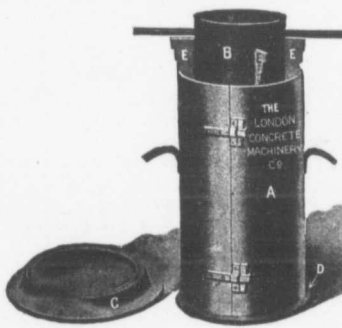


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*A Weekly Journal of Engineering, Public Works,  
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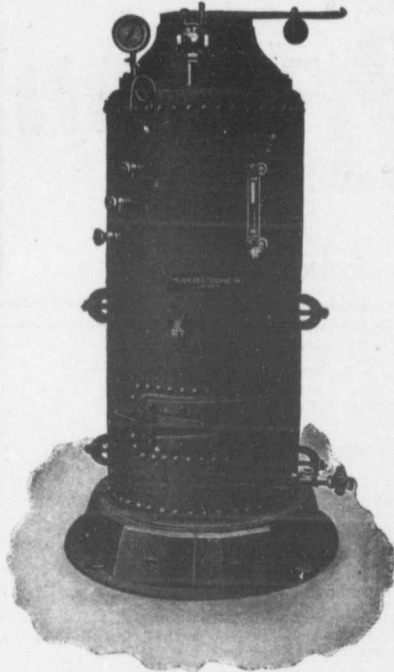
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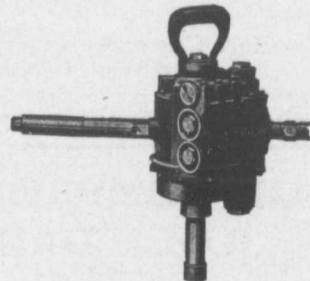
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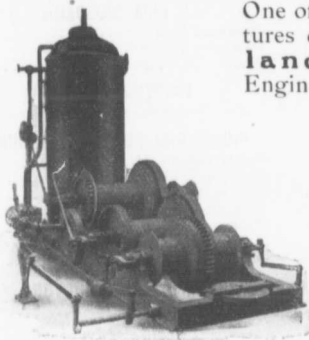
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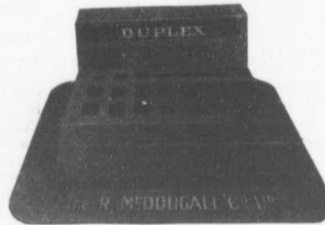
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## CLASSIFIED INDEX OF ADVERTISERS

<b>ACCIDENT INSURANCE</b>	Page				
Ontario Accident Insurance Co.....	25				
<b>BOILERS</b>					
Jenckes Machine Co.....	2				
McDougall Caledonian Iron Works...	9				
<b>BRICK</b>					
Don Valley Brick Works.....	5				
<b>BRIDGES (STEEL)</b>					
Canadian Bridge Co.....	8				
Canada Foundry Co.....	33				
Dominion Bridge Co.....	30				
Hamilton Bridge Works Co.....	1				
Ontario Bridge Co.....	29				
Phoenix Bridge and Iron Works.....	30				
<b>CASTINGS (IRON)</b>					
Jenckes Machine Co.....	2				
McDougall Caledonian Iron Works...	9				
<b>CEMENT</b>					
Alsen Portland Cement Co.....	8				
Bremner, Alex.....	27				
Canadian Portland Cement Co.....	26				
DeSola, C. I.....	26				
Edison Portland Cement Co.....	6				
Gray & Bruce Portland Cement Co.....	26				
Hanover Portland Cement Co.....	32				
Hartranft, Wm. G.....	30				
Lakefield Portland Cement Co.....	7				
McNally & Co., W.....	26				
Morrison & Co., T. A.....	32				
Owen Sound Portland Cement Co.....	30				
Ontario Portland Cement Co.....	30				
Stinson-Reeb Builders' Supply Co....	3				
Thorn Cement Co.....	7				
<b>CONCRETE BLOCK MACHINES</b>					
Canadian Concrete Machinery Co....	31				
Famous Machinery Co.....	5				
Ideal Concrete Machinery Co.....	34				
London Concrete Machinery Co.....	1				
Mussens Limited.....	10				
<b>CONCRETE MIXERS AND MACHINERY</b>					
Canadian Fairbanks Co.....	2				
Dartnell, E. F.....	35				
Goold, Shapley & Muir.....	5				
Hopkins & Co., F. H.....	36				
Ideal Concrete Machinery Co.....	34				
Jenckes Machine Co.....	2				
London Concrete Machinery Co.....	1				
Mussens Limited.....	10				
Morrison & Co., T. A.....	32				
Toronto Pressed Steel Co.....	34				
Vining Bros. Mfg. Co.....	35				
Wettlaufer Bros.....	24				
<b>CONTRACTORS' PLANT</b>					
Beatty & Sons, M.....	6				
Canada Foundry Co.....	33				
Canadian Rand Co.....	1				
Canadian Swensons.....	27				
Hopkins & Co., F. H.....	36				
Humphries Bracket Scaffolding Co...	35				
Jenckes Machine Co.....	2				
Mussens Limited.....	10				
Toronto Pressed Steel Co.....	34				
Wallington, G. P.....	32				
<b>CONTRACTORS</b>					
Canadian General Development Co....	1				
Tromanhauser, J. H.....	32				
<b>CONCRETE CONSTRUCTION</b>					
Ambursen Hydraulic Construction Co...	25				
<b>CORRUGATED IRON</b>					
Galt Art Metal Co.....	27				
Metallic Roofing Co.....	32				
Metal Shingle and Siding Co.....	29				
Ormsby, A. B., Limited.....	25				
Roofers Supply Co.....	32				
<b>CRUSHERS (STONE AND ROCK)</b>					
Canada Foundry Co.....	33				
Dartnell, E. F.....	35				
Hopkins & Co., F. H.....	36				
Jenckes Machine Co.....	2				
Mussens Limited.....	10				
Morrison & Co., T. A.....	32				
Sawyer & Massey & Co.....	6				
<b>DRILLS</b>	Page				
Canadian Rand Co.....	1				
<b>DRILLING CONTRACTORS</b>					
Bell, Wallace.....	27				
Harvey, J.....	32				
Peat & Sons, Jas.....	26				
<b>DEBERTURES</b>					
Stimson & Co., G. A.....	32				
<b>ENGINEERS (CIVIL AND MECHANICAL)</b>					
Birds, S. B.....	30				
Canadian Engineers, Limited.....	28				
Chipman, Willis.....	28				
Bowman & Connor.....	28				
Clarke & Monds.....	28				
Davis & Johnston.....	28				
Farmer, John T.....	28				
Fenson, C. J.....	28				
Fielding, John S.....	25				
Galt & Smith.....	28				
Jackson, John H.....	28				
Keating & Breithaupt.....	28				
Lea & Coffin.....	28				
Leofred, A.....	28				
Macallum, A. F.....	28				
Smith, Kerry & Chase.....	28				
Thomas, J. Lewis.....	28				
Wells & Raymond.....	28				
<b>ENGINES</b>					
Cameron & Co., Hugh.....	30				
Jenckes Machine Co.....	2				
McDougall Caledonian Iron Works...	9				
Sawyer & Massey Co.....	6				
<b>ELECTRICAL APPARATUS AND SUPPLIES</b>					
Canadian General Electric Co.....	33				
Drummond, McCall & Co.....	8				
<b>FIRE APPARATUS</b>					
Cameron & Co., Hugh.....	30				
Laurentian Granite Co.....	26				
McGregor & McIntyre.....	29				
Morrison & Co., T. A.....	32				
Seagrave, W. E.....	7				
<b>GRANITE</b>					
Laurentian Granite Co.....	26				
<b>HOISTING MACHINERY</b>					
Beatty & Sons, M.....	5				
Canada Foundry Co.....	33				
Georgian Bay Engineering Works...	3				
Jenckes Machine Co.....	2				
Hood & Son, Wm.....	7				
Hopkins & Co., F. H.....	36				
Mussens Limited.....	10				
<b>HYDRANTS</b>					
Canada Foundry Co.....	33				
Canadian Fairbanks Co.....	2				
Canadian Iron & Foundry Co.....	8				
Gartshore-Thomson Pipe & Foundry Co.	6				
Kerr Engine Co.....	35				
McDougall Co., R.....	3				
<b>LOCOMOTIVES AND RAILS</b>					
Canada Foundry Co.....	33				
Gartshore, John J.....	32				
Hopkins & Co.....	36				
Mussens Limited.....	10				
Sessenwein Bros.....	32				
<b>METERS</b>					
Neptune Meter Co.....	3				
<b>PLASTER BOARDS</b>					
P. W. St. George.....	32				
<b>PILE DRIVING</b>					
Hood & Son, Wm.....	7				
Russell, John E.....	7				
<b>PAVING AND PAVING MATERIALS</b>					
Ontario Asphalt Block Co.....	34				
Silica Barytic Stone Co. of Ontario...	32				
<b>PIPE (CAST IRON)</b>	Page				
Canada Foundry Co.....	33				
Canadian Iron & Foundry Co.....	8				
Gartshore-Thomson Pipe & Fndry Co	6				
Gaudry & Co., L. H.....	29				
Ontario Sewer Pipe Co.....	29				
Stanton Iron Works Co.....	26				
<b>PIPE (WOODEN)</b>					
Canadian Pipe Co.....	33				
Dominion Wood Pipe Co.....	33				
Pacific Coast Pipe Co.....	24				
<b>PAINTING MATERIAL</b>					
Eadie Douglas Co.....	27				
<b>PUMPS AND PUMPING MACHINERY</b>					
Beatty & Sons, M.....	6				
Canadian Fairbanks Co.....	2				
Canada Foundry Co.....	33				
Drummond, McCall & Co.....	8				
Mussens Limited.....	10				
McDougall Caledonian Iron Works...	9				
Ontario Wind Engine & Pump Co....	7				
<b>REFUSE DESTRUCTORS</b>					
Heenan & Froude.....	27				
<b>ROOFING MATERIALS</b>					
Roofers Supply Co.....	32				
<b>ROAD MACHINERY</b>					
Cameron & Co., Hugh.....	30				
Climax Road Machine Co.....	30				
Heaman, George.....	34				
Morrison & Co., T. A.....	32				
Mussens Limited.....	10				
<b>ROPE</b>					
Allan, Whyte & Co.....	30				
Dominion Wire Rope Co.....	36				
Greening Wire Co., B.....	6				
<b>SLATE</b>					
Roofers Supply Co.....	32				
<b>STEEL BARS (CORRUGATED)</b>					
Corrugated Steel Bar Co. of Canada...	30				
<b>STRUCTURAL IRON AND STEEL</b>					
Canada Foundry Co.....	33				
Dominion Bridge Co.....	30				
Hamilton Bridge Works Co.....	1				
McGregor & McIntyre.....	29				
Phoenix Bridge & Iron Works.....	30				
Reid & Brown.....	32				
Taunton, Richard A.....	27				
<b>STONE</b>					
Crushed Stone, Limited.....	30				
Doolittle & Wilcox.....	6				
Hagersville Contracting Co.....	5				
Laurentian Granite Co.....	26				
Morrison & Co., T. A.....	32				
<b>SHOVELS (STEAM)</b>					
Beatty & Sons, M.....	6				
Canada Foundry Co.....	33				
Hopkins & Co., F. H.....	36				
Mussens Limited.....	10				
<b>TANKS AND STAND PIPES</b>					
Canada Foundry Co.....	33				
Jenckes Machine Co.....	2				
Ontario Wind Engine & Pump Co....	7				
<b>VALVES</b>					
Canada Foundry Co.....	33				
Canadian Fairbanks Co.....	2				
Canadian Iron & Foundry Co.....	8				
Gartshore-Thomson Pipe & Foundry Co.	6				
Kerr Engine Co.....	35				
McDougall Co., R.....	3				
<b>WOOD FIBRE PLASTER</b>					
Imperial Plaster Co.....	6				
<b>WHEEL SCRAPERS</b>					
Bechtels Limited.....	27				

