Technical and Bibliographic Notes / Notes techniques et bibliographiques

L'Institut a microfilmé le meilleur exemplaire qu'il

The Institute has attempted to obtain the best original

may be bibliographica of the images in the re	py available for filming. Features of this copy which by be bibliographically unique, which may alter any the images in the reproduction, or which may nificantly change the usual method of filming, are ecked below.					lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.						
Coloured covers Couverture de c							loured ges de c					
Covers damaged						. /	ges dam ges ende	aged/ ommagée:	S			
	Couverture restaurée et/ou pelliculée					Pages restored and/or laminated/ Pages restaurées et/ou pelliculées						
Cover title miss Le titre de couv		ue				/	-		stained or f ichetées ou			
Coloured maps/ Cartes géograph		leur					ges deta ges déta					
Coloured ink (i.						1/1	owthro anspare	_				
Coloured plates Planches et/ou						. /)	•	f print var égale de l'	ries/ 'impression	1		
Bound with oth Relié avec d'aut		ts				i		us paginat n continue				
Tight binding malong interior malong interior malong the La reliure serrée	nargin/ e peut causer	de l'ombre				Co	mprend	ndex(es)/ d un (des)	index			
distorsion le lor			ay appear			• •	•••		en from:/ provient:			
been omitted fr	om filming/							of issue/ tre de la l	ivraison			
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont				Caption of issue/ Titre de départ de la livraison								
pas été filmées.						1	asthead, enérique		ques) de la	livraison		
Additional com Commentaires		res:										
This item is filmed at Ce document est film												
10X	14X		18X		22X			26 X	1 1	30×	7	
12X		16X		20X			24×		28×		32×	

THIS PAPER REACHES EVERY WEEK THE TOWN AND CITY CLERKS, TOWN AND CITY ENGINEERS, COUNTY CLERKS AND COUNTY ENGINEERS THROUGHOUT CANADA.

Vol. 5.

NOVEMBER 29, 1894

No. 43

THE CANADIAN CONTRACT RECORD.

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

Subscription price of "Canadian Architect and Builder" (including "Canadian Contract Record"), \$2 per annum, payable in advance.

C. H. MORTIMER, Publisher,

CONFEDERATION LIFE BUILDING, TORONTO.
Telephone 2362.
New York Life Insurance Building, Montreal
Bell Telephone 2299.

Information solicited from any part of the Dominion regarding contracts open to tender.

Advertising Rates on application.

At its Convention held in Toronto, Nov. 20 and 21, 1889, the Ontario Association of Architects signified its approval of the OANADIAN CONTRACT RECORD, and pledged its members to use this journal as their medium of communication with contractors with respect to advertisements for Tenders.

The following resolution was ununimous-ly adopted at the First Annual Meeting of the Province of Quebec Association of Arch ttects, held in Montreal, Oct. 10th and 11th, 1890: "Moved by M. Perrault, seconded by A. F. Dunlon, that we the Architects of the Province of Quebec now assembled in Conrention being satisfied that the CANADIAN OONTRACT RECORD affords us a direct communication with the Contractors,-Reusing its columns when calling for Tenders," solved, that we pledge our support to it by

Subscribers who may change their address should give prompt notice of same. In doing so, give both old and new address. Notify the publisher of any irregularity in delivery of paper.

Notice to Contractors

CANADIAN **CONTRACTOR'S** HAND-BOOK

A new and thoroughly revised edition of the Canadian Contractor's Hand-Book, consisting of 150 pages of the most carefully selected material, is now ready, and will be sent post paid to any address in Canada on receipt of price. This book should be in the hands of every architect, builder and contractor who desires to have readily accessible and properly authenticated information in a wide variety of subjects adapted to hid daily requirements.

Price, \$1.50; to subscribers of the CANADIAN ARCHITECT AND BUILDER, \$1.00. Address

C. H. MORTIMER, Publisher, Confederation Life Building, TORONTO.

CONTRACTS OPEN.

MIDLAND, ONT.—Chew Bros. propose enlarging their saw mills here

TILBURY CENTRE, ONT .- A Presbyterian manse will probably be erected

BRIGDEN, ONT.—The question of con-structing a system of waterworks is under consideration.

GATINEAU POINT, QUE.—John Wallingford has purchased property on which he proposes to erect a large hotel.

MONTICELLO, ONT. -T. Essery's saw mill, at this place, was completely wrecked last week by the explosion of a boiler.

HALIFAN, N. S.—A company is being formed to erect a large summer hotel. H. L. Chipman is among the promoters.

SHERBROOKE, QUE. - The Jenckes Machine Co. propose to erect a new factory. The City Council has granted a

BONDVILLE, QUE.—Wm. Hunter, of Brome Corner, has purchased a lot on the lakeshore and will erect a summer residence thereon.

CARLETON PLACE, ONT .- A by-law has been carried by the ratepayers authorizing the Council to proceed with the erection of a new town hall.

PETROLEA, ONT.—The purchase by the Council of a chemical engine and a complete hook and ladder apparatus has been recommended.

MOOSE JAW, N. W. T.—Tenders are invited by H. McDougall, Treasurer, for the purchase of \$5,000 of permanent improvement debentures.

STURGEON FALLS, ONL-The ratepayers will shortly vote on a by-law to grant a bonus of \$7,000 towards the erection of a pulp mill in this village.

GANANOQUE, ONT. - G. A. architect, of Brockville, has just completed plans for converting the old carriage works building in this town into an hotel.

WIARTON, ONT.-The C. P. R. are said to contemplate the construction of a branch line of railway from Chatsworth to this place. A charter for the road has already been obtained.

NORTH BAY, ONT.—Engineers from the Public Works Department, Ottawa, last week examined the dock and the lake surrounding for the purpose of repairing or building a new dock or breakwater here.

St. Andrews, N. B.—Mr. Gardiner, promoter of the Algonquin hotel, has purhased the Argyle hotel and six acres of land and, it is understood, proposes to erect another large summer hotel on the

KINGSTON, ONT .- It is proposed to submit a by-law to the ratepayers to raise the sum of \$8,500 for permanent improvements.—The Montreal Transportation Co. will construct a new dry dock adjoining their shipyard here.

AYLMER, QUE.—At a special meeting of the Town Council held last week, the

waterworks privileges were transferred from E. J. Rainboth, of Ottawa, to W. Poupore, of the firm of Poupore & Fraser, Morrisburgh, who will commence work in the spring. The site has already been the spring. purchased for the pumping house.

KNOWLTON, QUE. - The by-law for the construction of waterworks will be sub-mitted to the ratepayers shortly, and it is expected will meet with little opposition.

The Trustee Board of the Methodist church propose to erect a new building next spring. A prize of \$50 is offered for the best plan of a church having a seating capacity of 350, the cost of erection not to exceed \$4,000. Competition closes 1st January. Address W. Smith, Chairman of Board.

