

cross-sectional area of the clearance between moving and stationary parts. Thus, broadly speaking, the rotating element, through its pumping action, produces an axial circulation of the liquid in the nature of a local action, the axially-circulating body of the sealing liquid flowing through the clearance between the moving and stationary parts, and acting to seal the joint. The greater the difference in pressure, the more rapid will be the circulation. To retard the flow of the liquid between the periphery of the element in the chamber, and keep the volume of circulating liquid necessary to pack or prime the joint small, either part is provided with baffle-plates, or both parts are provided with angular projections 14, 15, forming an interleafed gland or tortuous passage, both of which constructions will act to retard the flow of the liquid, and thus reduce the volume of sealing fluid needed. Where several turbines are provided with the packing at their exhaust ends, which are connected to the same condenser, it is desirable to provide means for sealing the packing joint of any turbine of the set when not running. This may be effected in one way by providing check-valves for the circulation ports which open toward the atmosphere, and providing a means to force liquid into the tortuous gland, so as to flush and seal it.



Ontario.

The E. Long Mfg. Co., Orillia, have placed the order for a Duplex Pump, with the Smart-Turner Machine Company, Limited.

The plant of the Georgian Bay Engineering Works was destroyed by fire recently, and will be rebuilt as soon as possible.

The Grand Trunk Pacific announce that they have given a contract to J. S. Metcalfe for the construction of a two-million-bushel elevator at Tiffin, near Midland.

Fire destroyed pulp mill No. 1 of the Sault Ste. Marie Pulp and Paper Company, on April 24th. The loss is estimated at \$200,000, with insurance of \$100,000. Mr. Geo. Milligan, superintendent of the company states that in his opinion a new plant will be installed as soon as possible.

Quebec.

The Mechanics Supply Company are putting a line of first-class tools on the market. They are worth investigating.

New Brunswick.

The Massey-Harris Company have purchased land, and will erect a \$15,000 warehouse at Moncton, and will make that place their distributing headquarters, which at present are in St. John.

Nova Scotia.

The Anthony Lumber Company, of South Maitland, is now erecting a very large saw mill, with a brick power-house. The mill and machinery will cost in the vicinity of \$75,000.

Manitoba.

Humboldt is to have a cement industry for the manufacture of cement blocks, troughs, bricks, chimneys, waterproof cellars, beton work, etc. If the enterprise proves successful they will install a fully equipped plant and manufacture all kinds of cement pipes for waterworks, sewerage, etc. F. I. Hauser, and J. Armbrust are interested.

Alberta.

A new company has been formed at Medicine Hat, under the name of the Medicine Hat Coal and Brick Company. The coal mines and clay deposits near the city will be developed, and an electric line will be run out to the property. The R. R. Stoner Land Company and S. J. Hewson of the Menonamee Brick Company, of Minnesota, are interested.

SOCIETY MEETINGS.

American Waterworks Association will hold its annual convention at Toronto, Ont., from June 17th to 22nd. J. M. Diven, 14 George Street, Charleston, S. C., is the secretary.

CONTRACTS AWARDED.

Ontario.

J. S. Fielding, C.E., 15 Toronto Street, Toronto, has awarded the contract for erection of factory for the Carriage Mountings Company, at Niagara Falls, to A. Switzer, Toronto.

Jesse Stringer, of Carrville, has been awarded contract for the concrete work on the dam and power-house which is about to be constructed at Streetsville, at a cost of \$20,000. John S. Fielding, 15 Toronto Street, Toronto, Engineer.

H. D. Symmes, of Niagara Falls has the contract for installing an electric power plant at Cobalt, to cost half a million dollars. The plant will supply the power to operate the mines of the district and work will be begun at once.

The Forter-Miller Engineering Company, Pittsburg, has been awarded a contract to reline the two blast furnaces of the Algoma Steel Company, Sault Ste. Marie. These furnaces each have a capacity of 200 tons. The contract for the fire brick has been given to the Harbison-Walker Refractories Company, of Pittsburg.

Contracts for three steel bridges, one over the Vermillion River, and two over the Wilson River, have been awarded by the rural municipality of Dauphin, to the Algoma Steel Bridge Company, of Sault Ste. Marie. The work on the bridges will be commenced as soon as the material arrives.

The Fire and Water Committee, of Hamilton, have awarded contracts as follows for fire-fighting apparatus:—Steam fire engine, H. C. Cameron, agent for Waterous engines, \$5,500; combination waggon, Canadian Fire Engine Company, London, \$1,450; hook and ladder truck, Seagrave Company, Walkerville, \$3,500. These are all to have rubber tires. The contract for supplying new tubes for the boilers at the Beach pumping station was awarded to Richard Quinn. His tender was for \$560.

Quebec.

Mr. Frank Munro, contractor, of Montreal, has been awarded the contract for bridges on the Lake Superior division of the Canadian Pacific Railway. There will be twenty bridges in all extending from Trout River to Fort William. The work includes excavation, cement work, and pile driving.

The new fire-proof power house for the Quebec Railway, Light and Power Co. at Quebec will be a one storey structure with basement. The plans for the same were prepared by Messrs. Stavely and Stavely, and the structure is to be entirely void of wood, even the window casings being of steel. The Dominion Bridge Company will do the steel work and Mr. Francois Parent has the contract for the stone and concrete construction.

Manitoba.

The contract for the erection of the Great Northern depot at Brandon has been given to the Brandon Construction Company, the contract price being \$30,000. The structure will be one storey in height, on stone foundation, with cut stone trimmings. The walls will be of brick with enamelled brick inside. The floors will be tile and the platform vitrified paving brick.

MINING.

Ontario.

A concentrating plant will probably be installed on the Nipissing property this year.

Reports on the Larder Lake and Montreal River mining districts will be made by the Provincial geological staff, following through explorations and investigations to be conducted during the summer.

A despatch from Augusta, Maine, says:—The authorized capital stock of the Nipissing Mines Company has been reduced one-half to \$6,000,000. There was no opposition. The \$6,000,000 of stock thus retired never had been issued.

The Ontario Government has been asked for financial aid in the construction of a road from Boston, a point on the Toronto and Northern Ontario Railway, to Larder City. A good road is needed, it is claimed, to bring in supplies and