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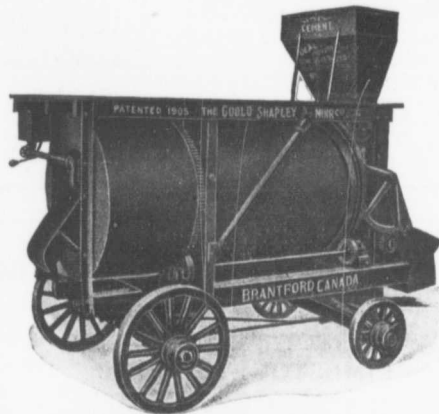
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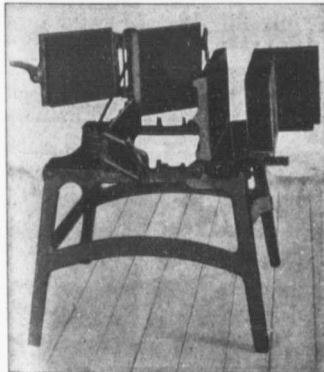
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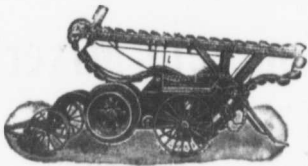
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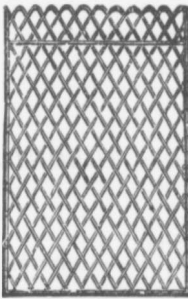
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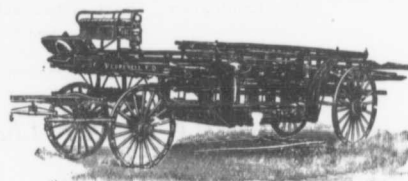


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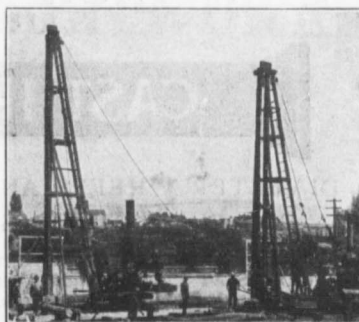
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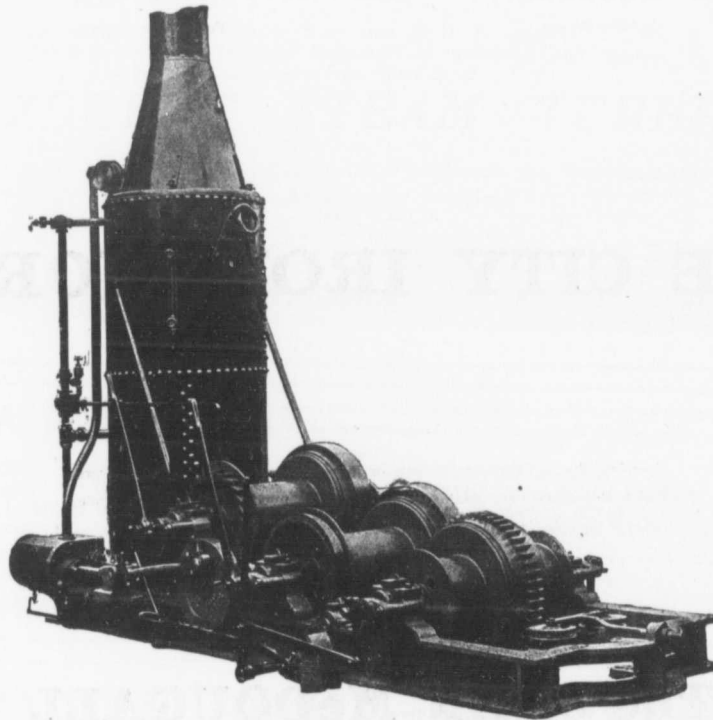
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### A Good Time to Build.

Conflicting reports come from various parts of the country regarding the prospects for the building trade. No one reports any great falling off, but the general report is one of hesitancy on the part of builders. Vancouver provides a healthy exception, and reports great activity. As to the favorableness of the present time for building operations no one seems to be greatly in doubt. The hesitancy is the result of inability to shake off the effects of the recent nightmare experienced by the financial world. A little foresight and determination are all that are needed to overcome this. There was seldom a more favorable time for building. Events of the last few months have led to a peculiar situation in the building business. It is scarcely more than half a year since those who wished to build, found, upon making enquiries, that the time was about the most inopportune they could select. Prices of material were higher than for many years, in fact higher than they had ever been before, taking everything into consideration. The cost of labor was similarly high. After one had made a contract it was difficult to have it carried out because of the fickleness of labor. Contractors had the greatest difficulty in completing their undertakings and people who had ordered buildings to

be erected had to put up with every conceivable delay. In many cases they had to face the alternative of brooking the delay or putting up with unsatisfactory or defective work. In the face of all these difficulties the price of money was exceptionally high.

The position, however, contained its own remedy, and has been of assistance in getting over the threatened financial troubles. The patience of the builders was being stretched to the breaking point, so that operations threatened to come to a sudden end. But fear of a financial panic came just in time, and it was not long before conditions began to change. Before the change, hard times had actually arrived, and employers had commenced to lay off their hands. Labor became a drug on the market. Then came the opportunity for the builders, and it has been improving ever since.

It is an unpleasant reflection that such a change was necessarily accompanied by hardship to a number of unemployed. But it is a pleasant thing, on the other hand, to think that we have passed safely through the trials of a threatened panic and have escaped practically unscathed. The improvement in the building prospect cannot fail to be coincident with a general improvement in trade conditions throughout the country. This being the case there is nothing now to look forward to but good times. Those who wish to do so can discount the future by having their own good times to-day. Builders are as quick as anyone to recognize the truth of this. When things are on the mend they are proverbially optimistic. To-day they are making optimism an asset of their business. Optimism is always worth more than par to the builder, and the indications to-day are that he will be able to realize on it, a large advance above par. Some people believe that optimism is really not a commercial article, that careful conservatism is the only safe guide through thick and thin. This is a good enough rule if one is content with what he has, and is not troubled with ambition, but the man who desires to

make business conditions better and to get a little slice of the prosperity melon for his own consumption will look ahead in dark times and in bright, and always be ready with the counsel of good cheer. He can place his optimism in the market and obtain for it a good price in dollars and cents; a price which may be definitely credited to that source by the accountant who looks over his books at the end of the year.

There is no room for doubt that with a continuance of present conditions the building business and business generally will soon be on the hum again. Hard times have been turned down and good times are up again. With the passing of the winter, the trials of the unemployed are becoming less severe. Should conditions improve as they promise to, the unemployed will soon disappear and scarcity of labor will again be the cry. The pendulum of commerce is swinging back to its proper side, and those who are living on hope alone can confidently expect to have something more substantial before many morrows have become to-days.

### Defeat of Anti-Bonus Bill.

The Ontario Government has found itself again face to face with the troublesome question of the bonusing of industries by municipalities. The question is perennial, and in one form or another has been a source of worry to governments and municipalities for many years past. In its present form it causes heartburnings and anxieties in almost every case in which it arises. It is natural for young municipalities to desire the erection in their midst of progressive industries. They see more than anything else the possible advantages from increased employment for their citizens. The likelihood of failure on the part of the company, and its attendant loss to the municipality, of the amount of its bonus, does not figure much in the calculations. Municipalities are after business as much as anyone, but sometimes they overreach themselves and disaster results. As a municipality grows and becomes a centre of industry the necessity for bonusing de-

creases and its attractiveness for manufacturing concerns increases. Large cities attract simply by the market they provide, and by their good railway facilities.

There is a time in the growth of a municipality when it can give over the bonusing system, but the habit grows with its exercise, and so long as no disastrous results have occurred to a municipality it will probably continue the practice. The younger and more inexperienced a municipality, the more it needs the protection of the Government. The older ones are pretty well able to take care of themselves. The necessity for a bill to abolish the bonusing system is not very great so far as the larger municipalities are concerned. As for the smaller places the government has control over their individual efforts to bonus and can exercise any necessary restraint in this way. It seems wise, therefore, on the part of the Legislature's committee, that it should recently have refused to acquiesce in the bill proposed for abolishing the system entirely.

That the question is not so simple as it might appear at first glance, is evident from the experience of the Government in the somewhat similar case of its own bonusing of railways. Although on a larger scale, the principal is much the same. The present Conservative Government, when its members were in opposition, criticized the former Government for its bonusing policy. It has made a strong effort to stop the practice since it came into power, but like its predecessors has found that it has to make exceptions to the rule.

#### G. T. P. Has the Money.

Canadians can be justly proud of the confidence felt in their financial stability in England. Mr. Charles M. Hays, second vice-president and general manager of the Grand Trunk, and president of the Grand Trunk Pacific, has returned from his trip to England, where he was in conference with President Sir Rivers Wilson and directors with regard to matters of policy. In an interview he said there was every reason for satisfaction with

the result of the recent Grand Trunk Pacific bond issues. There was not," said Mr. Hays, "the same avidity for all kinds of securities that there was in former years. The public were more discriminating. Their knowledge was very much greater, but the best class of Canadian securities were in good demand. They were evidently considered 'good things,' and I am happy to say that the Grand Trunk Pacific bonds were in that category. The reception given to these Canadian securities contrasted most favorably with the reception given to the three million pounds 3 1-2 per cent. loan of the New South Wales Government, which went decidedly flat." He said the Grand Trunk Pacific was now, with the large balance in hand in its treasury, and the two issues made this year — one for \$5,000,000 and the other for \$10,000,000 — exceedingly well provided with funds. It had sufficient for all its requirements for the next two years.

#### It Never Pays to be Nasty.

Architects and builders are frequently troubled by the unreasonable demands of people who set themselves out to ride roughshod over all who may clash with their intentions. An excellent instance is provided by an account which has recently been going the rounds of the press. The client in question was building a house upon a property, and after it had been about one-half completed his lawyer was informed by the man who lived next door that the wall encroached about two feet upon his property. Under such circumstances it would have been reasonable on the part of the owner of the house encroached upon, to accept a consideration for the encroachment. But in this case the man was deaf to all proposals. He fumed and fussed and declared that nothing would suit him but the pulling down of the wall. The lawyer for the man whose property encroached, looked about for other means to avoid the difficulty. By a careful search he found out that there had been an error in the original survey of the whole block, and the unreasonable neighbor's property, in-

stead of being encroached upon, actually overlapped the adjoining property to the extent of about six inches.

The biter was surely bit. Both the lawyer and his client were, however, of a more reasonable species than their opponent, but they were inclined, nevertheless, to have their innings, and to enjoy the situation to the limit. Incidentally, they did not think that a lesson would do any harm to the neighbor. When they had convinced him of the fact that his own property encroached, they insisted that the only possible way out of the difficulty would be that he should tear down his own wall. They let him worry about the matter for a long time, until he had been reduced almost to the verge of tears. When they had had just as good a time as they wished, they told him he might keep his wall standing. How much was he to pay, the neighbor asked, and his eyes bulged out when the reply was, nothing. The lawyer then explained to him what class of man he actually was, who had been so anxious to take advantage of his neighbor's misfortune, but had whined so pitifully when his own turn came. "I tell you I rubbed it in pretty hard," said the lawyer, "and I not only pointed the moral but I struck it into him pretty deep. When he left at last, he said he had learned a lesson, and I think he had."

#### Toronto's Western Gap.

It is reported from Ottawa that the contract for the new western entrance to Toronto harbor will be let in a few days, and that the Department of Public Works will see that the work is begun this spring and pushed through to completion as speedily as possible. The Minister of Public Works is now awaiting the report of the engineer sent to investigate the cost of the proposed tunnel to the Island under the western entrance, and, pending the receipt of that report, which is expected soon, further action on the matter will be delayed.

The estimates of the Toronto Island Committee include \$32,000 for the completion of the new athletic park of 36 acres.

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## NEWS OF THE BUILDING TRADE

### Vancouver on the Move.

Vancouver seems to be too far west to have realized that there was a toy business panic in the other parts of the continent this winter. The activity evident in the building line throughout the city is extensive. There appears to be no cessation in the flood of applications, the indications, as far as they can be learned from architects and builders, being that the rush is likely to continue throughout the season. This movement is the outcome of the situation which existed locally last fall when it was well-nigh impossible to secure houses for love or money. Now the newcomers are purchasing lots and erecting buildings, each action of the kind having as its basis the acquirement of property. A number of contractors are also getting ready for a condition in the fall similar to that existing last year, by planning the erection of several houses, with the expectation of selling them later in the year at a good profit.

All this activity means the increase of valuation of vacant holdings, and in the east end the effect on prices is already noticeable. Eligible lots in the southeast section of the city are today commanding higher prices than at the beginning of the season, and the prospects are that there will be still further increases before May 1st. To the man with small capital there are said to be many opportunities, however, of still purchasing lots in this district on small first payments, which are reasonably sure of being turned over in a few weeks at an advance.

### Ottawa Building Laws.

Ottawa seems at last to have settled down to the work of revising its building by-laws. The subject has been under discussion at the City Hall for a long time without much result. The civic fire and light committee has received a draft by-law submitted by the Ottawa chapter of architects and embracing 115 closely written pages. The suggested enactment gives evidence of careful preparation. The

committee adopted a resolution thanking the architects for their work and the by-law was referred to a sub-committee consisting of the chairman, Ald. McGrath and Davis to examine and report upon in conjunction with the building inspector.

