

Laurent. Ninety-nine million dollars is the estimated cost. The survey, which is now complete, has been a very thorough one, and represents four years of labor by large corps of technical officers. The cost of the survey has been over half a million dollars.

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In suggesting a thorough investigation that the diaphone signal contracts with the Government, Mr. Justice Cassels remarked: "Accounts showed that the Government had apparently paid \$150,000 for apparatus worth \$25,000. If more than a reasonable profit was being demanded, then the Government, under the patent law, had itself the privilege of manufacture."

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Next week we expect to commence the publication of a series of articles on Sewerage and Sewage Disposal. The articles are written by an engineer of wide experience with sewage disposal works, and who is still engaged with such problems. In Canada we are so busy with large railway and canal works that we sometimes forget the more important engineering work as water supply and sewage disposal. These articles will impress the necessity of proper disposal works and explain how they should be constructed. The series will be reprinted in book form.

#### PRECIPITATION FOR JUNE 1908.

The chief feature of the distribution of precipitation during June was the excessive amount over the Central and Northern portions of Alberta and Saskatchewan, where the fall was almost generally more than twice the average amount, while with local exceptions, the amount of rain recorded elsewhere in Canada was much less than normal.

The table shows for 15 stations included in the report of the Meteorological Office, Toronto, the total precipitation at these stations for the month.

Ten inches of snow is calculated as being the equivalent of one inch of rain:—

Station.	Depth in inches.	Departure from the average of twenty years.
Calgary, Alta. ....	7.26	+ 4.19
Edmonton, Alta. ....	5.50	+ 2.41
Swift Current, Sask. ....	3.00	— 0.04
Winnipeg, Man. ....	3.10	— 0.42
Port Stanley, Ont. ....	2.10	— 0.73
Toronto, Ont. ....	2.97	+ 0.22
Parry Sound, Ont. ....	1.00	— 1.66
Ottawa, Ont. ....	1.20	— 1.49
Kingston, Ont. ....	3.50	+ 0.69
Montreal, Que. ....	1.00	— 2.69
Quebec, Que. ....	2.50	— 1.41
Chatham, N.B. ....	3.00	— 0.45
Halifax, N.S. ....	4.30	+ 0.49
Victoria, B.C. ....	0.10	— 0.97
Kamloops, B.C. ....	0.90	— 0.47

#### NEW ADVERTISEMENTS IN THIS ISSUE.

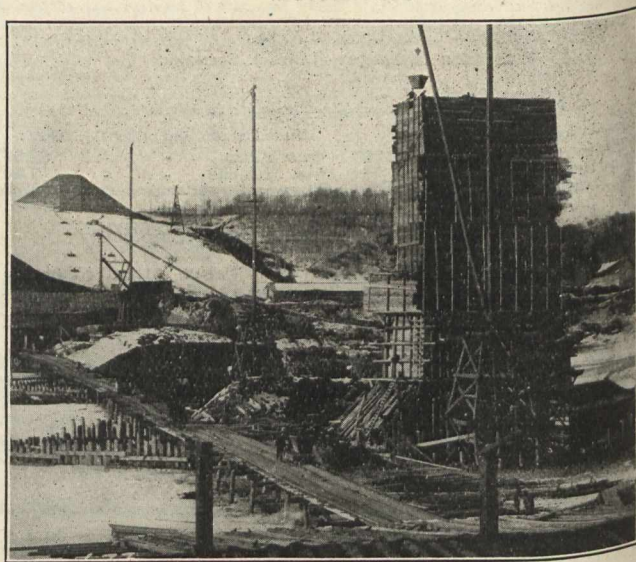
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#### Bridge at Clover Bar, Alberta.

The energy with which the railways in Western Canada are being extended has led to the construction of a number of new bridges and the replacement of old wooden structures by substantial bridges of various designs. The Canadian Pacific Railway are building a steel bridge 210 feet long on concrete piers near Saskatoon, which will probably be completed by July. The adjacent bridge of the Grand Trunk Pacific Company, with its approaches, is to be 1,501 feet long. The same Company are also constructing bridges across the Pembina and Battle Rivers, besides Clover Bar, near Edmonton. The latter is especially notable, since the four piers under erection are exceedingly massive. The bridge across the Battle will be almost half a mile long, and will, it is thought, be finished before next winter. In Winnipeg it is quite possible that three bridges will be commenced this summer to span the Red River. The National Transcontinental will build one, another may be



Pier No. 1 in course of erection, Clover Bar Bridge, Alta.

put up for the local traffic between Winnipeg and St. Boniface, and the Canadian Northern Railway also contemplate the construction of a bridge. Among the bridges recently completed are that of the Canadian Northern Company across the Saskatchewan, said to be the longest bridge in Western Canada, the Portage bridge of the Midland Railway, and one across the Rainy River at Pither's Point, which has a large opening span. One of the most interesting among the bridges in course of construction is that which is to carry the Canadian Pacific line across the Belly River at Lethbridge. It will be over a mile in length and more than 300 feet high. Another important bridge is that carrying the same railway across the French River. It includes the longest and heaviest single-track span yet built in Canada.

It is said that the river piers of the Grand Trunk Pacific Railway bridge at Clover Bar, near Edmonton, Alta., have the distinction of being the largest concrete piers in America, and possibly in the world. They are four in number, their dimensions being very similar to each other. The total height is 124 feet; the distance from footing to lower seat being 92 feet; from footing to upper seat, 98 feet; from footing course to bottom of foundation, 26 feet. The measurement at lower seat is 11 by 26 feet, and at foundation, 41 by 87 feet 6 inches, while the batter is half an inch to a foot. The total amount of concrete contained in each pier is 4,171 cubic yards. Besides the large river piers shown in the accompanying illustrations, these being four in number, there are two shore abutments and some thirty pedestals on the banks. The May-Sharp Construction Co. were the contractors, and about a year was required for the completion of the work. In order to get the steel work to