OTTAWA, ONT.—The Ottawa Electric Railway Company and the C. P. R. have a scheme under consideration to connect Ottawa and Aylmer by an electric railway, crossing the Ottawa River at Duschene Rapids on a bridge to cost about \$150,000. The officials of the companies are said to have stated that the work would shortly be proceeded with.—The Underwriters Association have recommended the erec-tion of an additional fire hall near the scene of the recent fire at J. R. Booth's mills.—The Dominion Government has decided to expend a considerable sum of money in transforming Gordon Island, a

few miles from Gananoque, into a public park. A wharf will be built in the spring.

WINNIPEG, MAN.—On the 17th of December the ratepayers will vote on a by-law empowering the City Council to issue debentures to raise the sum of \$225,000 for the construction of a system of waterworks for fire protection and for the establishment of an electric light plant for street lighting.—A joint meeting of representatives of the various Masonic lodges was held in this city a few days ago to consider the erection of a Masonic temple for the frateristy. A majority of the members were of the opinion that the scheme could be successfully financed, and a committee was appointed to report as to the arrangements which could be made for a suitable site.—A new building is to be erected on the site of the Western Canada Loan Co.'s building recently de stroyed by fire. S. Frank Peters, architect, will have charge of the work.

HAMILTON, ONT .- A deputation from this city last week interviewed Govern-ment officials, at Ottawa, regarding the proposed new bridge over the Burlington canal. They were informed by Mr. Coste, Chief Engineer of Public Works, that the plans were almost completed and that tenders for the work would be called for at an early date, in order that the bridge could be built in time for next year's traffic.—Architect Smith, of Boston, has drawn sketches of the station and car sheds proposed to be erected by the Hamilton Radial Railway Co, should their railway scheme be carried out. The buildings will cost from \$75,000 to \$100-000. – Building permits have been granted as follows. James Hobbs has a permit

for a brick dwelling on Oak avenue, to cost \$1,350, Thos. Allen, brick dwelling on Morden street, cost \$1,200, Coleman Planing Mill and Lumber Co., two-story brick dwelling on Grant ave., cost \$1,500.

TORONTO, ONT.- It is stated that ex-Ald. Thomas Pells is receiving tenders for the erection of a large theatre building at the corner of Queen and Frederick streets, to accommodate 2000 persons, and that work on the building is to be commenced without delay. Tenders are wanted at 18 Maitland street for alterations to seven roomed house. In a report presented to the Board of Works on Monday last, the City Engineer asked for authority to purchase 120 British water meters, at a cost of \$14,000. The matter was referred back by the Board, and it is probable the purchase of Crown meters will be recommended. The Committee appointed by the City Council to consider the application of the Metallic Roofing Co. for a site on which to erect a factory, have decided to offer the company a site with 100 feet frontage on King street, near Dufferin street. A Chicago firm engaged in the same business is also said to be considering the election of a factory in this city. Building permits have been granted as follows. R. C. Waterson, det. granted as follows. R. C. Waterson, det. 2 story and mansard bk. dwelling, 41 Dunn ave., cost \$3,500; A. W. White, pr. s. d. 2 story and attic bk. dwelling, 23 Roxborough st., cost \$8,000. The Toronto Radiator Mfg. Co. contemplate erecting a new factory building.

FIRES.

The residence of Capt. Forsythe, at

The residence of Capt. Forsytte, at Windsor, N. S., was destroyed by fire recently. Loss, \$5,000; insurance, \$4,000. The Commercial Hotel and a frame block occupied by P. Dickson & Co., at Alexander Station, Man., were totally consumed by fire on the 22nd inst. Loss, \$10,000. Furlong's hotel at Eganville, Ont., was burned on Thursday. No in-surance. Two blocks of buildings at St. Mary's, Ont., were budly damaged by fire last week. The loss on the buildings are. W. Tyler, \$3,000; insurance, \$1,200; T. M. Harrison, \$1,500; insurance, \$700; J. H. Mathieson, \$3,000, insurance, \$2,500. Graham's apple evaporator, at Norwich, Ont., was destroyed by fire on Saturday last. Loss, \$8,000; insurance on building, \$1,000. The two story brick residence of Thomas Holliday, about one mile from Stratford, Ont., was destroyed by fire on Tuesday last. Loss, \$9,000; insurance, \$2,500. A double tenement house at Bothwell, Ont., owned by Thomas Dillon, was burned on the 27th inst. The loss is partially covered by insurance.

CONTRACTS AWARDED.

STRATFORD, ONT. It is understood that Messrs. Jeffrey Bros., this city, have been awarded the contract for a metal ceiling for the Stratford City Hall.

PARRY SOUND, ONT. It is stated that Poulin & Fitzpatrick have been awarded the contract for constructing eight miles of the Ottawa, Arnprior and Parry Sound Railway.

OTTAWA, ONT.—The contracts for two sections of the Trent Canal have been awarded by the Department of Public Works. For section one of the Balsam Lake and Lake Sinnoe divisions, there were twelve tenders, the successful tenderer being Andrew Onderdonk, of Chicago, his figure being in the neighborhood of \$475,000. Section one of the Peterboro' and Lakefield division was secured by Hogan & Macdonald, of Montreal, at the price of \$260,000. For this work fourteen tenders were sent in.

TORONTO, ONT.—D. McIntosh & Sons, of this city, have been awarded the contract by the Dominion Government for the erection of monuments, 38 feet high, at Crysler's Farm, Chateauguay and Lundy's Lane.—Tenders for various supplies required by the Works Department for the ensuing year were opened by a sub-committee of the Board of Works on Saturday last. The following were accepted: good coarse sand per cubic yard—W. J. Adare, 75c.; pit gravel, clean, east of Yonge—John Bourne, 72c.; west of Yonge, W. J. Adare, 80c., screened, east of Yonge, John Bourne, 97c.; west of Yonge—R. A. Scarlett, 90c.; five-inch wire nails P. Meredith & Co., \$2.14 per 100 pounds: horse feed—P. McIntosh; cedar paving posts—D. L. Van Vlack, \$5 20 per cord, culls, \$4.75; lumber Reid Company, plank per 1000 feet \$12.57, scantling \$12.27; other tenders (Bryce & Co.), plank \$13.39 and scantling \$12.40: hardware—Aikenhead Hardware Co., \$1.014.06; ironwork, Galloway, Taylor & Co., castings per 100 lbs., \$1.40; wrought iron, \$3; sewer pipe—Ontario Sewer Pipe Co.