The proposed by-law provides in part that the building inspector shall be an engineer, an architect or a practical builder; that the owner or tenant of any building except private dwellings up to three stories in height shall within a month of being notified provide proper fire escapes and keep them in good repair; that every building used as a public hall or theatre with a seating capacity for 1,200 may be a second class building or "slow burning" construction except such portions as may be specified as to be fireproof, but if the seating capacity exceeds 1,200 it must be a first class building fireproof throughout; all buildings must be passed on by the building inspector before being allowed to be used. There are a great number of regulations with respect to the construction of buildings, tables as to foundations and wall thickness, renewal of fire areas, provisions limiting lumber yards and many other articles of a technical character.

Ald. McGrath introduced and had passed, a resolution recommending that no buildings more than eight stories in height be allowed in the city. His idea was that the whole city should not be taxed to bear the expense of the fire protection for a few high buildings.

### Montreal Building Laws.

Montreal is taking a decided interest in the new building regulations proposed by the Quebec Legislature's bill for the inspection of public buildings. At a meeting held by Chief Benoit, Deputy Chief Tremblay, and Building Inspector Mercier, several suggestions were made for additional clauses to be placed in the bill. They were as follows (a) water sprinklers should be placed in the basement of

every public building; (b) entrances to fire escapes should be through doors of approved width, opening outwards. These doors should not be more than one foot above the level of the floor, so that, if necessary, little children would have no difficulty in getting out; (c) doors should be placed on either side of the altar in Catholic places of worship in order to assist in clearing the building quickly in case of fire. Fire escapes also should be connected with the galleries of churches; (d) all hotels should have in each room a plan showing the location of fire escapes; (e) to prevent conflict of jurisdiction among inspectors, the city inspector should have authority over all city buildings and provincial inspectors should look after the small towns.

As to regulations relating to churches it was held in a general way that they should apply to all churches. In regard to the doors, however, it was considered that the extra ones were needed in the Catholic more than in the Protestant churches, as the latter had fewer services and the danger was lessened by the absence of canopies, altar cloths, and other decorations.

### Central Prison Changes.

The Ontario Government has decided to transfer the Central Prison at Toronto to some tract of land, to be purchased in a locality where the inmates can be employed in farming, in the manufacture of supplies which are necessary for provincial institutions and in such work as making highways. The old contract system of labor in prisons is to be abolished. As soon as arrangements for the purchase of a new site have been made, the new prison will be erected and steps taken to dispose of the present central prison property.

It is reported that a syndicate will erect a hundred houses for workmen on Broadview avenue, Toronto.

### Bridges for Don Valley.

The Toronto Board of Works are again grappling with the question of bridging the Don valley. They have decided to submit to the citizens a proposition to build a viaduct across the Don valley, connecting Wellesley street with Broadview avenue. The cost, as estimated by the City Engineer, would be \$290,000, to which should be added the land damages, estimated by the Assessment Commissioner at not more than \$9,500. The city some time ago decided that the proposition for a bridge at Wilton avenue, costing \$270,000, should be voted upon as soon as other by-laws were submitted to the electors, and the Wellesley street viaduct will go at the same time. The latter will be 60 feet over the tracks, and the abutments will not interfere with the rights of way. The Grand Trunk has announced that it has no objection to the project, but the C. P. R. has not yet decided. The St. James' Cemetery Trust was not certain that it could dispose of its property, but placed a valuation of \$8,400 on the land that would be taken.

The committee was inclined to look with favor on the Bloor street viaduct scheme, but the attitude of the County Council was considered an absolute bar to any action in that direction.

### Toronto University's Building Plans.

The University of Toronto has acquired the Worthington House, at the southwest corner of Grosvenor street and Queen's Park. The intention is to build upon the site for the departments of botany and forestry. The University owns the ground on which the house stands, but had leased it for forty-two years. The lease has now expired. The Domestic Science Building, which has been donated by Mrs. Massey Treble, will be erected at the corner of Bloor street and North Drive, opposite the Church of the Redeemer. The University authorities are now trying to acquire from Victoria University a strip of 20 feet to the south of the property already obtained, so that they may be able to set the building back from the street.

### Dental College Buys New Site.

The Royal College of Dental Surgeons of Ontario have purchased the property at the northeast corner of College and Huron streets, Toronto, opposite the Grace Hospital, for the sum of \$25,000. They will erect a new college building there, for which the architects will be Messrs. Burke and Horwood. It is expected that they will occupy it a year from next October. The former owners of the property were James Lockhart and the Isaac Suckling estate. It has a frontage of 120 feet on College and 150 feet on Huron street. The architects and the college authorities are busily engaged in drawing up the plans for the new building. The site of the college's present building has been expropriated by the building committee of the new General Hospital, but the college still have the use of it for a year to come. Negotiations had been on foot for the purchase by the college, of the Zion Congregational Church property on College street, but the congregation wanted \$40,000 and the college was only prepared to give \$35,000, so the negotiations fell through.

### Toronto Building Permits.

The total amount of building permits for Toronto during the month of March, 1908 was \$838,130. They included 310 permits representing 447 new buildings. This shows a considerable falling off from the same period of last year, for which the total was \$1,508,530 which included 357 permits representing 576 new buildings. For the first three months of 1908 the permits amounted to \$1,571,223 which, as will be seen, is not much more than the total for the one month of March 1907. The total for the first three months of 1907 was \$3,071,831. The permits for the present month are nearly all for new dwellings and stores or additions to the same. About the only exception is a \$20,000 addition to the Post Office, which the Canadian Government is to erect at the corner of Lombard and Victoria streets. The architect is Mr. D. Ewart and the builders are Henry & Son.

### Ottawa's New Residence Section.

Ottawa builders are interested about the new lots which have been placed on the market on Monkland avenue. This section of the city promises to be one of the finest residential portions of Ottawa. It is situated just south of Patterson avenue, and extends from O'Connor street to Elgin street. The avenue will form part of the main driveway from the experimental farm. Near it will be constructed artificial lakes, as announced by the improvement commission, and the broad driveway, with a roadway 30 feet from curb to curb, and 40 feet on each side, will be devoted to lawns and boulevard decorations, thus making over 100 feet from residence to residence. All this arrangement will unite to make the property among the most desirable in the city for residential purposes. Investors and prospective builders are enthusiastic about the locality.

### Edmonton Spreading Itself.

With the close of March the building permits for the first three months of the year 1908, at Edmonton, have reached a sum over twice as large as for the first three months of 1907. The permits for January, February and March of this year total \$1,340,333, while last year for the same period they were \$632,472. The number of permits issued already this year is 106, while last year the number was 98. For this month the total is \$40,000.

### Anti-Bonus Bill Defeated.

The Anti-Bonus Bill introduced in the Ontario Legislature by Mr. J. P. Downey has been killed by the Municipal Committee. In advocating the measure before the committee Mr. Downey said that year by year the bonus evil was growing in Ontario. Industries established on a bonus were built upon sand and some had moved from place to place. People forget their business sense in the competition to secure a factory for their own town. Mr. Clark (Bruce) pointed out that a number of the larger municipalities enjoyed the privilege of granting bonuses without reference to the Legislature.

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## What the Railways are Doing

### G. T. P. Building Plans.

About forty miles are still unfinished of the G. T. P. line between Portage la Prairie and Saskatoon. Work will be pushed as rapidly as possible. Dominion Day has been set for the running of the first through train from Winnipeg to Saskatoon. With regard to construction work in the mountain section, Mr. Morse announces that tenders are now being invited for 179 miles west of Wolf Creek, which is almost 120 miles west of Edmonton. This will carry the line fifty miles west of Yellowhead Pass. This section, which will involve some pretty heavy work in the form of rock cutting in the mountains, will be divided into three sections of forty, sixty and seventy-nine miles, respectively. Work will be given out in May and June. An early start will be made by Foley, Walsh & Stewart on 123 miles west of Winnipeg from Edmonton to Wolf Creek, and 100 miles east of Prince Rupert, given out to the same firm recently.

### Montreal Will Have Branch.

Montreal has been assured by Sir Wilfrid Laurier that the Government will see to it that a connection is built between that city and the G. T. P. line, which will run many miles to the north. A deputation waited upon Sir Wilfrid last week and pointed out to him that it was in the interests of Canada, as well as of Montreal, that the road should be built. The Grand Trunk, it said, could not commence to build the line until its own main line was completed. Sir Wilfrid said he recognized the necessity of building this branch. The National Transcontinental would not be complete until connection was made with Montreal. The general election would take place some time between now and the next eighteen months, and the Government would have time to enter into various contracts for large national undertakings before then. At present their

hands were pretty full with work, and everything could not be done at once. However, he assured the deputation that the branch would be built as soon as possible.

### Further Report on Quebec Bridge.

Four additional appendices to the report of the Quebec Bridge Commission have been presented to Parliament. One of these is an examination of the various full-sized column tests that have been made in America. The Commissioners point out that no evidence was forthcoming to show that either Mr. Cooper or Mr. Szlapka ordered any investigation to be made of the tests data that were available, and when the comparative magnitude of the undertaking is remembered, it is difficult to explain their failure to check their conclusions on the Phoenix testing machine, which was at their disposal.

Another appendix compares the stresses in the several members of the main trusses, computed from the bridge as finally designed, with the stresses authorized by the specifications. It says that the error of stresses in the main chords near the centre post, due to an error of assumed dead load, was fully ten per cent. The Commissioners are of the opinion that no manufacturing should have been done until the designers had so advanced with their work as to be able to make a proper estimate of the weight of the bridge. Manufacturing was commenced in July, 1904, without any checking, although the specifications called for it, and the contract practically demanded it.

By a mutual arrangement between the contractors, Messrs. Chandler, McNeil & McRae & Company, and the Temiskaming & Northern Ontario Railway Commission for the construction of the last forty-mile extension, the work has been placed in sole charge of Mr. T. S. Scott.

### Present Day Requirements in Town and Country.

(continued from last issue)

I and others, including my friend Mr. Hooley, are trying to standardize, if possible, this material, and if tar-macadam is going to be used as extensively as some of us believe it will be, those who sell tar will have to sell it with a guarantee as to its constituents. I believe that nearly all the failures can be put down to the quality of the tar; those who have a free hand and can buy where they like can do better than those who must buy from one works only, and buy tar containing many things which are not required, and are harmful to the process of mixing and making tar-macadam.

There are a good many kinds of apparatus for mixing tar-macadam; but I do not, for obvious reasons, propose to describe these. The material when warmed and coated with tar is preferably stacked for a few weeks to nature, but this is not absolutely necessary. It is laid in two coats, the lower one about 3 inches to 4 inches thick of material 2 inch to 2 1-4 inch gauge, and the top coat 1 1-4 inch to 1 1-2 inch thick of material 1 inch to 1 1-4 inch gauge. The whole is well rolled and covered with dry granite chip-pings.

There are limitations to the use of tar-macadam roads, and it is often laid down as a rule that this material should not be laid down on a gradient steeper than 1 in 18 or 1 in 20; in Nottingham there is a tar-macadam road laid on a gradient of 1 in 10, and heavily laden drays pass down this road with safety; they do not come up; they could not, whatever the surface was laid with. In certain conditions of weather the foothold is not all that could be desired, but if the sanding staff is well organized this difficulty may be surmounted.

The cost of a new tar-macadam road, including foundations, etc., is about 3s. 6d. per yard super. This road fulfils condition No. 1 as to foothold, except in very frosty or greasy weather; it fulfils requirement No. 2 as to noiselessness, also requirement No. 4 in dry, fine weather, but in

greasy weather is apt to encourage side slip; for urban roads it fulfils requirement No. 5, and it is fairly cheap and fulfils requirement No. 6.

We have not discovered any road which fulfils all the requirements laid down at the commencement of my remarks.

(2) I now come to the dust nuisance and the various remedies which have been tried to alleviate the nuisance.

(a) The ordinary method of street watering: how little effect this has on roads on very hot days in summer, when the sun's temperature rises to 140 degrees and the humidity falls to 45 as compared with 100 being complete saturation; water in this condition of weather arouses in the staff a feeling of hopelessness and certainly a doubt whether the money so spent is not absolutely futile. I am speaking more particularly of urban macadam roads and not paved roads. How would it be possible to water the miles of country roads? It is difficult in cities where the water mains are everywhere and standposts frequent, but on the country roads there are thousands of miles where there are no water mains, and it increases the cost enormously when the water has to be carted a mile or more from the nearest pond or dyke; there is also the risk that the latter may be dried up during hot weather just when watering is most required.

Water can only be used with economy and with moderate success when standposts are placed at not more than 1-4 mile intervals. Road watering on an urban road under these conditions costs from 3-4d. to 1d. per yard super. per annum.

