Dimension, per cu. ft. at quarry | | 60 | | 75 |
| Credit Valley Grey Coursing, per superficial yard | 1 50 | 2 00 | | 2 15 |
| Credit Valley Grey Dimension, per cubic foot | | 60 | | 75 |
| Clark's N. B. Brown Stone, per cubic foot, f.o.b. | | 1 25 | | 1 00 |
| Brown Free Stone, Woodpoint, Sackville, N.B., per cub. ft. | | 1 25 | | 1 00 |
| MadocRubble, delivered, per toise | 14 00 | 14 50 | 14 00 | 14 50 |
| Madoc dimension floating, f. o. b. Toronto, per cubic ft. | 30 | 32 | | |
| Cape Bauld, N. B., Brown Freestone | | 90 | | 70 |
| Cocaigne, N. B., Gray Freestone (olive-green) | | 90 | | 70 |
| OHIO FREESTONE, FROM THE GRAFTON STONE CO.'S QUARRIES. | | | | |
| No. 1 Buff Promiscuous | | 90 | | 1 00 |
| No. 1 Buff Dimension | | 95 | | 1 05 |
| No. 1 Blue Promiscuous | | 60 | | 70 |
| No. 1 Blue Dimension | | 65 | | 75 |
| Sawed Ashlar, No. 1 Buff, any thickness, per cub. ft. | | 1 10 | | 1 20 |
| Sawed Ashlar, No. 1 Blue, any thickness, per cub. ft. | | 80 | | 90 |
| Sawed Flagging, per sq. ft., for each inch in thickness | | 06½ | | 07½ |
| Above prices cover cost freight and duty paid. For small lots add 5 to 10 cents per cubic foot. | | | | |
| Quebec and Vermont rough granite for building purposes, per c.ft. f.o.b. quarry | 33 | 1 50 | | |
| For ornamental work, cu. ft. | 35 | 2 0 | | |
| Granite paving blocks, 8 in. to 12 in. x 6 in. x 4½ in., per M | | 50 00 | | |
| Granite curbing stone, 6 in. x 20 in., per lineal foot | | 70 | | |
| ***SLATE.*** | | | | |
| Roofing (₱ *square*). | | | | |
| " red | | 18 00 | | 20 00 |
| " purple | | 00 | | 10 00 |
| " unlading green | | 9 00 | | 6 00 |
| " black | | 8 00 | | 5 50 |
| Terra Cotta Tile, per sq. | | 25 00 | | |
| Ornamental Black Slate Roofing | | 8 50 | | |
| ***PAINTS.*** *(In oil,* ₱ *lb.* | | | | |
| White lead, Can., per 100 lbs. | 6 25 | 5 50 | 5 50 | 6 00 |
| " zinc, Can., " " | 6 50 | 7 50 | 6 50 | 7 50 |
| Red lead, Eng | 4 00 | 5 00 | 4 50 | 5 00 |
| " venetian, per 100 lbs | 1 60 | 1 75 | 1 60 | 1 75 |
| " vermillion | 90 | 1 00 | 90 | 1 00 |
| " Indian, Eng | 10 | 12 | 10 | 12 |
| Yellow ochre | 5 | 10 | 3 | 5 |
| Yellow chrome | 15 | 20 | 15 | 20 |
| Green, chrome | 7 | 12 | 7 | 12 |
| " Paris | 20 | 25 | 14 | 20 |
| Black lamp | 15 | 25 | 12 | 25 |
| Blue, ultramarine | 15 | 20 | 12 | 18 |
| Oil, linseed, raw, *& Imp. gal.* | 54 | 59 | 58 | 59 |