QUEBEC, QUE .- The following tenders have been accepted by the Road Committee for the construction of the new ity Hall: excavation and masonry, J. B. Jinchereau, \$71,316; carpentry and join-ery, J. B. Gingras, \$27,966; plumbing and gashtting, Paul Parent, \$1,775; heating apparatus, Ovide Picard, \$7,400; roofing, K. Connolly, \$5,4 ∞ ; painting and izing, Jos. G thier & Frere, \$2,755; glazing, Jos. G thier & Frere, \$2,755; total \$116,612. The unsuccessful separate tenders were:—Excavation, etc.—Honore Dorion, \$79,500; Louis Larose, jr., \$81,518; W. Peters, \$79,000; N. K. Connolly, \$128,300; François Parent, \$88,147.78; \$128,300; Francois Parent, \$88,147.78; carpentry and joinery—Jos. Bussiere, \$29,429; Elzeat St. Pietre, \$36,720; W. J. Peters, \$37,000; N. K. Connolly, \$35,000; plumbing, etc.—James Maguire, \$2,115; N. K. Connolly, \$2,900; Ovide Picard, \$3,430; Chas. Vezina, \$2,349; heating apparatus—N. K. Connolly, \$10,800; Chas. Vezina, \$10,139; roofing—J. J. Barbeau, fils, \$5,472; Alfred Langlais and C. Labrecque, \$5,473; N. Barbeau, \$5,900, painting and glazing— Barbeau, \$5,900, painting and glazing— W. J. Peters, \$3,200; N. K. Connolly, \$3,200; tenders for the whole work were received as follows. Emery Lafontaine, Montreal, \$141,000; Ferdinand Devarenne, \$131,000 for city labor and \$129,000 for work done by outside laborers; W. J. Peters, \$134,800 for city labor; N. K. Connolly, \$178,550, outside labor; Alph. Charlebois, \$129,801.57, city labor; outside labor, \$124,628.15; Francois Parent, \$144,591, city labor, and \$135,716 outside

NEW COMPANIES.

BROCKVILLE, ONT Cossitt Bros Co, I imited, seeking incorporation, capital \$400,000, to manufacture harvesting machinery and other implements.

WALLACEBURG, ONT. - Sydenham Glass Co., incorporated; capital \$50,000; to manufacture glassware; incorporators, J. Steinhoff, D. A. Gordon, H. Morris and others.

KINGSTON, ONT.—Kingston Vehicle Co., incorporated; capital, \$70,000; to manufacture carriages, waggons, etc.; incorporators, George Richardson, R. J. Carson, John Hewton, and others.

WINDSOR, N. S.—Dominion Atlantic Railway Co., applying for incorporation; to purchase the assets of the Windsor and Annapolis Railway Co. and to construct and operate telephone and telegraph lines, railways, etc.

THE UNITS OF MEASUREMENT OF MASON'S WORK ARE.

For excavation, the cubic yard.
For concrete, foundations, the cubic foot.

For concrete, floors, the superficial foot. For dimension-stone, footings, the superficial yard.

For dimension-stone, bridge masonry, the cubic foot.

For dimension-stone, surface dressing, the superficial foot extra.

For rubble-work, the cubic foot.

For rubble-work, surface dressing, the superficial foot extra.

For brick-work, common, the thousand

brick.
For brick-work, pressed, the superficial

foot:
For tuckpointing, cleaning fronts, the

superficial foot.
For plastering, plain surfaces, the super-

ficial yard.

For plastering, cornices, the running and superficial foot.

ROMAN CONSTRUCTION IN BRICK AND STONE.

The Romans, at a very early period, adopted two distinct methods of construction, which they were accustomed to combine in their buildings- the construction with squared and figured stones, and that with rubble or brick. The former was employed by them only as a thick facing composed of large blocks laid together without mortar, united by gudgeons and cramps of metal, or even of wood, behind which they threw masses of small stones or gravel imbedded in an excellent mortar. The vaults were made of principal arches or ribs of cut stones or bricks, with a filling of concrete. This construction imposed on Roman architects plans peculiarly their own, composed of massive piers as points of support for the springing of their vaults. In these constructions there were no walls properly speaking, but isolated points of resistance, connected together by certain walls or screens, comparatively light, as they had no weight to support. The arrangements of plans, necessarily resulting from this principle, were admirably adapted to vast edifices containing numerous apartments for various uses.

WHAT MILL CONSTRUCTION IS.

- 1. Mill construction consists in so disposing the timber and plank in heavy solid masses as to expose the smallest number of corners or ignitable projections to fire, to the end also that when fire occurs it may be most readily reached by water from sprinklers or hose.
- 2. It consists in separating every floor from every other floor by incombustible stops—by automatic hatchways, by encasing stairways either in brick or other incombustible partitions—to the end that a fire shall be retarded in passing from floor to floor to the utmost that is consistent with the use of wood or any material in construction that is not absolutely fire-proof
- 3. It consists in guarding the ceilings over all specially hazardons stock or processes with plastering laid on wire lath or upon dovetailed lath or by plaster board of a suitable kind, following the lines of the ceiling and of the timbers without any interspace between the plastering and the wood, or else in protecting the ceiling over hazardoes places with tin or other suitable metal, but not with zinc.
- 4. It consists not only in so constructing the unil, workshop, or warehouse that fire shall pass as slowly as possible from one part of the building to another, but also in providing all suitable safeguards against fire.
- 5. It consists in laying the top floor and the outer boarding of the roof over mortar, plaster board, or some other fire re-

tardent between it and the plank, where the maximum of safety is to be attained.

CORK AS A BUILDING MATERIAL.

Mr. S. Campolo calls the attention of architects and engineers to the value of the cork waste for building purposes. With a cement of plaster of Paris, dextrine and sequioxide of iron which may be made waterproof by oxychloride of the pulverized cork may be formed into bricks, which, while resisting compression, the peculiar properties of the cork. Such bricks, which have already been made and tested in France, only begin to crack under a pressure of 190 pounds per square inch. The material is an efficient non-conductor of heat, and may be employed to confine the heat of boilers and pipes, or it could be used to line roofs and walls to make houses cooler in summer and warmer in winter. As a non-conductor of sound, cork concrete has been tested in Paris for a hall ceiling to protect tenants overhead from troublesome noise at night. The cork composition is so elastic as to have an important effect in reducing vibrations due to the running of machinery; and as a lining for walls and partitions in a gunpowder factory it has so resisted the force of an explosion that only a harmless shower of cork fragments fell upon the workmen. Cork bricks are very light, only about half as heavy as ordinary porous bricks. While not strictly fireproof, they do not spread fire but carbonize very slowly, giving out smoke but no

Systems of mechanical ventilation are very often faulty, says Heating and Ventilation, in that, while the supply of a sufficient volume of pure, fresh air has been provided for, the ducts through which it is conveyed are of too contracted area, so that the air enters the room at too high a velocity, causing disagreeable currents and too much of an admixture of the pure and impure air within them. Naturally this lessens the useful effect of the air admitted, which should act as nearly as possible to push the impure air out bodily before it, thus replacing the foul air instead of merely diluting it. The best results can be obtained in hot blast heating and ventilation only by introducing volumes of air at a slow velocity.

