

Hudson bay. We have not only to compare the large body of water at Hudson bay with Lake Superior, but we have to compare that with our shallow canals, and with our little shallow lakes that we meet with in the St. Lawrence route. Then there is another reason, which I would commend especially to our friends from the west. The climate of western Canada will improve very rapidly. I will undertake to show that the climate will be so much improved inside the next 50 or 100 years that we will be raising wheat further north than the mouth of the Mackenzie river. I commend that idea to the government. Here is another point. Science tells us that black is the warmest of colours. We can prove that any time during the next month, when the sun's rays are getting strong, by taking a piece of black cloth and putting it on the snow and near by it a piece of white cloth. A little further away cover a piece of snow of the same size with a matting of grass or hay. After four or five days you will find that the sun's rays have penetrated the black cloth, they have not been reflected, while the heat rays falling upon the white cloth have been reflected, and consequently you will find that the black cloth has sunk into the snow, while the white cloth will not have sunk so far, because it has rejected a certain amount of the solar heat rays. But when you come to the spot that has been covered with hay or grass, what will you find? You will find that the snow has sunk away from it on all sides, because snow and grass are not a conductor of heat. If you wish to keep ice during the summer we will cover it with hay or straw. My good friend from Pincher Creek (Mr. Herron) tells me that he went to that country first thirty years ago, and that at the end of July he dug down into the ground that was covered with hay and grass and found ice two feet from the surface. Now, that black is the warmest colour I have had frequent opportunities to prove in travelling through the country for 33 years.

I would have occasion in the spring of the year, after the sheep were sheared, to go out through the country, during the night time, and as I drove along I would find flocks of sheep lying right on the black road. I would drive over them, and I had the greatest trouble in the world trying to avoid them. I wondered why the sheep lay on the black road, and I thought it was more reasonable that they should lie on the grass at the side, but, these sheep had been sheared, they were cold and they naturally got upon the black road, because the black road absorbed the heat by day and gave it out at night. Therefore, when our western country is all black, when it is all ploughed, it will absorb the heat through the summer day, give it off at night, and you will have no more summer frosts to

kill the wheat. All that we have to do is to wait a little. I think I have given a scientific reason why the climate will change. Most men have read Caesar's *De Bello Gallico*—I read it when a boy—in which he described the climate of Germany, and from which it is evident that they have overcome the disadvantages of climate in the same way there. He talks about the fierce Germans, the rigour of their climate, and the Hyrcinian forest. That forest has been cleared up and drained, and it is now a vineyard, and it is there that the celebrated hock wine is made. The same can be said with regard to the climate of the whole of Europe to-day, the change being so great that it has made a difference of ten degrees of latitude. That means a difference of 695 miles, or, let us say, a difference of 600 miles. That being so, it means that we will be growing wheat as far north as the 73rd parallel of latitude. If you can go 600 miles north, our wheat district will extend to that limit just as soon as the whole country is blackened, or cultivated, and we will be raising wheat on the islands of the Arctic that Captain Bernier is going to look after. There is another reason why the Hudson Bay route will be the better one. It is not only that it is in a better position than Lake Superior, that it is open longer, but it will be benefited by this improvement in the climate much more than Lake Superior will, because that blackened and consequently warmer country will be nearer to Hudson bay. There is another reason why the Hudson Bay route will be preferable. We hear a great deal about drift ice coming down from Fox channel, and we have a great many reports about this drift ice. I had the old principle instilled into me when I was a boy that the whole is greater than its parts. The drift ice coming through Fox channel must come through the Fury and Hecla straits, and it occupies only about one-sixth of the width of Hudson straits. It is impossible that the drift ice coming through Fury and Hecla straits can fill the whole of Hudson strait. All the reports we have about ice in Hudson strait are reports of ice along the south shore of the strait. The floe ice coming down Fox channel will naturally lodge on the southern shore of Hudson strait. At the same time it is quite evident that there cannot be enough ice to fill the whole of Hudson strait, and there must be clear water to the north. Wireless telegraphy, signal stations, &c., would remedy this by giving warning and information to passing ships. I will read to you what some people say of the navigability of Hudson bay and straits. I have a few authorities here. There was a committee appointed by the legislative assembly of Manitoba in 1884 to inquire into this subject. It was composed of Messrs. Harrison, Greenway, Killam, Lea-