| " " boiled " | 57 | 63 | 62 | 63 |
| " " refined, " | 78 | 85 | 75 | 75 |
| Putty | 2¼ | 2¼ | 2¼ | 2½ |
| Whiting, dry, per 100 lbs | 75 | 1 00 | 60 | 75 |
| Paris white, Eng., dry | 90 | 1 25 | 90 | 1 00 |
| Litharge Eng | 4 | 5 | 4 50 | 5 00 |
| Sienna, burnt | 10 | 15 | 12 | 15 |
| Umber, " | 8½ | 12 | 12 | 15 |
| ***CEMENT, LIME, etc.*** | | | | |
| Portland Cements.— | | | | |
| German, per bbl | | 3 25 | 2 55 | 2 65 |
| London " | 2 50 | 2 75 | 1 92 | 2 05 |
| Portland Cements.— | | | | |
| Newcastle " | | | 2 50 | 1 85 1 95 |
| Belgian, Josson, artificial | 3 40 | | 2 50 | 2 65 2 75 |
| English, artifical, per bbl | 2 60 | | 2 90 | 2 55 2 65 |
| Belgian, natural, per bbl | 2 30 | | 2 40 | 1 70 1 85 |
| Canadian " | 2 30 | | 2 50 | 1 80 1 85 |
| Roman " | | | | 2 00 2 25 |
| Parian " | 4 50 | | 4 75 | 5 50 5 75 |
| Superfine " | 6 50 | | 7 00 | 8 00 9 00 |
| Hydraulic Cements.— | | | | |
| Thorold, per bbl | | | 1 50 | 1 25 1 50 |
| Queenston, " | | | 1 50 | 1 50 1 60 |
| Napanee, " | | | 1 50 | 1 50 |
| Hull, " | | | 1 50 | 1 50 |
| Ontario, " | | | 1 25 | |
| Keene's Coarse "Whites" | 4 50 | | 4 75 | 4 50 4 75 |
| Fire Bricks, Newcastle, per M | 27 00 | | 35 00 | 15 00 21 00 |
| " Scotch " | 27 00 | | 35 00 | 19 00 21 00 |
| Lime, Per Barrel, Grey | | | 40 | |
| " " White | | | 50 | |
| Plaster, Calcined, N. B. | | | 2 00 | |
| " " N. S. | | | 2 00 | 2 50 |
| Hair, Plasterers', per bag | 80 | | 1 00 | |
| ***HARDWARE.*** | | | | |
| Cut nails, 50d & 60d, per keg | | | 2 65 | 2 25 |
| Steel " " " " | | | 2 75 | 2 50 |
| CUT NAILS, FENCE AND CUT SPIKES. | | | | |
| 40d, hot cut, per 100 lbs | | | 2 70 | 2 30 |
| 30d, " " " | | | 2 75 | 2 33 |
| 20d, 16d and 12d, hot cut, per 100 lbs | | | 2 80 | 2 40 |
| 10d, hot cut, per 100 lbs | | | 2 85 | 2 45 |
| 8d, 9d, " " " | | | 2 90 | 2 50 |
| 6d, 7d, " " " | | | 3 05 | 2 65 |
| 4d to 5d, " " " | | | 3 25 | 2 85 |
| 3d, " " " | | | 3 65 | 3 25 |
| 2d, " " " | | | 4 15 | 3 75 |
| 4d to 5d cold cut, not polished or blued, per 100 lbs | | | 3 15 | 2 75 |
| 3d to 5d cold cut, not polished or blued, per 100 lbs | | | 3 55 | 3 15 |
| FINE BLUED NAILS. | | | | |
| 3d, per 100 lbs | | | 4 00 | 3 75 |
| 2d, " " | | | 4 50 | 4 15 |
| CASING AND BOX, FLOORING, SHOOK AND TOBACCO BOX NAILS. | | | | |
| 12d to 30d, per 100 lbs | | | 2 50 | 2 60 |
| 10d, " " | | | 2 80 | 2 70 |
| 8d and 9d, " " | | | 2 95 | 2 80 |