BRICK DUST AS A SUBSTITUTE FOR HYDRAULIC CEMENT.

The use of brick-dust mortar as a substitute for hydraulic cement, where the latter cannot be obtained, is now recommended on the best engineering authority, experiments made with mixtures of brick-dust and quicklime showing that blocks one-half inch in thickness, after immersion in water for four months, bore without crushing, crumbling or splitting, a pressure of 1,500 pounds per square inch. It is considered, too, that the addition of even as small a portion as one-tenth as much brick-dust as sand to ordinary mortars, is preventive of the disintegration so often characterizing mortars used in the masonry of public works. The use of brick-dust mixed with lime and sand is said to be very generally and successfully practised in the Spanish domains, and it is said to be in all respects superior to the best Rosendale hydraulic cement in the construction of culverts, drains, tanks or cisterns, and even of roofs, whether for setting flat tiles or for making the usual tropical flat roof. The proportions used there in the manufacture are approximately one of brick-dust, one of lime and two of sand, mixed together dry and tempered with water in the usual

BUSINESS NOTES.

Prenoveau, Turcot & Martineau, masons, Montreal, have dissolved partnership.

Napoleon Turcot, plumber, Montreal, has compromised with his creditors at 50 cents on the dollar.

MUNICIPAL DEPARTMENT.

Gianite metalling was used in the construction of a road in Toronto in 1893, which was built in a manner described essentially as follows by Mr. H. D. Ellis, the toadway engineer of the city. The surface of the ground was excavated to a depth of 11 or 12 inches, and thoroughly rolled with a 10-ton roller until a compact subgrade was obtained, upon which a layer of large stones was placed on end by hand and the interstices filled with small pieces of granite. The whole was then rolled until the stone formed a true surface. Upon this a layer of broken granite was laid and 10lled, the surface and binder being composed of fine granite screenings. The roadway was rolled longitudinally, beginning at the curb, with a final rolling on the crown. This rolling was kept up, with thorough sprinkling, until no impression could be made with a horse roller 3½ feet in diameter and 4½ feet in width, loaded to weigh ten tons, and giving a pressure of 433 pounds per lineal inch of roller. No loam or sand was allowed to be mixed with the stone, which was clean and broken to pass through a 1½-inch rine.

The sewage disposal works at Teddington, England, are described by their engineer, Mr. Henry York, in a paper recently read before the Incorporated Association of Municipal and County Engineers. The sewage is charged with milk of lime and then pumped up about 36 feet into a chan-nel leading to the precipitating tanks, alumino-ferric being injected into the rising main before the tanks are reached. The latter have a capacity of about 67,200 gallons each and are adapted for either continuous or intermittent use. The effluent from the tanks is discharged over a filtration area of 634 acres, the under-drains of which terminate in a 15-inch stoneware pipe emtying into the Thames River. The buildings at the disposal works contain the air compressing machinery for working the Shone ejectors en the sewerage system, a small electric lighting plant driven by an arrangement of pulleys from the pumping engine, and a duplicate sewage pumping and sludge compressing plant. The works are designed to treat the sewage of 30,000 people, but at present only 5,200 persons are connected with the sewerage system. The machinery was started up about a year ago and has been run 12 hours a day only until recently; continuous pumping is now maintained and is found to be more satisfactory.

Mr. Charles F. Chapman, an eminent civil engineer. and a native of Prescott, Ont., died in Minneapolis last week. He had been employed on many important works in Canada and the United States.

DEBENTURES WANTED.

Municipalities usuing debentures, no matter for what purpose, will find a ready purchaser by applying to G. A. STIMSON, 9 Toronic Street, Toronic. N.B.—Money to loan at lowest rates on first mortgage.

D. BAER & GO.

... Bear Patent ...

COMBINATION - BRIDGE DOON, ONT.

All communications promptly answered.

Mufficipal Officers, Contractors and others are requested to mention the CONTRACT RECORD when corresponding with advertisers.

Paving Granite

Granite Sets for Street Paving.

CURBING cut to any shape ordered. Quarries, St. Phillipe d'Argenteuil, P. Q.

Address all communications to

JOS. BRUNET - COTE DES NEIGES; MONTREAL

MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.

J. M. SHANLY

WILLIS CHIPMAN, B.A.Sc.,

M. Can. Soc. C.E.; M. Am. Soc. C. E.; M. Am. W. W. Ass'n.

CIVIL AND SANITARY ENGINESR
Water Works - Betteraye.
Netwage Disposal

103 BAY STREET - TORONTO.

J. McDOUGALL, C. E.,

GENERAL MUNICIPAL ENGINEER Consulting Engineer for Municipalities in regard to Electric Railway and other Franchises. Specialties: Bridges, Foundations, Electric Railway, and Roads. Surveys made; Plans, Specifications and Agreements prepared, and work superintended.

GOURT HOUSE, . TORONTO.

JOHN D. EVANS, O.L.S.

MBM. CAN. SOC. C. B.

LAND SURPEYOR

Civil Engineer: Architect
and Patent Solicitor.

Special attention given to Consulting and Municipal Work.

GRASS' BLOCK, FRONT ST., TRENTON, ONT.

JOHN GALT

C. E. AND M. E., M. CAN. SOC. C. E., Consulting Engineer.

20 Years' Practical Experience in England, United States and Canada in Civil, Sanitary, Hydraulic, and Mechanical Engineering. SPECIALTIES

Waterworks, Sewerage, Electric Railways

Office: Rooms 99 and 100, CANADA LIFE BUILDING. - TORONTO.

ALAN MACDOUGALL

M. Can. Soc. C.E. M. Inst. C.E.

CIVIL AND SANITARY ENGINEER

32 East Adelaide St. - TORONTO

SURVEYS AND ESTIMATES PREPARED for all classes of municipal work, water powers, road improvement. Construction superintended.

Fire Bricks and Cement

DRAIN AND WATER PIPES SANITARY EARTHENWARE LONCON PORTLAND CEMENT

GUARANTEED GENUINE Paving and Scoria Bricks for Stables, Sidewalks, Yards, etc.
Large quantities on hand and to arrive. We handle only the best quality. Prices lower than ever.

F. HYDE & CO. MONTREAL.

THE "CRAHTRYX" SMOKE TEST AND DISINFECTING MACHINE.

E. D. MORRIS

Direct Importer and Dealer in

Best English and Canadian

PORTLAND CEMENTS

Vitrified, Paving and Fire Bricks, Fire Clay, &c.

Offices: 8 Market St.

THE "IMPROVED" **GEORGE GULLEY**

OR STREET DRAINING WELL.



TORONTO

Not ONE com-plaint.

For further par-ticulars, apply

LEWIS SKAIFE, Manager New York Life Building MONTRBAL.

Drummond McCall Pipe Foundry Company, MONTREAL

MANUPACTURERS OF WATER AND CAS

WORKS. LACHINE, QUE.

