

"The engineering of this period is marked by an unfortunate omission, for which we find no excuse."—p. 75.

"Enough has been said to make it manifest that the country has had but poor compensation for the money spent on excavation through muskegs. This, however, would not show that the loss is due to an oversight in the engineering."—p. 79.

The Commission proceed to blame me for not "learning before locating and contracting for the construction of the road-bed, the nature of the material which was likely to be met with in the prosecution of the work. The serious omission to which we have here called attention would not have occurred, had the Chief Engineer and his subordinates acted on the elementary principles of railway engineering."—p. 81.

The Commission appear to have made some researches in engineering literature in support of their accusation and they base their criticisms on the views expressed in a text book written by a professor in a college in Scotland.

They quote Professor Rankin and lay great stress upon the necessity of "Trial pits and borings," "in order to ascertain the strata of the ground, borings are the less costly in time, labor and damage to ground, &c." (Professor Rankin, page 81.)

Do the Commission mean that in equipping the various surveying parties with stores of food and clothing, with shelter, with axe men and axes to force a passage through the forest and with packmen to carry supplies for all, that I should still further have increased the impedimenta? In all seriousness do they mean that I should have added boring implements and gangs of men to work them, with the additional food and shelter which these extra men would need? Suppose I had so acted, would not the Commission have had some grounds for censuring me for absurdly wasting public money.

It is one thing to cite a sentence from a college text-book, to sustain a far fetched argument; it is another to know what is reasonably expedient, and to carry into execution what is really practicable.

The Commission, sitting in their room in Ottawa, must have been reminded of matters which attracted attention twenty years ago, and in which one of its members filled a prominent place. I refer to the enormous amount sunk in the foundations for the Parliament Buildings, by which the estimate and appropriation were so largely increased. On that occasion the principal officer of the Department of Public Works was censured for not having an examination made of the ground where the buildings were to be placed. The principal officer referred to is now one of my accusers, and he must know perfectly well that the cases are totally different. The examination of the ground for a massive building is an every day occurrence; that of the site at Ottawa might have been accomplished at any time in less than a fortnight. In the other case, such examinations are not common; they are not as a rule deemed necessary in this country, and in all probability had they been ordered it would have been necessary to delay construction for another year.

The Commission in one sentence pass censure because the surveying parties were unnecessarily expensive; in another they blame me for not making them more expensive still by adding more men, by dragging through forest and swamp, across rivers and lakes, the tools and machinery to make borings.

In a country like England, with good roads and good inns everywhere, and where land damages are an important factor, the practice may without difficulty be observed, but it certainly is not common in America.

At quite a different stage of the work, viz.: as construction advances, boring is sometimes resorted to, but the process is slow and tedious. A whole summer was spent in making the borings at one river crossing on the Intercolonial Railway.

I have yet to learn that the practice, which the Commission condemn me for not observing, is observed any where. I ask, is there at this moment any gang of men, with boring implements, "ascertaining the strata of the ground" on any of the new lines under survey in Ontario or Quebec?

I state, advisedly, that notwithstanding all the experience of the past there is not a single boring instrument in use to-day in the manner and for the purpose referred to by the Commission on any one of the surveys now being made by the Canadian Pacific Railway Company at any point between the Atlantic and the Pacific.