(b) Various oil preparations have been tried, with only moderate success, and have given place to materials of which calcium chloride is the principal ingredient. It has been known for years that street watering with sea water is more effective than watering with the town water supply; after the water has evaporated the particles of sea salt, which is really sodium chloride, remain; it is a deliquescent body, always taking up moisture from the air and remaining damp. Calcium chloride is a saline body, much

like sodium chloride, but is more deliquescent, as, if some of the calcium chloride is exposed to the air for a short time, it attracts so much moisture from the air that it rapidly becomes a liquid. It is a by-product at the large chemical works, and is produced in enormous quantities, and it ought to be sold more cheaply than it is, the present price being about 30s. per ton, plus carriage. It is applied in the usual way by means of a water cart, the first dressing is a 10 per cent. solution, and the second a 5 per cent. solution. After the evaporation of the water, which is simply the medium by which the calcium chloride is applied to the road, the crystals of the calcium chloride are left on the surface of the road and attract moisture from the air and keep the surface of the road damp. Curiously, the greatest enemy of any oil process or calcium chloride mixture for laying dust is heavy rain; the latter washes the oil or calcium chloride from the surface of the road into the channels, and the process of treating the surface has to be repeated.

I have found calcium chloride very effective, and its great advantage over ordinary street watering is that it ensures a road with freedom from dust for twenty-four hours a day for seven days a week. A road requires treating about once a month, although this depends a good deal upon the amount of the traffic. The cost of treating roads with calcium chloride is about 25 per cent. less than ordinary street watering, but the comparison is hardly fair to calcium chloride for the reasons given above.

(c) Tar painting, or spraying, of roads has been strongly urged by its champions as being the only cure for dust. The Roads Improvement Association and the Automobile Club offered prizes last year for the best method of laying dust, and very extensive trials were made on roads near London. I saw some of these trials and have given the subject very careful attention. The roads upon which the trials were made were absolutely free from dust before the trials, and there was no dust afterwards, because there was no sunshine and plenty of rain.

I would like to see tar painting or spraying tried in a hot, dry summer, when the system could be carefully tested. I am bound to say, however, that some surveyors speak very highly of it, and I understand that one surveyor in the south of England has given an order for the tar treating of 150 miles of road, so that there will be opportunities of watching this process if the weather is dry and favorable. One great drawback to tar painting is that in winter, after frost and snow succeeded by continuous but not heavy rainfall, the road is coated with a black, slimy mud, which is very difficult to remove.

Tar painting is expensive. From figures I have obtained from those having experience, the cost is from 1d. to 2d. per yard per annum. This is the opinion of the county surveyor of Kent, who says: "If all the country roads are to be tar painted the cost would be £1,000,000 a year, and about 34,000,000 gallons of tar would be consumed, of a value of about £280,000." What a windfall for gas works! And how long, in view of such a demand, would tar remain at its present price? Taking the cost at only 1d. per yard per annum, and the roads at an average of 10 yards wide, would equal £73 per annum. I believe the average cost of the upkeep of the county roads is only £60 per annum, and therefore the cost of maintenance of the county roads would be more than doubled if they had to be tar painted in order to lay the dust.

(3) I come now to the third point: what road will most effectually combat the dust and mud nuisance? I believe that the only road which will effectively do this is some kind of tar-macadam road, which could be made very cheaply if some of the enormous heaps of slag and granite which are now waste material could be utilized for the purpose, and if tar could be properly standardized and delivered to the user in a state fit for use without resorting to hours of continuous boiling. I have already said that a tar-macadam road would cost about 3s. 6d. per square yard, but this is for an entirely new road, and includes excavation, foundation, etc.; many

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roads have fairly good foundations, and these could have the coat of tar-macadam laid on the top, using the present macadam as a foundation.

(4) What would it cost, and who should pay for it? I believe that treating the country roads as suggested would cost £1,000 per mile; I think they could be done for that. I understand that there are about 27,500 miles of roads in England and Wales, there is, therefore, an expenditure of £27,500,000 to be faced; how is that money to be found? The easiest manner is that the State must find it. It is to me a most mysterious process of reasoning that State aid is a financial saving; everything must be paid by the State — education, poor law, road maintenance, etc. Some people imagine that if you get a State grant you are relieved from making your share of the payment; they think there is some magic in transferring a charge from the rates to the taxes; the money is found by the people in the end, and whether it is better to raise money by rates or taxes does not come within the scope of these remarks.

What has brought about the trouble regarding the upkeep and maintenance of urban and country roads? The answer is, the motor car and other self-propelled vehicles. Road engineers are frequently told that they know nothing about the maintenance of roads, and that road surfaces are not brought up to everyday modern requirements; but road engineers might with equal truth say that motor cars are quite as imperfect, and that the ingenuity of man could not devise a more efficient dust raiser than the modern motor car, with its low body, trailing leather splashboards and excessive speed.

As a road destroyer, after slight rain, just drying, or, worse still, after a sharp frost succeeding wet weather quickly and followed by a sudden thaw, a heavy motor car traveling at 30 miles an hour will make grooves in an ordinary macadam road 5 inches wide and 1-2 inch deep, yet some people say motor cars do not affect the roads prejudicially. We are not all motorists, and as these are primarily responsible for present trouble on ur-

ban and country roads, is it unreasonable to ask, that either the construction of motor cars should be improved to prevent the damage they do to the roads, and worse still, the inconveniences they cause to the general public, and more particularly to the owners of and residents in houses abutting on those roads, or that they should at any rate help to pay for converting the roads to their use? Surely people who can afford to pay from £800 to £2,000 for a motor car, and from £200 to £600 a year for its upkeep, can afford to pay a tax for their use of the roads, by which they absolutely take away all the pleasure which the ordinary pedestrian or driver of a horse used to find on the public highway.

I quite agree that the advent of the motor car and other self-propelled vehicles has done some good, not only as regards urban but country roads. The old methods adopted by some rural councils of repairing roads with any kind of soft stone and binding it together with refuse obtained from wayside ditches has, it is hoped, gone forever.

I believe that motor cars, motor vehicles, traction engines, tractors, and in fact every self-propelled vehicle which is firstly a public danger, and which secondly affects the public highways in such an extraordinary degree, should pay something.

Just look for a moment how severely handicapped is that self-propelled vehicle, an electric tramcar. Take a system operated by a company, say at Bristol: they have to not only make, but maintain, the paving of the road they run over; and they do not wear it out as they do not touch it. And they also pay rates on their buildings, plant, and track as any ordinary business concern does. Compare this with the ease with which an owner of a traction engine can pass into a neighboring county by paying a fee of 2s. 6d. and do £500 worth of damage.

Road engineers can make roads practically dustless, with a surface to suit the motorist and to stand fairly heavy traffic, but it amounts to a reconstruction of our country roads.

It would require that the ordinary rates for maintenance would be about doubled, and this would have to be supplemented by a sum of money being found from other sources, and the only source which will occur to most people is a tax on self-propelled vehicles. Mr. Asquith, the Chancellor of the Exchequer, stated last year when propounding his budget that this tax had been suggested to him, and there is no doubt in most people's minds that such a tax will have to be imposed. There are at least 60,000 or 70,000 self-propelled vehicles in the country, and a tax of £20 per annum would realize from £1,200,000 to £1,400,000; and this should be collected by the State and handed over to the various authorities in proportion to their mileage and requirements. At the conference of road engineers and road users held last year under the auspices of the Incorporated Association of Municipal and County Engineers and the Roads Improvement Association a resolution was, I believe, practically unanimously carried that "a further tax beyond that at present imposed should be levied on self-propelled vehicles as a means of providing revenue for road maintenance purposes."

If, therefore, the present cost of the maintenance of roads in the counties is put at £1,500,000, and an additional £1,000,000 is obtained from rates, and, say £1,250,000 from a tax of self-propelled vehicles, a sum of £3,750,000 per annum would be available, and with this sum the condition of the roads could be altered, not so as to make them perfect, but it would render their condition such that the present intolerable dust nuisance would be stopped. The change could not be made in a year or in five years, but would be one of gradual growth, and the roads ought to be under some general system of inspection and control so as to insure that the money was spent on some system that would give the maximum amount of comfort for a minimum amount of expenditure. I am disinclined to suggest Government control, but rather a control of some board of engineers who have had large experience practically as road engineers

# Contracts Department

News of Special Interest to Contractors, Engineers, Manufacturers and Dealers in Building Supplies.

## CONTRACTS OPEN.

### Ancaster, Ont.

An independent telephone company is being organized. Henry Pim is interested.

### Amherst, N.S.

Stewart Jenks will receive tenders up to April 10th for \$150,000 worth of town debentures, issued for waterworks and street pavement extensions.

### Bridgeburg, Ont.

The Welland County Telephone Company will remove their headquarters from Steventville to this town where they will improve their system at a cost of \$10,000.

### Brandon, Man.

The sketch plans of the new court house for this city have been prepared. This building will be erected on the corner of Princess and 11th street at a cost of \$80,000 or \$90,000.

### Brantford, Ont.

Tenders will be received by T. Harry Jones, City Engineer, up to April 23rd for supply of sewer pipe and paving brick required by the city for 1908; also up to April 24th for extensions to the waterworks, including furnishing and laying 1,150 feet of fifteen, eighteen and twenty-four inch sewer conduit pipe; ditto 850 feet of 24 inch cast iron suction pipe.

The Grand Valley Railway Company will construct two new extensions to their system during the spring. One will be built to Port Dover, a distance of 35 miles, and the other to Woodstock, 18 miles in length.

### Calgary, Alta.

Willis & Cosgrove will erect a \$25,000 theatre on Eighth avenue this summer.

### Cranbrook, B.C.

Plans are being prepared by the Imperial Bank of Canada for the erection of a new branch at this place.

### Campbellton, N.B.

Tenders are invited by Fred Gelinas, Secretary, Department of Public Works, Ottawa, up to April 27th for construction of an extension to the wharf. Specifications at office of E. T. P. Shewen, Resident Engineer, St. John, N.B., and Geoffrey Stead, Resident Engineer, Chatham, N.B.; on

application to the local postmaster and at the department.

### Duncan, B. C.

A steel structure will be built across the Cowichan river by the C. P. R. Five bridges in all will be erected in this locality by the company.

### Durham, Ont.

The Dominion Government are considering sites for the proposed armory to cost \$8,000.

### Dauphin, Man.

A complete system of waterworks and sewerage will be installed in the summer.

### Deloraine, Man.

D. L. Livingstone, Secretary Treasurer, states that a by-law to grant taxation concession to the Deloraine Engine and Machine Works will be submitted to the ratepayers on April 27th.

### Edmonton, Alta.

F. W. Moorse, General Manager, G. T.P., states that tenders are now being invited for the grading of 180 miles west of the Foley contract, which covers 120 miles west of this city.

Tenders will be received by Fred Gelinas, Secretary, Department of Public Works, Ottawa, up to April 29th for the construction of a heating system for the post office. Specifications at office of R. J. Manson, Clerk of Works, this city, and at the Department.

### Fairview, B.C.

A new normal school to cost \$50,000 is to be erected here this spring.

### Fort Frances, Ont.

It is stated that James L. Trowbridge, of Chicago, Fred L. Wessel, of New York, and G. W. Brinkerhoff, the latter an expert paper maker, formerly of Kansas City, have recently been investigating the water power here with a view to the establishment of a large paper plant.

### Granby, Que.

It is stated that the city section of the Montreal and Southern Counties Railway will be commenced at an early date. The laying of rails to St. Lambert, Montreal and Longueuil will also be proceeded with in the near

future, preliminary to extending the line to Chambly.

### Goderich, Ont.

W. T. Murney, Chairman, Water and Light Commission, will receive tenders up to April 20th for covered reinforced concrete sedimentation basin; also for 18-inch cast iron flanged pipe, special castings, valves, etc. Plans and specifications at office of J. G. McGregor, C.E.

### Guelph, Ont.

A report upon the proposed extensions to the waterworks has been submitted by Engineer Davis, of Berlin, and tenders for the work will likely be called for at an early date.

J. J. Hackney, manager, waterworks department, wants tenders up to April 20th for supply of 21,000 lineal feet of twenty-four inch sewer pipe. Specifications on application to Davis & Johnston, engineers, Berlin Ont.

It is probable that a new structure over the Eramosa road will be erected jointly by the city and the C.P.R..

### Hamilton, Ont.

The congregation of St. Peter's church are contemplating the extension of their building. Rev. T. W. Teneyck is rector.

The Board of Education are contemplating the enlargement or rebuilding of the Barton street school.

Plans are being prepared by the Sherman Avenue Presbyterians for a new church to cost \$15,000.

It is stated that plans are being prepared for the erection of a four-storey office building, corner of King and McNab streets, to be occupied by the Dominion Bank.

The Dominion Government will be asked to extend the Catherine and Ferguson sewers to the revetment wall.