ANADA PIPE AND FOUNDRY CO....

MANUFACTURERS OF

Cast Iron Pipes and Special Castings

Works: MONTREAL AND ST. HENRI, QUE. CORRESPONDENCE SOLICITED.

HAMILTON AND TORONTO SEWER PIPE CO.

SEWERS, **CULVERTS.**

> AND WATER PIPES.

Fire Brick Sewers

Write for Discounts.

FOR ALL DUTIES

`oronto

Ont.

HEAD OFFICE AND FACTORY: HAMILTON, CANADA.

AND POWER STEAM



COPP

BROS. GO., (LIMITED)

The only Manufacturers in Canada and Sole Owners of the Canadian Patents of the American CHAMPION ROAD MACHINES CHAMPION ROCK CRUSHER CHAMPION SGEEL ROAD ROLLER

Catalogues Free. Correspondence Solicited COPP BROS. CO. -HAMILTON, ONT.

OF ST. JOHNS, P. Q., (LIM.)



Manufacturers of

Salt-Glazed Vitrified

SEWER PIPES

Double Strength Railway Cul-vert Pipes, Inverts, Vents,

ALL KINDS OF FIRE CLAY GOODS.

THE G. & J. BROWN MFG. CO.

Railway and Contractors' Plant.

BELLEVILLE, ONT.

Artificial Granite Stone Pavements

STREETS, SIDEWALKS, BASEMENT

FLOORS, ETC. The attention of municipalities and others interested is called to the excellence of this material.

GRAHAM

Sole Proprietor and Patente 226 Picadilly St., - LONDON. ONT.

Municipal Officers, Contractors and others are requested to mention the CONTRACT RECORD when corresponding with advertmers.

UNICIPAL **OFFICIALS**

should see to it that in the erection of town and city PUBLIC BUILD-INGS, the installation of water works plant, etc., the advantages of . . . MINERAL WOOL



are made use of for deadening sound in floors and partitions, insulation of heat and cold, fireproofing, etc., also SECTIONAL MINERAL WOOL COVERING for steam pipes, boilers, exposed water

CANADIAN MINERAL WOOL CO., Limited, 122 BAY ST., TORONTO

Montreal Agent: LEWIS SKAIFE?

, of New York Life Building

CENTRAL BRIDGE AND - -- - ENGINEERING COMPANY,

(LIMITED) Peterborough, Ont.

WM. H. LAW, Manager and Engineer.

RAILWAY AND HIGHWAY BRIDGES

Vladucts, Piers, Roofs, Turntables and Girders in Steel and Iron.

Tension members forged without welds. Riveting done by hydraulic or compressed air machines. Specialties: Good workmanship and strict adherence to specifications and drawings.

CAPACITY: 2,000 TONS PER ANNUM.

Prices of Building Materials.

CONDITION OF THE MARKET.

CONDITION OF THE MARKET.

TORONTO: The improvement noted in the hardware business has been maintained, and numerous orders are reported from the upper lakes, to be shipped by boats before the close of Navigation. Trade has fallen off in plumber's supplies, window glass and paints and oils, Galvanired iron is moving freely, and prices are being well maintained at \$4.25 for 28 gauge. A few ton lots of lead pipe have changed hands during the past week, but in general the demand is only for small quantities. Cement quotations are unchanged.

MONTHEAL: The market for builders' supplies remains quiet, and no renewed activity is looked for until the spring. Small lines of hardware are moving freely, and travellers report a brighter feeling among the country dealers. The arrivals of cement at this port for the week ending November 29 were \$5.700 casks of English brands, which completes the importations for the present season of navigation. Business is quiet and no large sales are reported. I irrebricks are reported in good demand at prices quoted below. Glass is steady. Galvanized iron, lead and iron pipe, and cut nails remain unchanged.

LUMBER.

CAR OR CARGO LOTS.

CAR OR CARGO LOTS.					
Tor	onto.	Mon	treal.		
. \$	\$	\$	\$		
15 to 2 clear picks. Am ins3 o	იდვნ სი		@45 ∞		
to 2 three uppers, Am ins.	37 00	40 00	45 00		
1 1/4 to 2, pickings, Am ins	26 0 0	27 00 52 50	30 00		
1 inch cleat		32 30			
hetter 200	0 22 00	18 ∞	20 00		
z better 20 0	0 1700		19 00		
7 x 10 and 12 dressing 20 0	0 2200		z\$ 00		
1 x 10 and 12 common13 0	0 14 00	8 ∞			
1 x 10 and 12 common	10 00	10 00			
i inch clear and picks 25 c	0 3230	33 ∞	9 ∞ 35 ∞		
i inch dressing and better 20 0	0 22 00	1800			
t inch siding, mill run 140	0 15 00	14 00			
inch siding, common12 0	0 130-)	1200			
i inch siding, ship cullsit o	0 12 00	1000			
inch siding, mill culls 9 oc Cull scantling 8 oc	1000	8 00 8 00			
-1/ and shicker cutting up		000	9 ∞		
plank24 00	2600	22 00	35 00		
plank	1500	16 (0	15 00		
1 inch strips, commot 11 (0	1200	11 ∞	13 (0		
1% inch flooring 16 0	17(0	14 (0			
t inch flooring	1700	1400	16 00		
XXX shingles, sawr, per M	- 4-		_ •		
76 in	2 (a 1 6a	2 60 1 63	260		
Lath 2 40	1 00	1 03	1 70		
•					
YALD QUOTATE	ONS.				
Mill cull boards and scantling	10 00		10 00		
Shipping cull bourds, pre-					
miscuous widths	13 00		13 00		
Shipping cull boards, stocks Hemlock scantling and joist	16 00		16 00		
up to 16 ft	1200		10 00		
up to 16 ft					
up to 18 it 12 00	300	13 00	3 (0		
Hemlock scantling and joist					
up to 20 ft	14 00	13 ∞	14 60		
cord	5 00		5 ∞		
Cedar for Kerbing, Ax 14.	3 00		3∞		
per M	14 00		14 00		
Scantling and jost, up to 16 ft	14 ∞		14 CO		
	1500		15 CO		
2011	16.0		6 00		
Scantling and joist, up to 22 ft	1700		17 00		
· " :6 ft	19 00 20 00		10 (0		
" " 2d ft	22 00		23 1 0		
" 70 ft	24 00		25 00		
" " 32 ft	27 00		27 00		
" 14 ft	29 50		39 50		
" 36 ft " 38 ft	3100		31 00		
" " 44 ft	33 00 34 00		35 00 36 0		
Cutting up planks, 11/2 and	-		J V		
tnicker, dry 25 00	28 oo	25 ∞	26 00		
Cutting up planks, 1% and		.0			
thicker, board 18 00	74 01	18 00	55 00		
B. M.		_			
1 1/2 in flooring, dressed, F.M. 26 00 1 1/2 inch flooring, rough, B.M. 18 00 1 1/2 inch flooring, rough, B.M. 18 00 1 1/2 in undressed, B.M. 18 00	30 00	28 ∞	31 00		
14 the descent FM	22 00	18 ∞	22 00		
136 u undressed, BM, 18 oo	19 00	27 ∞ 18 ∞	30 00		
134 " dressed1800	:000	18 ∞	19 00 22 03		
al/ unl	15 m	13 00	2500		
Beaded sheeting, dressed20 00	3500	22 00	35 ∞		
Beaded sheeting, dressed 20 00 Clapboarding, dressed	13 00		12 00		
18 in 2 60			• • •		
Sawnlath 2 50	- 10	2 50	3 co 2 60		
Cedar	2 90	- 30	290		
KEG 03K	40.00	30 00	40 00		
Wnite37 00	45 00	35 ∞	45 00		
White	30 00	18 ∞	30 OO		
CHOIN, 210 + and 270 00	00 oo	70 ∞	80		
	,	,			

