

paper, which was illustrated by a prospector's outfit, and some very valuable information was given.

The report of the Committee on Exploration in Ontario was presented by Mr. E. Stewart, of Collingwood, who moved its adoption, which, seconded by Mr. Kirkpatrick, was carried.

Mr. J. W. Tyrrell, of Hamilton, then read the report of the Committee on Polar Research. Among other matters of interest Mr. Tyrrell stated that, taking advantage of the fact that an expedition is to be sent to Hudson Straits and vicinity by the Dominion government during the approaching spring, the committee had written the Minister of the Interior with the object of having a small exploring party accompany the expedition to a point on the north shore of the Hudson Straits near the west end, and thence work northerly during the summer and return with the ship in the autumn. In reply the Minister stated that he was afraid the demands upon his department would not permit of any expenditure during the coming year, but that he was pleased to be apprised of their views, and might be able to do something in that direction in the future.

In addition to sentimental reasons, said Mr. Tyrrell, there were many substantial objects to be gained through judicious Arctic exploration. There was much to be looked for in the development of fisheries, the fur trade and the discovery of minerals. It was well known that for many years the northern portions of Hudson Bay had been the favorite districts of American and Dundee whaling ships, and in this connection he said that a single "right whale" in oil and bone is valued at from \$10,000 to \$20,000. But exclusive of these more or less scanty prizes the Hudson Bay and the adjacent waters abound in other commercially valuable forms of life. He had observed the surface of the water as far as his eye could reach from the deck of a vessel appear an undulating sheet of white, caused by great schools of white whales. Walrus are also found in great numbers, the value of each animal being from \$30 to \$40. In addition there are narwhales, porpoises, several varieties of seals and many species of magnificent fish. Then, as regards furs and the products of the land, he had seen the richest furs stacked by the Eskimos like haystacks upon the shore to await an opportunity for transportation to the nearest Hudson Bay Co.'s trading post. At one locality, which he had occasion to visit, the Eskimos during the preceding winter had trapped over 1,000 white foxes, besides many wolves, wolverines and colored foxes. As to minerals, he said, there was no reason why the limitless rocky plains of the north should not be found to contain as many

and as rich mineral tracts as have been discovered in the temperate or torrid zones. In conclusion Mr. Tyrrell urged that an active interest be taken in Arctic exploration by all the members.

The report was adopted.

Mr. Chipman, as chairman of the committee on Civil Engineers' Bill, reported that the Canadian Society of Civil Engineers had not as yet applied to the Provincial Parliament for an act of incorporation. The bill introduced in the Quebec legislature to incorporate the Civil Engineers' Society was withdrawn at the second reading.

At 11 p.m. the meeting adjourned.

## SECOND DAY.

The meeting resumed at 10 a.m. on the following day.

The president read the report presented by the committee on drainage, dated November, 1896.

On motion of Mr. T. H. Jones, seconded by Mr. A. Niven, it was resolved that the report of the Drainage Committee as read be received and adopted.

A volunteer paper on "Ditches and Water Courses Act as Applied," by G. Smith, O.L.S., of Woodville, was read by Mr. Jones.

The president then presented to the meeting Mr. Kivas Tully, who donated to the Association plans of a proposed tunnel under the western channel at Queen's wharf. The meeting acknowledged the reception of the plans in suitable terms.

The report of the committee on topographical surveying, Otto J. Klotz, of Ottawa, chairman, was read by Mr. H. H. Gibson. After some discussion on it Mr. Niven moved that the report be received and adopted, seconded by Mr. Gibson, and carried.

Mr. T. H. Wiggins, of Cornwall, presented his paper on "Water Works," which was very thoroughly discussed by the members present.

A paper entitled "Proposed Sault Ste. Marie and Hudson's Bay Railway," by Mr. Joseph Cozens, O.L.S., of Sault Ste. Marie, was read by Mr. Davis. The author pointed out what he considered would be the great advantages to Ontario by the construction of the Sault Ste. Marie & Hudson Bay Railway. He claims that as Sault Ste. Marie is the key to Lake Superior, so is it also the key to Hudson Bay. A few miles north of the town and of the C.P.R., he said, is an unbroken wilderness—not in the sense of a broken waste, as all the elements of successful settlement are there—but there are no roads and hence no settlers. For the past twenty years Ontario has been depopulated for the benefit of Manitoba and the North-west, leaving her magnificent northern territory, which, according to Dr. Bell, of the Geological Survey, contains in the valley of the Moose river alone, more good land than the

whole of the greatest civilized portion of Ontario, to lie fallow and uninhabited, save by a few miserable Indians. The railway, he said, would open up a grand farming country, easily accessible, close to good markets and close to lake navigation. It would develop the mineral country lying to the north of the Soo, as the C.P.R. has developed the Sudbury district, and more than all, would bring the Hudson Bay close to our doors and enable us to utilize the enormous fishing resources of that great inland sea. "How few," Mr. Cozens said, "realize that the Soo is only 400 miles distant from the coast of the second largest inland sea in the world, a sea which is practically land-locked and entirely within the Dominion of Canada. This sea is closed from the ocean for about nine months in the year, while the season of navigation upon it is longer than on Lake Superior, hence the necessity for a portage to the south by which its enormous resources can be developed and its products marketed." Concerning the railway itself Mr. Cozens said that he hoped it would be the first electric through line in Canada, as there were sufficient water powers on the route to furnish more than sufficient energy. Mr. Cozens further claimed that if, after the line is built, a line of steamships were put on the bay to connect with a short portage railway from Chesterfield Inlet to the connecting waters of the Mackenzie river, it would bring the northern gold fields of the Rocky Mountain chain in closer connection with Ontario than even with British Columbia, and that the enormous oil fields of the section lying between the Mackenzie river and Hudson Bay would also be tributary to the route.

In conclusion Mr. Cozens said that he had spent some of the best years of his life in obtaining a knowledge of the country to be traversed, and he was now convinced that the route proposed was the one most eminently suited by nature for the opening up by Ontario of its northern seaboard.

At 12.50 p.m. the meeting adjourned, and resumed at 2 o'clock.

The proposed amendments in the Survey Act and the Act respecting Land Surveyors was very exhaustively discussed by the members. It was thought that a bill containing certain desired amendments might be introduced during the present session of the Legislature. One of the changes which has been incorporated into the Act is a clause requiring surveyors from elsewhere in Canada than Ontario or from other parts of the British Empire to spend at least twelve months in their profession in this province before taking the qualifying examination. Heretofore surveyors from Quebec were let off with six months, notwithstanding that that province did