The Board of Education are recommending the erection of a Technical College on a site at the rear of the present Collegiate Institute.

It is stated that the construction of the Hamilton and Guelph Junction Railway will be commenced as soon as the franchise is secured. W. Leonard is General Manager.

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**Halifax, N.S.**

R. J. Wilson, Secretary, School Commissioners, invites competitive plans and specifications for a school house, up to April 18th.

**Indian Head, Sask.**

An additional \$10,000 will be expended on the waterworks extensions.

**Kingston, Ont.**

The militia department are about to take tenders for building a rifle range back of Barriefield Heights.

**London, Ont.**

The Private Bills Committee have approved the measure for the erection of the proposed sanitarium to cost \$10,000. A bylaw will be submitted by the county to raise \$4,000 of this amount.

Tenders for the new isolation hospital recently opened were far in excess of the estimates and the city engineer has been instructed to prepare fresh plans for a building not to exceed \$30,000.

**Morrisburg, Ont.**

The Morrisburg Electric Railway Company are applying for a charter. The company propose to construct a system of electric railways from this town through Williamsburgh and Russell to Winchester.

**Montreal, Que.**

Representatives from the City Council, Board of Trade and Chambre de Commerce recently waited upon the Government to ask the early construction of a line to connect this city with the main line of the National Transcontinental Railway. George Hadrill is Secretary, Board of Trade.

Negotiations for the purchase of a large vacant lot on St. Catharine street west, opposite Western Square, are being carried on by J. A. Christin, who will establish a new amusement place the feature of which will be a roller skating rink.

An influential delegation of business men from the central part of the city presented a petition to Mayor Payette last week with a view to the installation of a high pressure water system for better fire protection and the matter will be taken up by the city council at an early date.

The Legislation Committee are seeking power to spend \$250,000 of the \$2,400,000 loan for permanent repairs to the streets.

**Nanaimo, B. C.**

The E. & N. Railway have a considerable amount of bridge construction in project. A new steel structure will be built across the Chemainus river and other structures will be

erected at Raymond's crossing, Shawinigan lake and Nanaimo river.

**Ninga, Man.**

A by-law to raise \$12,000 for the erection of a school house here will be voted upon on April 10th. G. C. Smith, secretary treasurer, Boissevain.

**North Sydney, N. S.**

It is understood that the council have received from a prominent citizen an offer for the erection of a fully equipped modern hospital.

**Ottawa, Ont.**

The Eastern Ontario Motor Boat Association are considering the erection of a large club house.

Another stage towards the erection of the Anti-Tuberculosis Association's home has been reached by the board of appeal's approval of the Bayswater site, donated by Mrs. Pugsley.

Extensions to the street railway are in view. The Preston street line is to be built and a new loop constructed down George street, also a spur on Lyon street. The St. Patrick street and new Edinburgh bridges are to be strengthened and renewed.

The time for receiving tenders for steel plates and shapes to be delivered at the Sorel Shipyard has been extended to April 13th. F. Gourdeau, Deputy Minister, Marine and Fisheries Department.

Recent building permits include: J. C. Chamberlin, double brick veneered dwelling, Preston street, \$3,000; Thomas Heamen, double brick veneered dwellings, Laurel street, \$2,800; G. S. Betts, brick veneered dwelling, Gloucester street, \$2,000; W. D. Hopper, double brick veneered dwelling, Carling avenue, \$6,000; Thomas Dean, double brick veneered dwelling, Eccles street, \$4,000; James Byrnes, double brick veneered dwelling, Osgoode street, \$4,000.

**Port Stanley, Ont.**

M. Loney, of St. Thomas, is preparing plans for a large restaurant with residence overhead.

The Standard Implement Company have purchased eleven acres on the Pere Marquette line west of the river and will erect a big plant there. J. B. Donald is president.

**Peterborough, Ont.**

The Private Bills committee have approved a by-law granting fixed assesment to the Peter Hamilton Company, Limited, manufacturers of farm implements.

**Portage la Prairie, Man.**

On April 22nd votes of the rate-payers will be taken on a measure to provide \$50,000 for the establishment of an auxiliary water system.

A large theatre will be put up here by the Imperial Theatre Company. Dr. E. J. Lundy, E. L. Burns and Harry Stephens are the promoters.

**Prince Albert, Sask.**

A recommendation is being submitted to the High School Board for the immediate building of a \$100,000 high school, for which a site has already been obtained and plans prepared.

**Quebec Que.**

Tenders are invited by W. D. Bailairge, City Engineer, up to April 22nd for the following supplies: broken stone, macadam, unbroken stone, stone curb, forge work, stone and brick pavements, stone and brick sidewalks, sand, deals and nails.

Hon. Rodolphe Lemieux, Postmaster General, was recently in the city and is stated to have closed negotiations for the erection of a branch post office in St. Joseph street at an estimated cost of \$20,000.

**Regina, Sask.**

The new high school projected by the school board will cost \$120,000. J. Kelso Hunter is interested.

The National Manufacturing Company of Pembroke, Ont., will probably locate here or at Saskatoon.

**Selkirk, Man.**

A \$10,000 Carnegie library will be built this summer.

The Dominion Bank will put up a building to cost \$11,000.

**Stratford, Ont.**

Tenders are about to be called by the Separate School Board for two fire escapes.

The Loretto Convent will be materially enlarged this summer; estimated cost \$15,000.

**Sydney, N.S.**

The newly formed National Rolling Mills, Halifax, are contemplating the establishment of a plant here. Construction would be commenced at once, C. V. Wetmore is interested.

The Illinois Solid Forge Car Company are negotiating with the council with a view to the location of a plant in this city, and the offer of a free site and exemption from taxes for ten years has already been made.

The Marine and General Engineering Company are negotiating for a site and will proceed at once with the erection of a plant.

**St. Mary's Ont.**

The St. Mary's and Western Ontario Railway Company are figuring on the cost of a new line to Sarnia. The proposed routes have already been surveyed.

**Moose Jaw, Sask.**

The trustees of the High School Board are taking competitive plans for a Collegiate Institute estimated to cost \$100,000. H. Jagger is secretary.

A by-law providing for the erection of a new fire hall is now being prepared.

**Stamford, Ont.**

The township council are negotiating for the location of a large manufacturing concern. Ten acres of land will be required for the buildings, which would be 700 by 100 feet in extent, in three sections, four or five storeys in height. Alderman George Hanan is interested.

**Saskatoon, Sask.**

Herbert Weston will erect a business block this season at a cost of \$150,000.

**Tweed, Ont.**

It is proposed to erect a smelter for treating ore from J. Cowain's galena mine in Bedford township.

**Victoria, B.C.**

Fred Gelinias, Secretary, Department of Public Works, Ottawa, will receive tenders up to April 22nd for alterations to the post office. Plans and specifications may be seen on application to William Henderson, resident architect, this city.

Alexander Robinson, Superintendent of Education, states that the Provincial Government are about to take tenders for the erection of a Normal school to cost \$80,000.

Plans for the erection of a proposed bridge over the Canoe Pass, Fraser river, have been forwarded to Ottawa for the approval of the authorities. F. C. Gamble is Public Works Engineer.

J. Arbutnot, a former mayor of Winnipeg is reported to have organized a company, capitalized at \$3,000,000, to exploit coal deposits near Port McNeil on Vancouver Island.

W. W. Northcott, Purchasing Agent, will receive tenders up to April 21st for boiler, engine, cement mixers and steam drills as per specifications.

**Vancouver, B.C.**

Evans, Coleman & Evans have entered into an arrangement with the Pacific Coast Gypsum Company and will erect a hard wall plaster factory.

The congregation of Wesley Methodist Church are launching a proposal to erect a large church in the west end at a cost of \$100,000 and the special committee have been empowered to purchase a site corner of Bute and Haro streets.

It is stated that C. P. Chindler, of this city, is contemplating the erection of a large plant for the manufacture of sand lime bricks.

Parr & Fee, architects, are taking tenders for alterations to the McGraw & McLennan Carriage Company's building on Pender street.

It is stated that a concession of 3½ miles near Lillooet has been purchased by American capitalists, who will build a dredge this summer at a cost of \$75,000.

Robert Howe has laid before the Mainland Board of Fire Underwriters a report in which considerable extensions are stated to be necessary. These include three new fire engines, two new chemical engines, a portable water tower, two fire boats, one for Burrard Inlet and the other for False Creek, a salvage truck and a modern trussed ladder truck, also the increase of the stock of hose.

A plan for building a dyke round Sea Island is now under consideration. The Commissioners appointed to look after the work are William Nicholls, William Shannon and Hugh McArthur. It is proposed to build one large dyke 30 feet broad at the base, 15 feet at the top and six feet high, with arrangements for a complete drainage system. Modern machinery will be used and it is estimated that the whole system will involve \$30,000.

Recent building permits include:— M. Simpson, frame dwelling, Cornwall street, \$3,200; W. L. Tait, addition to Manhattan building, Thurlow and Robinson streets, \$30,000; W. H. Chow, two frame dwellings, corner Nelson and Bidwell streets, \$6,400; J. Roberts, brick store and office building, Pender street, \$24,000; J. Martin, frame dwelling, Seventh avenue, \$2,500; Frank Maikawa, frame dwelling, Fifth avenue, \$1,800; G. and A. Mc Arthur, frame cottages, Cordova street, \$4,000; Grant McArthur, brick store, Westminster avenue \$8,000; R. Reinhardt, brick apartment house, Hornby street, \$8,000; Joseph Parkinson, frame dwelling, Third avenue, \$2,500; J. W. Lee, frame dwelling, Davie street \$3,600; G. E. Munro, frame tenement, Keefer street, \$2,000; J. Churchill, frame dwelling, Third avenue, \$2,000; C. J. Churchill, frame dwelling, Fifth avenue, 3,000; J. J. J. Grey and L. Barry, frame store and rooming house, Hamilton street, \$16,000; Temple Goodman, frame store, Westminster avenue, \$6,000; W. McQuarrie, frame dwelling, Alberni street, \$3,400; John Morley, frame dwelling, Fifth avenue, \$4,800; Hobson & Scott, frame tenement, Powell street, \$3,000; Thomas Booker, frame dwelling, Tenth avenue, \$1,800; W.

T. Abuthnot, frame dwelling, Twelfth street, \$2,000; Nels. Lang, four double cottages, Twelfth street, \$5,200; C. G. Swansyn, frame apartment, Clarke Drive, \$2,000.

**Toronto, Ont.**

The Board of Education have practically decided to enlarge the following schools: Leslie street, Morse street, Queen Alexandra, Cottingham street, Kent street, Parkdale, Fern avenue, Perth avenue, Howard, Girls' Home and Seaton street. Improvements in the heating and ventilation will also be carried out. Total estimated cost \$286,500; W. A. Littlejohn, city clerk.

The city's plans for a viaduct have been forwarded by City Engineer Rust to the Dominion Board of Railway Commissioners.

Joseph Oliver, Chairman, Board of Control, will receive tenders up to April 15th for steam fitting, plumbing, electric wiring and laundry machinery for the public bath house. Specifications at office of city architect.

The Works Committee have recommended the submission of bylaws to provide \$280,000 for the construction of a bridge over the Don at Wilton avenue and \$270,600 for another structure over the Don at Wellesley street. Recommendations have also been passed for the expenditure of \$8,000 on repairing damage west of Sunnyside.

Negotiations are under way for the erection of a new building for the Deaconess Missionary Training Home. Estimated cost \$125,000.