		ito. N		al.
White ash, No. 1 and 2 Black ash, No. 1 and 2	94 00	35 00 30 ∞	18 co 30 co	35 ∞ 30 ∞
Picks, American inspection	10 00]	30 00	16 00	22 00 40 00
Three uppers, Am. inspect	ion K—191	50 00		50 00
Common Walling		6 50 8 00		6∞
Good Facing		0 8 00	8 50	8 50 9 00
Pressed Brick, Per Red, No. 1, f.o.b. Beamsvi	ille	16 0		
" " 3		14 00 9 00		
Brown	• •	21 00 24 CO		
Roman Red Buff Brown		30 ∞ 35 ∞		
Sewer	•	40 ∞ 7 50 6 0 1		
Roof Tiles	 h)	22 00 20 60		
Red "A" f. o. b. Don Vall	ey	18 00		25 00
Red "A" f. o. b. Don Vall Red "B" " " Red "C" " " "		16 00		20 00 17 00
Trojan and Corinthian Pompeiian Athenian and Egyptian	••	33 00 31 00		28 00 28 00
Tyrian		25 ∞ 35 ∞ 40 ∞		31 00 41 00 45 00
Roman		35 00		40 00 45 00
Ornamental	. 30 00	100 00	30 00 1	00 00
ist quality, f.o.b. at Port C	redit	14 00 12 00		18 00 15 00
Hard building brick		8 00 6 50		12 00
Omamental, per 100	३∞ N.D.	10 00		٠
Per Load o 11/2 Cubic Yar		1 25		1 25
STO				
Common Rubble, per tois delivered. Large flat Rubble, per toise	e, 	14 00		14 00
delivered. Foundation Blocks, per c. f Kent Freestone Quarrie	•	18 00 50		18 ∞
Kent Freestone Quarrie Moncton, N. B., per ci	s 1	30		50
River John, N. S., brow	n.	1 00		
Freestone, per cu. ft., f.o. Ballochmyle New York Blue Stone Granite (Stanstead) Ashlar,	b. . 8o	95	65	75
New York Blue Stone Granite (Stanstead) Ashlar,	6	Ť		1 05
			70	25 80
Moat Freestone	cu. It. ar		75	80
Credit Valley Brown Cour	s.	8 ∞		
ing, up to 10 inch, per sur yard, at quarry	p. :	z 75		
sion, per cu. ft. at quarry	<u></u>	60		
sion, per cu. ft. at quarry Credit Valley Grey Coursing per superficial yard Credit Valley Grey Dimer	. I 50	2 00		2 15
sion, per cubic foct MadocRubble, delive ed, pe		60		75
		14 50	14 00	14 50
Madoc dimension floating, o. b. Tororto, per cubic f Ohio Freestone, No. 1 Blu Promiscuous, f.o.b.	t. 30 e	32		
Promiscuous. f.o.b No. 1 Blue Dimension No. 1 Buff Promiscuous		60 65		
No. 1 Bull Dimension		80 85		
The above prices mean freight and duty paid.				
2 in, sawed flagging persq.fr 23 ii ii ii ii 32 ii ii ii ii	•	13¾ 16¾		
37 11 11 11 11 11 11 11 11 11 11 11 11 11		22 27 %		
Outy to be added to thes		33		
prices.				
Quebec and Vermont rough granite for building pur poses, per c.ft. f.o.b. quarry	Y 33	1 50		
poses, per c.ft. f.o.b. quarr For ornamental work, cu. ft Granite paving blocks, 8 in. to	0	20		
tain. x6in. x4% in., per h Granite curbing stone, 6 in.;	K	50 ∞		
20 in., per lineal foot		70		
Rocfing (* square).		18 co		20 00
o purple		9 00 8 50		6 00
untading green black Terra Cotta Tile, per sq Ornamental Black Slate Roof		3 00 25 00		7 50
Ornamental Black Slate Roof	•	8 ∞		
PAINTS.	In oil,		4	4
White lead, Can., per 100 lbs. "zinc, Can., "" Red lead, Eng	6 50	5 50 7 50 5 00	6 00 7 50	6 25 8 00 6
Red lead, Eng	. 160	1 75 1 00	1 60	1 75 1 00
" Indian, Eng	. 10	12	90 10	122
Vellow chrome	. 15	20 20	15 7	20 12
Black lamp	. :0	25 25	20 20	20 25
Blue, ultramarine	7.0	20 59	12	18
Oii, linseed, raw, & Imp. 1.41 boiled refined,	57 78	63 85	63 66 75	65 68 75
Whiting, dry, per 100 lbs	. 2¾ - 75	23/2 1 00	75 21/4 60	75 2½ 75
Putty	. 90	I 25 5	9° 634	3 10
Umber, "	: 83	15	12	15 15
CESTENT, 1 Cement, Portland, per bbl German.	. I.HE,	elc. 2 50		3 50
" London "	2 50	2 75	2 65	2 85 2 90
" Newcastle "				3 30