| 6d and 7d, " " | | | 3 10 | 3 05 |
| 4d to 5d, " " | | | 3 30 | 3 20 |
| 3d, " " | | | 3 70 | 3 60 |
| FINISHING NAILS. | | | | |
| 3 inch, per 100 lbs | | | 3 10 | 2 95 |
| 2½ to 2¾ " " " | | | 3 25 | 3 10 |
| 2 to 2¼ " " " | | | 3 40 | 3 25 |
| 1½ to 1¾ " " " | | | 3 60 | 3 45 |
| 1¼ " " " | | | 4 00 | 3 85 |
| 1 " " " | | | 4 50 | 4 35 |
| SLATING NAILS. | | | | |
| 5d, per 100 lbs | | | 3 35 | 2 95 |
| 4d, " " | | | 3 35 | 2 95 |
| 3d, " " | | | 3 75 | 3 35 |
| 2d, " " | | | 4 25 | 3 85 |
| COMMON BARREL NAILS. | | | | |
| 1 inch, per 100 lbs | | | 3 75 | 3 35 |
| ⅞ " " " | | | 4 25 | 3 60 |
| ¾ " " " | | | 4 75 | 4 35 |
| CLINCH NAILS. | | | | |
| 3 inch, per 100 lbs | | | 3 35 | 2 95 |
| 2½ and 2¾ " " | | | 3 50 | 3 10 |
| 2 and 2¼ " " | | | 3 65 | 3 25 |
| 1½ and 1¾ " " | | | 3 85 | 3 45 |
| 1¼ " " | | | 4 50 | 4 10 |
| 1 " " | | | 5 00 | 4 60 |
| SHARP AND FLAT PRESSED NAILS. | | | | |
| 3 inch, per 100 lbs | | | 3 75 | 3 45 |
| 2½ and 2¾ " " | | | 4 00 | 3 60 |
| 2 and 2¼ " " | | | 4 20 | 3 75 |
| 1½ and 1¾ " " | | | 4 40 | 3 95 |
| 1¼ " " | | | 5 00 | 4 60 |
| 1 " " | | | 5 50 | 5 10 |
| STEEL WIRE NAILS. | | | | |
| Steel Wire Nails, 70c.; 5% discount from printed list. | | | | |
| ***Iron Pipe:*** | | | | |
| Iron pipe, ¼ inch, per foot | | | 6c. | 6c. |
| " " ⅜ " " | | | 7 | 7 |
| " " ½ " " | | | 8½ | 8¼ |
| " " ¾ " " | | | 12 | 12 |
| " " 1 " " | | | 17 | 17 |
| " " 1¼ " " | | | 24 | 24 |
| " " 1½ " " | | | 30 | 30 |
| " " 2 " " | | | 43 | 43 |
| Toronto, 65 per cent. discount. | | | | |
| Montreal, 60 to 65 per cent. discount. | | | | |
| ***Lead Pipe:*** | | | | |
| Lead pipe, per lb | | | 7c. | |
| Waste pipe, per lb | | | 7½ | |
| Discount, 30 % off in small lots. | | | | |
| ***Galvanized Iron:*** | | | | |
| Adam's—Mar's Best and Queen's Head: | | | | |
| 16 to 24 guage, per lb | | | 4½c. | 4¾c. |
| 26 guage, " | | | 4¾ | 5 |
| 28 " " | | | 5 | 5¼ |
| Gordon Crown— | | | | |
| 16 to 24 guage, per lb | | | 4¾ | 4¾ |
| 26 guage, " | | | 4½ | 4¾ |
| 28 " " | | | 4¾ | 5 |
| Note.—Cheaper grades about ½c. per lb. less. | | | | |
| ***Structural Iron:*** | | | | |
| Steel Beams, per 100 lbs | | | 2 75 | 2 50 |
| " channels, " | | | 2 85 | 2 60 |
| " angles, " | | | 2 50 | 2 30 |
| " tees, " | | | 2 80 | 2 60 |
| " plates, " | | | 2 55 | 2 35 |
| Sheared steel bridge plate | | | | 2 35 |

(Corrected up to July 15th)