Recent building permits include: David Lavine, pair semi-detached brick stores and dwellings, Queen street west, \$6,500; A. J. Henderson, 2 storey brick veneer dwelling, St. Clarens avenue, \$2,000; R. Parris, pair semi-detached rough cast dwellings, brick fronts, Emerson avenue, \$3,200; A. Poyntz, 2 storey and attic brick dwelling, Euclid avenue, \$4,000; R. Bullen, 3 storey brick apartment house, Irwin avenue, \$8,000; W. J. Lynd, 2 storey brick dwelling, near Heath street, on west side Forest Hill road, \$5,200; H. F. Saunders, 2 storey brick dwelling, Macdonnell avenue, \$2,500; W. T. Pember, alterations to store, Yonge street, \$2,000; Alex. Manning Estate, 2 storey brick addition, King street west, \$2,600; W. J. Greenaway, 2½ storey brick dwelling, Hewit avenue, \$4,000; C. Heehn, 2 storey brick store and dwelling, \$3,000; Tomlin & Hinchliff, pair 2 storey semi-detached brick dwellings, Elliott street, \$4,000; T. W. Hall, three attached 2 storey brick dwellings, Lansdowne avenue, \$6,000; Love Bros., Limited, two pair 2 storey semi-detached brick dwellings, Dear-

bourne avenue, \$8,000; R. McCauley, pair 2 storey semi-detached brick dwellings, Kendall avenue, \$6,500; Symons & Rae, 2 storey brick dwelling, Prince Arthur avenue, \$5,000; H. S. Mara, six attached 2 storey brick dwellings, Davenport road, \$12,000; Neil Bryson, 2 storey brick store, Bloor street, \$3,000; Addison & Mainprice, 2 storey brick addition to warehouse, Pearl street, \$9,000; John Price, two pairs 2 storey semi-detached brick dwellings, Greenwood avenue, \$8,000; J. F. House, 1 storey addition to machine shop, Church street, \$3,500; E. Wilkins, 2 storey brick dwelling, Castle Frank avenue, \$5,000; Gurney Bundy, 2 storey brick dwelling, Alhambra avenue, \$2,500; A. A. Kennedy, two detached 2 storey brick dwellings, Packway avenue, \$6,000; J. Hunt Stanford, 2 storey and attic brick dwelling, corner Poplar Plains road and Lynwood avenue, \$8,000; M. Doyle, 2 storey brick dwelling, Palmerston boulevard, \$5,000; A. Elliott, 2 1/2 storey brick dwelling, corner Oakland avenue and Cottingham street, \$4,000; Davis & Moore, three attached 2 storey brick dwellings, Clarendon avenue, \$6,500; H. Dillon, 3 storey brick dwelling, Duchess street, \$3,000; J. E. Peterkin, three attached 1 1/2 storey brick dwellings, Roseberry avenue, \$6,500; T. Kelly, two pair 2 storey semi-detached dwellings, Lewis street, \$4,800; Ansman & Marshall, pair 2 1/2 storey semi-detached brick dwellings, Palmerston boulevard, \$8,000; F. W. Hill, two pair rough cast dwellings, Dagmar avenue, \$4,000; W. J. Webb, pair 2 storey semi-detached brick dwellings, Dovercourt road, \$4,000; W. B. Charlton, two pair 2 1/2 storey semi-detached brick dwellings, Walker avenue, \$12,000; Chas. Meech, three attached brick stores, Parliament street, \$4,000; L. B. Howland, 2 storey brick dwelling, Clarendon avenue, \$5,000; Thos. M. Smith, pair 2 storey semi-detached rough cast dwellings, Gerrard street east, \$2,400; F. Saunders, 3 pair 2-storey semi-detached brick dwellings, Ossington avenue, \$12,000; Love Bros. Limited, 3 pair 2 1/2-storey semi-detached brick dwellings, Woolfrey avenue, \$13,200; L. C. Sheppard, pair 2 1/2-storey semi-detached brick dwellings, corner Bloor street and Perth avenue, \$14,000; Geo. H. Hees & Co., sprinkler tank, Davenport road, \$2,500; John Maloney, 2 pair 2-storey semi-detached brick dwellings, Brock avenue, \$12,000; E. D. Gooderham, 2-storey and attic brick dwelling, Sherbourne street, \$20,000.

#### Welland, Ont.

Plans for a three-storey brick post office are now in the hands of the

authorities at Ottawa; estimated cost \$35,000.

#### Weyburn, Sask.

The Western Fireclay Products, Limited, a company capitalized at \$600,000, have definitely decided to locate here. They will engage in the manufacture of fire-clay, tile, sewer-pipe and other kindred lines.

#### Wallace, Ont.

Tenders will be received by reeve Smith up to April 10th for the cement abutments for the Shipley bridge, fourth concession. Plans and specifications at Sandard office, Molesworth, Ont.

#### Williston, Alta.

W. D. Donington will receive tenders up to April 17th for \$1,300 school district debentures.

#### Winnipeg, Man.

Steps are being taken by the council to enforce the erection of the C. N. R. subway at Water street.

C. J. Brown, City Clerk, gives notice of the civic intention to carry out various local improvement works including considerable sewerage and sidewalk construction.

Tenders will shortly be taken by the Winnipeg Theatre Company for the erection of their new building. Estimated cost \$150,000; H. C. Bristow, architect.

\$600,000 has been voted by the school board for new buildings and additions to the schools. Construction will be put in hand this season. D. A. Ross, chairman of board.

The J. I. Case Threshing Machine Company will construct a spur across Higgins avenue from the C.N.R. to their property on May street.

The School Board have practically decided to erect a new school building west of the Aberdeen.

A by-law will be submitted to expend \$90,000 in rebuilding Louise bridge.

It is definitely stated that the proposed provincial sanitarium will be located at Moose Nose, near Bird's Hill. Smith & Bruce have prepared plans of the building, which are being submitted to the trustees for approval.

Plans for the G.T.P. bridge over the Red river at Lombard street are now at Ottawa for the approval of the authorities. This bridge is included in the J. D. McArthur contract, but it is rumored that the work will be sublet.

The Great American Railway Company, capitalized at \$150,000,000, headquarters at Pierre, S.D., are stated to have organized for the construction of a railway from Chicago to

Winnipeg and Medicine Hat, with branches over the North West. The proposed line is 2,700 miles in length and would cost in the neighborhood of \$82,000,000. The incorporators are A. J. Hyde, T. F. Orton, J. C. Brockest and H. L. Moses, of Lancaster, Wis.

M. Peterson, Secretary, Board of Control, wants tenders up to April 9th for sewer construction in Gunnell street from Henry avenue to Higgins avenue. Specifications at office of City Engineer.

### CONTRACTS AWARDED.

#### Fort William, Ont.

The contract for the erection of St. Joseph's school has been let to Cewson & Matthieu, of this city.

#### Hull, Que.

The International Portland Cement Company have awarded the contract for the steel work of their new buildings to the Phoenix Bridge Company, of Phoenixville, Pa.

#### Kenora, Ont.

G. H. Archibald & Company, of Winnipeg, have been awarded the contract for rebuilding the Maple Leaf Flour Mills here recently destroyed by fire; approximate cost \$600,000.

#### Lethbridge, Alta.

Janse & MacDonnel, of Maple Creek, have obtained contract from C.P.R. for thirty-six miles of construction between this city and MacLeod; estimated cost per mile \$15,000.

#### Moose Jaw, Sask.

The successful tenderers for the erection of the new court house were Smith Bros. & Wilson, at \$57,000.

#### Montreal, Que.

La Compagnie de Construction et de Pavage Modernes have obtained from the Roads Committee a supply contract for asphalt at \$2.81 on a six-inch foundation, at \$3.14 on a nine-inch foundation and \$3.66 on a twelve-inch foundation.

The Sicily Asphalt Company have obtained a contract for asphalt at \$2.75 and \$2.41, to be laid on a six-inch foundation.

Additional contracts have also been awarded by the Roads Committee as follows: La Compagnie de Construction et de Pavage Modernes, "Danforth" flags, \$2.51 to \$2.88, according to size; F. D. Lawrence, N. Y. bluestone, \$2.25 to \$2.56, and Laurin & Leitch, grey canyon, \$2.12 to \$2.45.

#### New Westminster, B.C.

W. W. Forrester secured the contract for the extension of the C.P.R. car shops; approximate cost \$20,000.

(Continued on page 24.)

# TENDERS AND FOR SALE DEPARTMENT

## FOR SALE

### CONTRACTOR'S GRADING OUTFIT

Large Contractor's outfit comprising 130 teams, mules and horses, with harness, camp equipment and complete grading outfit.  
Six miles and horses located at Fishing Lake, six miles south of Kuroki, on the Canadian Northern Railway. Grading outfit at Touchwood Hills.  
Bids will be received for all or part.

H. A. CASSIL,  
232 St. James Street, Montreal, Quebec.

## County of Wellington Bridge Tenders

Tenders will be received by the County Clerk, James Beattie, Esq., Fergus, Ont., until APRIL 18TH NEXT for the construction of the Mount Forest Bridge.

1. Steel Superstructure and Concrete Floor.
2. Concrete Abutments, about 600 cubic yards.

For all information apply to the Engineers.

BOWMAN & CONNOR,  
36 Toronto Street, Toronto.

## City of Brantford

### Waterworks Extension

Sealed tenders, addressed to F. W. Frank, Secretary of the Board of Water Commissioners, Brantford, will be received till 12 o'clock noon on FRIDAY, APRIL 24TH, 1908 for the following:

- (a) The construction of a Storage Reservoir.
- (b) The furnishing and laying of about 850 feet of 24 inch Cast Iron Suction Pipe.
- (c) The furnishing and laying of about 1,150 ft. of 15 inch, 18 inch and 24 inch Sewer Conduit Pipe.

Plans and specifications may be seen at the office of the City Engineer, Brantford, from whom Instructions to Bidders and forms of tender may be obtained.

The lowest or any tender not necessarily accepted.

T. HARRY JONES,  
City Engineer.  
City Hall, Brantford, April 1st, 1908.

## NOTICE

### Drainage Contract

Sealed tenders will be received by the undersigned up to 12 o'clock noon of MONDAY THE FIRST DAY OF JUNE, A.D., 1908, for the construction of the Grantley Creek Drain in the northwest part of the Township of Osnabrock and northeast part of the Township of Williamsburg (about six miles from Chesterville, on C.P.R.) Engineer's estimate of total work, \$14,106.77. Parties tendering will please state whether dredge or team work is intended. An accepted cheque for one-tenth the amount of tender will be required as a deposit.

Tenders for culverts in the Township of Osnabrock will be accepted at the same time and subject to the same conditions, but need not necessarily accompany tender for excavation. Plan, profile, etc., can be seen with the undersigned or with Magwood & Walker, Engineers in charge, Cornwall, Ont.  
(The Township of Williamsburg build all culverts in the said township by arrangement.)  
The lowest or any tender not necessarily accepted.

H. E. HODGINS, Clerk.  
Osnabrock Centre, Ont.

## Tenders Wanted

Sealed tenders (marked "Tenders for Factory") in whole or part will be received by the undersigned up to and including SATURDAY, APRIL 11TH, for the several trades required in the erection and completion of a factory on Queen Street West, Toronto. Plans and specifications may be seen at the office of the Architects. No tender necessarily accepted.

ELLIS & CONNERY, Architects,  
Manning Chambers, Toronto.

## Tenders for DRILLING WELL

Tenders addressed to the undersigned marked "Tender for Drilling Well," will be received up to APRIL 15TH at 6 p.m. for drilling an 8 inch Test Well for the Clinton Waterworks system, also for a second well in same vicinity if required.

State price by the foot and lump sum and also whether tenderer guarantees to find water or not.

D. L. MACPIERSON, Town Clerk,  
Clinton, Ont.

## Street Railway

The Council of the City of Calgary is open to receive offers for the installation, construction, equipment and operation of a Street Railway in said City for a limited period of franchise.

Companies making applications for same will please state time required under franchise and other particulars. For particulars apply to the undersigned.

H. E. GILLIS,  
City Clerk.  
Dated at Calgary, March 19th, 1908.

## CITY OF BRANTFORD

### Tenders for Sewer Pipe and Paving Brick

Sealed tenders addressed to Samuel Suddaby, Chairman of the Board of Works, in care of the City Clerk, Brantford, Ont., will be received up to 12 O'CLOCK NOON ON THURSDAY, APRIL 23RD, 1908, for the supply of Sewer Pipe and Paving Brick required by the City of Brantford for 1908. Instructions to bidders and forms of tender may be obtained on application to the City Engineer. Each tender must be accompanied by a marked cheque payable to the order of the City Engineer for the amount called for in form of tender.

The lowest or any tender not necessarily accepted.

T. HARRY JONES,  
City Engineer.  
City Hall, Brantford, Ont., March 31st, 1908.

## TENDERS FOR CAST IRON PIPE AND SPECIALS

Sealed tenders will be received by the City Clerk of the City of Prince Albert until 8 P.M. ON THURSDAY, APRIL 16TH 1908 for the following:

- 3756 feet 8" Cast Iron Pipe.
- 9444 " 6" " " "
- 8000 lbs. Special Castings.
- 4"-8" Valves.
- 2"-6" Valves.
- 17 Hydrants.
- 16 Valve Boxes.

Specifications, conditions and form of tender may be obtained at the Office of the City Engineer, or at the Office of the City Clerk, City Hall, Prince Albert.

No tender necessarily accepted.  
R. S. COOK, Mayor. F. A. CREIGHTON, City Engineer.  
C. O. DAVIDSON, City Clerk.

## To Sewer Pipe Manufacturers

Sealed tenders, addressed to the undersigned, will be received up to noon, MONDAY, APRIL THE 20TH NEXT, for the supply of 21,000 lineal feet of 14-inch Sewer Pipe. Specifications may be obtained from Davis & Johnston, Engineers, Berlin, Ontario.