NIKACI RECORD.	November 29, 1894			
Toronto. Montrea	l. Toronto. Montreal			
Cement, Belgian, per bbl 230 185 20	COMMON BARREL NAILS.			
Consider 1. 230 230 225 23	30 1 inch, per 100 lbs 1 50 1 50			
77 144	75 🚜 '' '' '' 1 75 75			
	•			
" Superfine " 630 700 630 76	CLINCII NAILS.			
" Queenston, " 1 to	inch, per 10.1 lbs. 85 85			
" Napanez, " 150 " Hull, " 150	73 440 374			
Keene's Coarse "Whites" 4 50 475 450 47	. 134 and 134 " 114 116			
Calcined plaster, per barrel rec 19	10 1% " 200 200			
Fire Bricks, Newcastle per M 22 on 20 on 16 to 22 c	უ 1 ° ° ° 250 21 ზე			
" Scotch " 23 00 10 00 14 00 30 0	SHARP AND PLAT PRESSED HAILS.			
Lime, Per Barrel, Grey 30 400 300	3 inch, per 100 lbs. 1 35 1 35			
Flaster, Calcined, N. B 200	2½ and 2½ "" 150 150			
" " N. S 200				
Hair, Plasterers', per bag 80 100	11/2 " " " 250 250			
HARDWARE.	1""" 300 300			
Cut nails, 5: d & 6:d, per keg 240 25	STEEL WIRE NAILS.			
Steel 11 11 11 250 23	Steel Wire Nails, 75, to and 5 % discount from printed list.			
CUT NAILS, FENCE AND CUT SPIKES.	Iron Pipe:			
70d. u 11 u t 1	o Iron pipe, & inch, per foot 6c.			
20d, 16d and 12d, hot cut, per	11 1 3/4 11 11 1			
100 lbs 15 1	13			
10d, ho; cut, per 100 lbs 20 2 8d, 9d, 11 11 25 2				
6d, 7d, '' '' 40 4	5			
4d to 5d," " " 60 6	o ii ii i¾ ii ii 30			
34,				
2d, " " " 150 15 4d to 5d cold cut, not polished	to Black wrought tron pipe, 67 1/1/2 off above prices. Galvanized 40/2 to Cast and soil "57/2"			
	Cast and soil " ". 57% "			
3d to 5d cold cut, not polished	Lead Pipe:			
	Lead p.pe, per lb			
PINE BLUED NAILS.	Waste nine, per lh.			
3d, per 10 lbs 150 15 2d, " " 200 20	Discount, Toronto and the West, 30 % off in small			
CASING AND BOX, FLOORING, SHOOK AND TOBACCO BO				
NAILS,				
12d to 30d, per 100 lbs 50 5	Galvanized Iron:			
rod, 60 6	o Adam's—Mar's Best and Queen's Head:			
ou and 90, 75 7	5 16 to 24 guage, perlb 4½c. 4½c o 26 guage, " 4½ 5			
6d and 7d, "" 90 9	o 26 guage, " 4½ 5 o 28 " 5 5½			
3d, " " 150 15	o Gordon Crown—			
FINISHING NAILS.	16 to 24 gunge, per lb 4½ 4½ 26 gunge, " 4½ 4½			
3 inch, per 100 lbs. 85 8	J 40 11 11 11/ 4			
2½ t0 2½ """ 100 10				
21032	•			
1½ to 1½ " " 35 13 1½ " " 175 17	•			
1 " " 225 22	, Steel Deality per 100 lbs 275 250			
SLATING NAILS.	Characts, 295 200			
sd, per 100 lbs	: " tees, " 280 264			
3d, " " 125 12	" " plates, " 255 235			
2d, " " 175 15	T Sheared steel bridge plate and and			
INDEX TO ADVERTISEMENTS				
	Architect and Builder."			

	/3 .30	
	EX TO AD	
Architects.	_ Cements.	
Ontario Directory . III	Bremner, Alex v Currie&Co, W.&F P xii Estate of John Battle viii Magune Br. s	Gurney ! King & S
Queoec Directory it	Estate of John Battleviii	Ormsby Pease Fi
Architectural Sculp- tors and Carvers.	Magune Br. s i Morris, E. D vi	Toronto
Holbrook & Molling.	Owen Sound Portland	Co
ton i	Morris, E. D vi Owen Sound Portland Cement Co v Vokes Hardware Co i	Williams
toni Wagner, Zeid'er & CoIII	Cut Stone Con-	Currie &
Architectural Iron-	tractors.	Currie & Morris, I
Work.	Isaac Bros II Oakley & Holmes II	
B. Greening Wire Co. xii Dominion Ornamental	-	Denton 8
Iron Covi	Chimney Topping.	Met
Meadows Geo B ii	Bremner, Alex v Currie&Co., W &F.P. xii	B. Green Metallic
Iron Co vi Dominion Bridge Co. I Meadows, Geo.B ii Shipway Mfg o iv Toronto Fence & Ornamental Iron Co vii Whitfield John. I	Drain Pipe	
mental Iron Co vii	Bremner, Alex v	Morta Shin
Whitfield, John I	Bremner, Alex v Currie &Co., W&F.P. xii Hamilton and Toronto	Cabot Sa
Art Woodwork.	Sewer Pipe Co xi	Maguire
Carnovsky Wood Mfg	Maguire Bros i	Muirhea
Coix Knechtel, SIII Wagner, Zeidler & Co. III	Standard Drain Pipe	Orna
Bricks (Pressed).	Co II Vokes Hardware Co ii	Baker, J. Hynes, V
Paneralla Passand	Dumb Walters	Hynes, V
Brick Co viii	King & Son, Warden x	Paints
Brick Co viii Morris, E. D vi Port Credit Pressed Brick & Terra Cotta Co., Limited viii	Electric and Gas Fixtures	Harris C
Brick & Terra Cotta	Barwell, James IV	Muirhead
Taylor Brosviii	Electric Wiring	P. Gilmor &
Builders' Supplies.	Rogers & Doss IV	1
Bremner, Alex v Currie & Co., W & F P. xii Clatworthy, Geo ix Maguire Bros i Morris, E. D vi Rice Lewis & Son IV	*	The G
Clatworthy, Geo ix	Elevators Fensom, John LV	Barytic
Morris, E. D vi	Fensom, John IV	P!
Rice Lewis & Son IV	Williams, A. R xii	Hynes, \
Vokes Hardware Co i Building Stone	Engravers.	Plumb Barwell,
Dealers. Carroll, Vick & Co vii	Can. Photo-Eng Bu- reauiv	Dominion
		Pottery Sanitas A
Builders' Hard- ware.	Fire Brick and Clay	Toronto:
Rice Lewis & Son IV Vokes Hardware Co i	Bremner, Alex v Currie& Co, W &F P xii	& Meta McRae 8
Creosote Stains	Morris, E. D vi	
Cabot, Samuel IV	Standard Drain Pipe	Planis C
Church and School	Co 11	Hobbs M
Furniture.	Galvanized Iron Workers.	McCausi: The Cons
Furniture Co ix	Tucker & Dillon II	Glass (
Can. Office & School Furniture Coix Globe Furniture Coix Office Specialty Cox	Douglas Bros II Ormsby & Co., A. B I	Pargu
Snider, J. B ix		Elliott &
Church Resectors	Granite Bruget, Jos 111	Pallanter
Frink, I. Piv		Ballantyr
Contractors' Plant and Machinery	Grates and Tiles.	Repro Di
Rice Lewis & Son IV	Holbrook&Mollington i Rice Lewis & Son	New Cold