J. J. HACKNEY,  
Manager Guelph Water Works.

## RURAL MUNICIPALITY OF WALLACE TENDERS

Sealed tenders, addressed to the undersigned and marked "Tenders for Telephone Lines," will be received up to NOON OF 10TH DAY OF MAY 1908, for the building of such telephone lines and the installation of such telephones as will be required in the telephone system in the Rural Municipality of Wallace. Plans and specifications may be seen at the office of the Municipal Secretary in the Town of Virden or at the offices of the Department of Telephones and Telegraphs, Parliament Buildings, Winnipeg.

An accepted cheque of an amount equal to five per cent. of the tender must accompany same.

The lowest or any tender not necessarily accepted.

(Signed)  
JAMES F. C. MENLOVE,  
Secretary-treasurer.

## CITY OF PORTAGE LA PRAIRIE PROVINCE OF MANITOBA

### Notice to Contractors

Tenders addressed to the Secretary-Treasurer will be received until 8 P.M. ON

WEDNESDAY, APRIL 15th, 1908

for Pumping Machinery, Water Pipes, Pipelaying, etc., as an auxiliary to the existing City Waterworks System. The work is to be fully completed within two months and machinery delivered from stock.

Plans may be seen at Toronto and at Portage la Prairie.

For further information apply to the Chief Engineer, 103 Bay Street, Toronto, Ont.

F. W. CLAYTONG, Esq.,  
Secretary-Treasurer,  
Edward Brown, Esq.,  
Mayor, Portage la Prairie, Man.  
Portage la Prairie, Man.

WILLIS CHIPMAN, C.E., Chief Engineer,  
103 Bay Street, Toronto, Ont.

## NOTICE

Sealed bids will be received at the office of the City Clerk of Vancouver, British Columbia, up to noon of SATURDAY, APRIL 4TH, 1908, for the manufacture and erection of the Superstructures of the new Bridges over False Creek at Westminster avenue and Granville street. Estimated weight of structural steel, about 2,800 tons.

Plans and specifications will be on file at the City Engineer's office, Vancouver, on and after SATURDAY, MARCH 14. Copies of all the papers may be secured from Waddell and Harrington, Consulting Engineers, Kansas City, Mo., upon the receipt of a deposit of twenty-five dollars, which will be refunded upon return of the plans and other papers in good order.

## NOTICE

The date for receiving bids at the office of the City Clerk of Vancouver, B.C., for the manufacture and erection of the superstructures of new bridges over False Creek, at Westminster avenue and Granville street has been extended to noon of FRIDAY, MAY 1ST, 1908.

**WANTED**

A Municipal Engineer for the Town of Campbellton, N.B. Must be capable of taking full control of water and sewerage systems. Position at once. Apply, stating references, to J. F. Andrew, Chairman Committee, Campbellton, N.B. 16

**Tenders Wanted**

Sealed tenders (marked "Tenders for Town Hall) in whole and part will be received by the Town Clerk, Meaford, up to and including APRIL 15TH, for the several trades required in the erection and completion of a Town Hall. Plans and specifications may be seen at the Clerk's Office, Meaford, also at the Architects' Office, Toronto. No tender necessarily accepted.

ELLIS & CONNERY, Architects,  
Manning Chambers, Toronto.

GEO. ALBERY, Town Clerk,  
Meaford, Ont. 15

## TOWN OF GODERICH

### Province of Ontario

Sealed proposals will be received at the office of the Water and Light Commissioners, Goderich, Ont., until noon APRIL 20TH, 1908, for the following works:

CONTRACT A—Covered Reinforced Concrete Sedimentation Basin Intermittent Type, with screen and valve chambers and appurtenances.

CONTRACT B—Cast Iron Flanged Pipe 18 inches dia, special castings, valves &c.

Plans and specifications prepared by J. Grant McGregor, C.E., will be on view at the above office, and copies of specifications and forms of proposal can be had on application on and after the 6TH APRIL 1908.

The lowest or any tender need not necessarily be accepted.

W. T. MURNEY,

Chairman of Commission.

W. A. McKIM,

Clerk.

**As Other See Us.**

Leslie M. Shaw, former Secretary of the Treasury of the United States, when in Montreal recently, expressed optimistic views of the future of the Canadian West. He declared that it was almost impossible to even estimate the future growth of the Canadian provinces west of the Great Lakes.

**Calgary Gets Montreal Firm.**

Work is to commence at once on a \$40,000 warehouse in Calgary, which is to be built for a large Montreal firm. The building will be just west of the Registry Office. This is practically the first Montreal firm to invade Calgary. The warehouse is to be the property of Sir John Langham and the Montreal firm to occupy it is one of the largest institutions in Canada.

The Hamilton building permits for March amounted to \$96,450, as compared with \$815,260 for the same month last year. The difference is accounted for by the fact that the contracts for a number of big works were let in March last year.

**Revenue Increases for the Year.**

The customs revenue of Canada for the fiscal year closing March 31st, reached the total of \$57,866,632 an increase of \$6,054,033 over last year when the total revenue was \$51,812,599. Custom receipts for March showed a decrease of \$745,334 as compared with March 1907. The months receipts were \$4,356,102.

Customs receipts for Toronto for the fiscal year ending March 31st showed an increase of \$2,947,496.26 over the returns on the same date in 1907. The total duty collected since the 31st of March last year, has been \$11,148,984.40, as compared with the showing of \$8,201,488.14 on the same day last year. The figures are deceptive, however, because some time ago the fiscal year was altered and the receipts reported on March 31st, 1907, were merely those of the previous nine months. The total duty collected during the past month was \$868,893.50, an increase of \$234,833.51 over March 1907.

Montreal's customs duties during the fiscal year, ending March 31st, were the largest in the history of the port, being \$16,480,921.38, as compared with a total of \$14,784,151.14 in the preceding twelve months, an increase of \$1,696,769.97. The greatest increase took place in July last, when an excess of \$458,499.73 was recorded, and the biggest decrease in March, when the collections fell \$186,047.21 short of those in the same month of last year.

Toronto Junction's customs receipts during March amounted to \$31,447.35 as compared with \$23,918.25 in March of last year, an increase of \$7,529.10. The total collections for the fiscal year amounted to \$290,012.13. The last fiscal year consisted of only nine months, but for the twelve months ending March 31st 1907, the collections were \$240,249.40. This year's increase is, therefore, \$49,762.73.

Winnipeg's Inland revenue collections for March were \$188,128.57. Twenty years ago the same month's collections were \$16,261.

The revenue returns of the United Kingdom for the year ending March 31st, show a total of \$782,688,459, a

net increase over the preceding twelve months of \$6,506,020.

**Industry Steady, Railway Building Heavy.**

The *Labor Gazette* for February showed little change in labor and industrial conditions for that month as compared with January. Compared with the corresponding month of 1907 conditions were less buoyant. The number of unemployed was less at several points than in January, owing to the heavy snowfalls which necessitated the employment of large numbers of men in the work of removal. In Western Canada and in Nova Scotia, the weather continued exceptionally mild.

The announcement of arrangements on an extensive scale for railway construction during the present year had a favorable effect, the outlook being that expenditures in this connection will exceed those of any previous year. Arrangements for the supply of labor were already being made. The money stringency, however, continued, being chiefly felt in the manufacturing industry, and in the building trades, in both of which the outlook was less favorable than at the corresponding period of 1907. In the mining industry, the Nova Scotia collieries were very busy, and there was an improvement in the metal mining camps of British Columbia. Lumbering and fishing continued dull, the effect being particularly felt in British Columbia and in the Maritime Provinces. The storing of ice was completed under exceptionally favorable conditions, the quality of the product being excellent and the supply abundant.

**Architect Lennox Wins His Suit.**

Mr. E. J. Lennox has been awarded \$2,757 by Chief Justice Falconbridge against Messrs. Hyslop Brothers. Mr. Lennox sued for \$3,200 for preparing plans for a garage to be erected on the site purchased by defendants at the corner of Queen and Victoria streets. The defendants repudiated part of the claim, on the ground that the plaintiff had not complied with the instructions given to him.

**CONTRACTS AWARDED.**

(Continued from page 21).

**Nelson, B.C.**

W. P. Tierney & Company are reported to have obtained a large contract from the C.P.R. for filling and replacing bridges on the line between Castlegar and Cascade, also for a new spur and change of grade at the Mother Lode mine, near Greenwood.

**Ottawa, Ont.**

For the New Brunswick section of the G.T.P., contracts have been awarded to M. P. Davis & J. G. Davis, Ottawa; Faquier Bros., Ottawa, and Willard Kitchen & Company, of Fredericton.

**Prince Rupert, B.C.**

Barr & Anderson of Vancouver, have been awarded the contract of installing steam heating systems in the two hotels being built by the Grand Trunk Pacific.

**Quebec, Que.**

The Canadian Stewart Company, Limited, of Montreal, have secured the contract to construct a 7-storey addition to the Chateau Frontenac in this city, for the Canadian Pacific Railway Company. Estimated cost, \$500,000.

**Toronto, Ont.**

John Inglis & Company have been awarded the contract for the new

waterworks engines, and the Polson Company's Heine boilers have finally been selected by the City Council.

Thomas V. Gearing, of this city, has been awarded the contract for the addition to Osgoode Hall at a sum slightly under \$35,000.

**Victoria, B.C.**

The contract for cast iron pipe to be used in the new water distribution system has been awarded to W. Beverly Robinson, of Montreal, at \$100,187.

**Welland, Ont.**

The contract for the erection of the new General Hospital has been awarded to P. S. Peacock.

**Winnipeg, Man.**

The Winnipeg Theatre Company have awarded contract for alteration to their building to the J. McDiarmid Company, of this city.

Kelly Bros., of Kenora, have obtained the contract for the building of seventeen bridges on the McArthur contract.

**Fires.**

Hobbs' Glass Works and Canada Furniture Company's plant, London, Ont.; loss \$300,000.

Warehouse of C. Bessette, Mon-

tréal, Que., property of G. W. Stephens' estate, Montreal, Que.; loss \$5,000.

Store building of F. E. Sulls, Parrsboro, N.S.; loss \$21,000.

Building of Burke Bros., Toronto, Ont.; loss \$4,000.

Residence of J. V. Kearney, East Florenceville, N.B.; loss \$7,000.

Sawmill of the Sumner Lumber Company, Bathurst, N.B.; loss \$25,000.

Premises of Dominion Cloak Company and others, Toronto, Ont.; total estimated loss \$40,000.

Store building P. Leclerc, Montreal, Que.; loss \$3,500.

Store building of G. McDownell, Maroma, Ont.; total loss \$17,000.

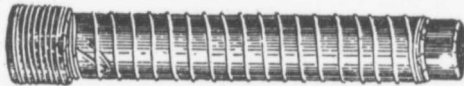
Factory of Manchester Cereal Company, Ingersoll, Ont.; building loss \$17,000.

Shingle mill of Barrett Bros., Ottawa, Ont., loss \$5,000.

The assets of the Stratford Mill & Lumber Company, Stratford, Ont., will be sold by auction on the 14th inst.

John A. McRae, lumber manufacturer, Inwood, B.C., has been succeeded by the Inwood Coal and Lumber Company, Limited.

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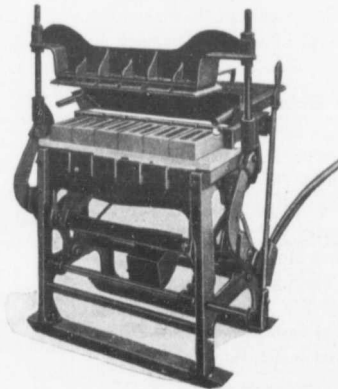
Machine Banded  
Wood Stave  
**WATER PIPE**

For city and town Water Systems, Fire Protection, Power Plants, Hydraulic Mining, Irrigation, Etc.

One-half the cost of Iron Pipe—and better.

**PACIFIC COAST PIPE CO., LIMITED**  
P.O. BOX 563 VANCOUVER, B.C.

**Concrete Mixers and Brick Machines**



YOU can use fine gravel and crushed stone with this machine as it polishes the face of the brick, and therefore brings the cement to the face of the brick, thus assuring a much stronger brick in the face.

We manufacture these mixers in all sizes to suit the contractor, including hand mixers and power mixers of all sizes, run by steam, gasoline or electric power. Our improved mixer gives you a batch in thirty seconds.

**WETTLAUER BROS.**  
Mitchell - Ontario



**New Companies.**

King George Mining Company, Limited, Ottawa, Ont., incorporated, capital, \$750,000. Incorporators, R. E. Burroughs, of Smith Falls, Ont.; R. K. Farrow and Thomas Brown, of Ottawa; J. E. Caldwell, of Nepean township, Ont., and Hon. Daniel Derbyshire, of Brockville.