Architect and Builde	er."
Heating.	D
Cuman Founday Co. vii	Douglas Bros. 11 Duthie & Sons, G. 11 Hutson, W. D. 11 Metallic Roofing Co. vii Rennie & Son, K. 11 Stewart, W. T. 11 Williams & Co., H. 11 Warren Chemical &
Ving & Son Waylen	Duthie & Sons, G II
Gurney Foundry Co xii King & Son, Warden x Ormsby & Co., A. B I Pease Furnace Co xii	Union W D
Ormsby & Co., A. B., 1	Hutson, W. D 11
rease rumace co xii	Metallic Roofing Co vii
Toronto Rudiator Mfg	Rennie & Son, R II
Co isi Williams, A. R xii	Stewart, W. T II
	Williams & Co., H 11
Line. Currie & Co, W & F P. xii Morris, E. D vi	
Currie & Co. W &F P. vii	Mfg. Co 11
Morris E. D. vi	Roofing Materials
1101101 01 01 11 11 11	Roofing Materials Danville State Co iv Merchant & Co ii
Legal.	Merchant & Co ii
Denton & Dods II	Metallic Roofing Co., vii
	Warren Chemical &
Metallio Lath.	Mfg. Co 1
B. Greening Wire Co. xii	
Metallic Roofing Co vii	Sanitary Appli-
	ances
Mortar Colors and	Dominion Sanitary
Shingle Stains.	Pottery Co iv
	McRae & Co 11
Cabot Samuel, IV Maguire Bros i	Sanitas Míg. Co II
Mariehand Andrew	Toronto Steel Clad Bath
Muirhead, Andrew i	& Metal Coii
Ornamental Plas-	
terers.	Shingle Stains
Pales I D	Cabot, Samuel IV
Baker, J. D vi Hynes, W J II	gildlag Dilade
Hynes, W J II	Clatworthy, Geo ix
Paints & Varnishes,	Sliding Blinds Clatworthy, Geo ix Lea & Seaman II
	Den of Deamail 11
Harris Co., The E vi	Stained and Decora-
Muirhead, Andrew i	tire Glass
The day days	
Painters.	Dominion Glass Co iv
Gilmor & Casey iv	Drake, W iv
Paving.	Elliott & Son 1
The Guelich Silica	Gilson Bros. Stained
Barytic Stone Co IV	Glass Works iv
Day file blone co I	Castle & Son
Plasterers	Hobbs Mfg. Co iv
Hynes, W. J II	Horwood & Sons, H., iv
113110, 11. 3 11	McCausland & Soo ii
Pleanhing Summilian	Longhurs . H iv Quesnel, Sharpe & Co. iv Ramsay & Son, A iv Spence & Son, J. C iv
Plumbing Supplies	Quesnel, Sharpe & Co. iv
Daminion Sonitares	Ramsay & Son. A iv
Barwell, James IV Dominion Sanitary Pottery Co iv Sanitas Mfg. Co II	Spence & Son. I. C iv
Contract Mar Co 17	openee et ouit, j. O 14
Toronto Steel Clad Bath & Metal Co	Terra Cotta
S Maral Co	The Karitan Hollow &
MaDan & Co VII	Porous Brick Co vi
McRae & Co II	
Dinta Circa	Wall Paper and Celling Decorations Ellion & Son 1
Plate Glass Harris Co., The E vi	Celling Decorations
Harris Co., The E vi	Elliott & Son I
Hobbs Mfg. Co v McCausland & Son ii	WireManufacturers
McCausland & Son ii	
The Conso'idated Plate	B. Greening Wire Co. xii
Glass Co ii	Alezdows, Geo. B ii
T)	B. Greening Wire Co. xii Meadows, Geo. B ii Shipway Mfg Co iv
Parquetry Floors	Wall Planter
Elliott & Son I	Wall Plaster Nowell & Co.B. L vi
Plumbers	
	Wall Tie
Ballantyne, James ii	Mac Machine Co ix
Reproduction of	Window Blinds.
Drawings	Clatworthy, Geq is
New Color Process Co. ix	Lea & Seaman II
ATCH COOL A TOCKS CALL IX	com the Ocalians, all

atina	Roofers
andni Ca wii	Dougles Pres 11
undry Co xii	Douglas Bros 11
, warden x	Dutnie & Sons, G II
ating. undry Co xii n. Warden x Co., A. B I nace Co xii adiator Mfg	Douglas Bros
nace Co xii	Metallic Roofing Co vii
diator Mfg	included or oom, It At
isi	Stewart, W. T 11
A. R xii	Williams & Co., H 11
ime.	Mfg. Co 11
lme. o, W&F P. xii	
D vi	Roofing Materials Danville State Co iv Merchant & Co ii
	Danville Slate Co iv
egal.	Danville Slate Co iv Merchant & Co ii
Dods II	Metallic Roofing Co., vii
	Warren Chemical &
llo Lath. g Wire Co. xii	Mfg. Co
g Wire Co. xii	
oofing Co vii	Sanitary Appli-
Com	ances
Colone and	Dominion Sanitary
Colors and c Stains.	Pottery Co iv
o pianio.	McRae & Co 11
uel, IV	Sanitas Mfg. Co. 11
ros i	Toronto Steel Clad Bath
Andrew i	& Metal Corii
	a metal co
ental Plas-	Shingle Stains
rcrs.	Cabot, Samuel IV
) yi	Oncor, Cambel
J 11	Sliding Blinds
	Clatworthy, Geo ix
Vormishes	Lea & Seaman II
Varnishes.	
Andrew i	Stained and Decora-
Andrew i	tive Glass Castle & Son
	Castle & Son ir
nters.	Dominion Glass Co., iv
asey iv	Drake, W iv
nin a	Elliott & Son 1
ving. ich Silica	Gilson Rms Stained
	Glass Works iv
tone Co IV	
	Grimson, G. & J. E iv
lerers	Hobbs Mig. Co iv
J 11	Horwood & Sons, H., iv
	McCausland & Soo ii
g Supplies	Longhurs, H iv
mes IV	Quesnel, Sharpe & Co. iv
Sanitary	Ramsay & Son, A iv
Sanitary iv z. CoII rel Clad Bath	Quesnel, Sharpe & Co. iv Ramsay & Son, A iv Spence & Son, J. C iv
z. Co 11	
cl Clad Bath	Terra Cotto The Karitan Hollow &
Covii	The Raritan Hollow &
Co 11	Porous Brick Co vi
. (1)	Wall Paper and
TLT	Celling Decorations
o Glass The E vi y. Co v d & Son ii	Elliott & Son 1
, ω y	
d & Son ii	WireManufacturers
Marker & Mile	B. Greening Wire Co. xii
ii	B. Greening Wire Co. xii Meadows. Geo. B ii Shipway Mfg Co iv
	Shipway Mfg Co iv
ry Floors	TP-II Dr-4-
ina I	Wall Planter
	Nowell & Co.B. L vi
mbers	Wall Tie
James ii	Mac Machine Co ix