Western District Orange Hall Company of Toronto, Limited, Toronto, Ont., incorporated, capital \$40,000. Incorporators, A. A. Gray, W. H. Harper, Edward Lankin, R. Armstrong and Robert Coulter, all of Toronto.

Defiance Handle & Turning Company, Limited, Holstein, Ont., incor-

### The Ontario Accident Insurance Co.

Accident, Employers, Elevator and General Liability

104 St. Francois Xavier St. MONTREAL

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15  
TORONTO STREET - TORONTO

IF YOUR BUSINESS ISN'T WORTH ADVERTISING, ADVERTISE IT FOR SALE

porated, capital \$40,000. Incorporators, D. J. Davis, James Galloway, A. J. Buller, A. G. Brebner and G. T. Calder, all of Holstein.

Inwood Coal & Lumber Company, Inwood, Ont., incorporated capital \$40,000. Incorporators, F. Carson, John Thomas, C. L. Taylor, George White and T. J. Ookes, all of Inwood.

Canada Glass Mantles & Tiles, Limited, Toronto, Ont. incorporated, capital \$150,000. Incorporators, C. W. Thompson, C. W. Wright, J. I. Grover, H. Hunter and E. P. Seon, all Toronto.

York Construction Company, Limited, Toronto, Ont., incorporated, capital \$150,000. Incorporators, W. B. Russell, C. W. Dill, R. H. Parmenter, all of Toronto, and A. Lothian, of Maxville, Ont.

Municipal Contracting Company, Limited, Montreal, Que., incorporated, capital \$100,000. Incorporators, Victor Morin, Thomas Sutton, A. H. Desloges and R. Gohier, all of Montreal.

Special Machinery Manufacturing Company, Limited, Montreal, Que., incorporated, capital \$49,000. Incorporators, L. Engelhorn, John Vanderlice and B. Beaudry all of Montreal; also L. N. Labelle, of Joliette, Que.

La Compagnie des Tourbieres de Ste-Therese, Limited, Ste. Therese, Que., incorporated as importers and exporters of peat, and manufacturers of bricks, gas, paper, etc., capital \$20,000. Incorporators, J. A. Leguerrier and O. P. Dorais of Montreal, and others.

Willis Piano Company, Limited, St. Therese, Que., incorporated, capital \$100,000. Incorporators, A. P. Willis, R. A. Willis and C. D. Patterson, all of Westmount, Que.

Canada Stove & Furniture Company, Limited, Montreal, Que., incorporated, capital \$75,000. Incorporators, E. Panneton, J. A. St. Germain and E. G. Golding, all of Montreal; also P. E. Panneton, of Three Rivers, Que.

Inland Navigation Company, Limited, Hamilton, Ont., incorporated, capital, \$2,000,000. Incorporators, G. L. Staunton, A. O'Heir, F. Morrison and G. J. Gauld, all of Hamilton.

### Vancouver Permits.

Vancouver building permits for the month of March nearly reached the half million mark. This showing makes the total for the first quarter stand at \$1,206,565, an advance of \$213,445 over the figure for the corresponding period last year.

**Business Notes.**

W. H. Code, contractor and lumber manufacturer, Smith Falls, Ont., is reported to have assigned.

The issue of \$20,000 debentures of the united counties of Northumberland and Durham, bearing 4½ per cent. interest, were sold to Mr. John Helm, of Port Hope, for \$20,237 and accrued interest.

Wood, Gundy & Company, of Toronto, have just purchased \$30,000 city of Peterborough debentures bearing 4¾ per cent. interest and payable half yearly. The bonds are due \$20,000 at the end of 30 years and the balance at the end of 20 years.

**DAMS**

**AMBURSEN**  
HYDRAULIC CONSTRUCTION  
CO. OF CANADA, LIMITED  
519 CORISTINE BLDG.  
MONTREAL, P.Q.

**STANDARD METAL WINDOWS**

GLAZED WITH FIREPROOF GLASS  
— PREVENT AND RETARD FLAMES —  
— REDUCE YOUR INSURANCE PREMIUMS —  
— CLOSE AUTO. MATICALLY —

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67, 679 NOTRE DAME ST. W., WINNIPEG

MANUFACTURERS AND CONTRACTORS OF  
FIREPROOF WINDOWS, DOORS AND SKYLIGHTS  
METAL STUDDING FOR FIREPROOF PARTITIONS  
CORNICES, CORRUGATED IRON, METAL CEILINGS  
CORNER IRON, ETC. SLATE, FELT & GRAVEL ROOFERS

### Vacancy for City Engineer.

The report of the special committee of the City Council of Hamilton, Ont., calling for the appointment of a city engineer has been carried and applications for the position will be received by S. H. Kent, City Clerk, up to April 20th.

### Business Notes.

Mr. William Gell has been appointed master mechanic in charge of motive power, cars and shops of the Grand Trunk Pacific Railway, with temporary headquarters at Winnipeg.

Mr. Wm. Henderson has been engaged by the Water Commissioners of

Smith's Falls as superintendent of the Water Works Department. He is a qualified electrical engineer of Glasgow.

Creditors of the Provincial Construction Company, Limited, are notified to send in full particulars of their claims to the Trusts & Guarantee Company, Limited, not later than April 21st.

### The LAURENTIAN GRANITE CO., Limited

MANUFACTURERS OF

Building Granite, Granite Setts, Curbing, Etc.

SAMPLES FURNISHED AND PRICES QUOTED ON APPLICATION

Rose and Pink Granite Quarries at STANFORDVILLE, P. Que., Co. Argenteuil, on C. P. R.

Bell Tel. M. 4354 - Rooms 27-28, 55 St. Francois-Xavier St., MONTREAL

### THE GREY AND BRUCE PORTLAND CEMENT COMPANY

of Shallow Lake, Limited

MANUFACTURERS OF "HERCULES" BRAND OF PORTLAND CEMENT

Very finely ground. Unsurpassed for Sidewalks, Floors and all work requiring the highest grade of Portland Cement. For prices address

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

### Josson Cement

Is the Highest Grade Artificial Portland Cement and the Best for High-Class Work. Has been used largely for Government and Municipal Works.

TO BE HAD FROM ALL CANADIAN DEALERS OR FROM

C. I. DeSOLA, 180 St. James Street, Montreal

### Drilling Contractors



WATER, SALT, OIL AND GAS WELLS

of any depth from 100 to 3,000 feet. Contracts taken in any part of Canada. Excellent references. Estimates. Geological Reports. Expert Drillers and complete Drilling Rigs furnished.

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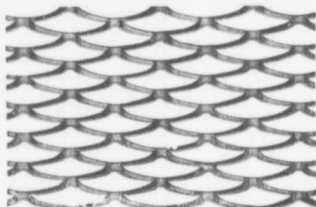
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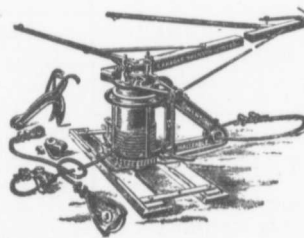
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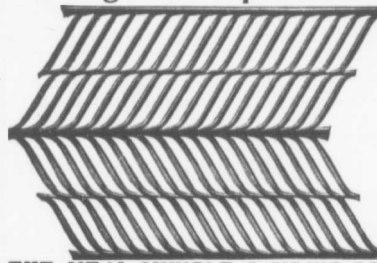


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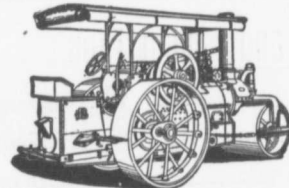
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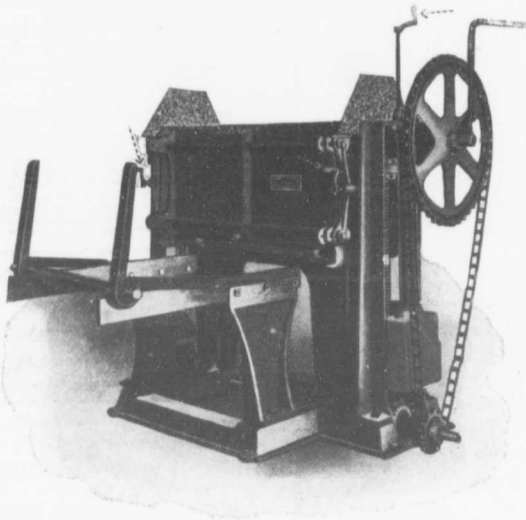
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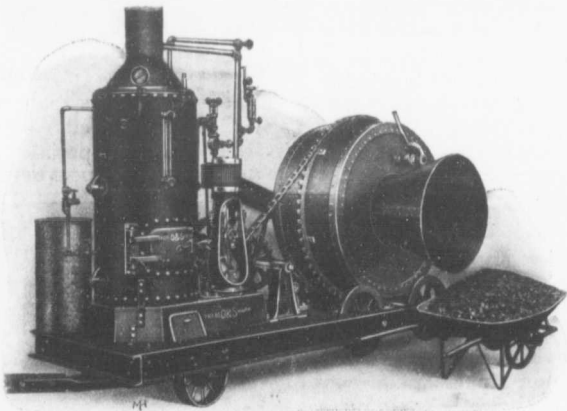
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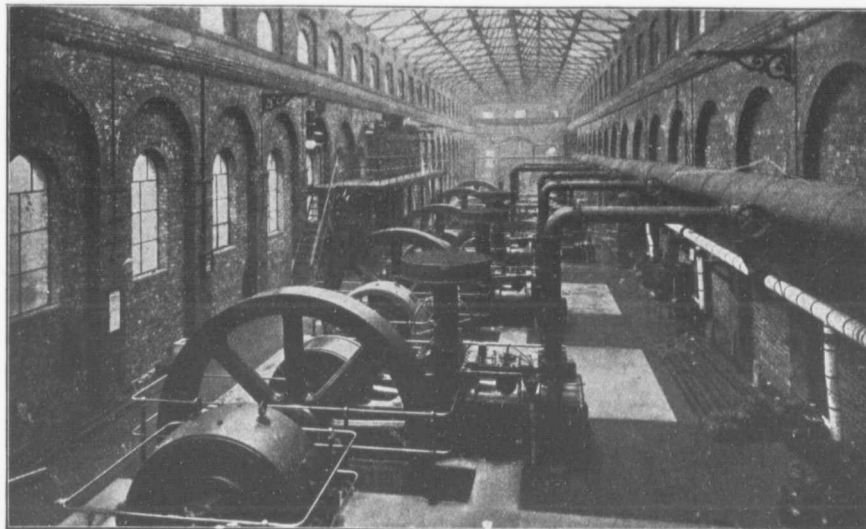
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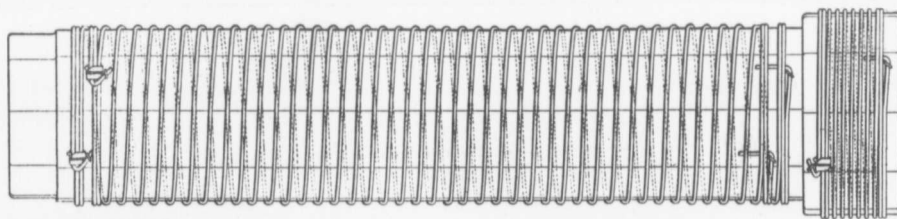
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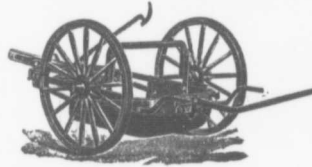
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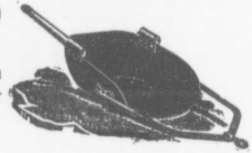
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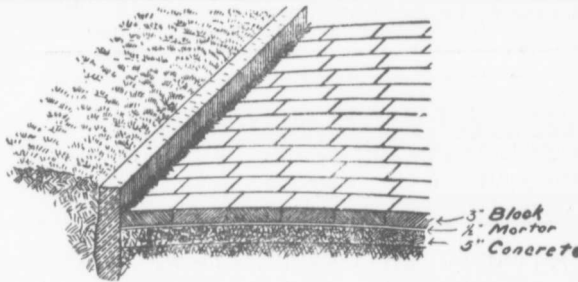
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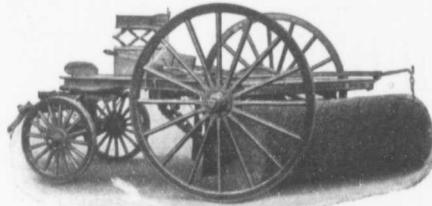
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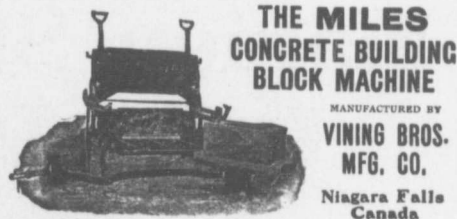
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