

the time of the construction of the canal, commenced in 1834, I am bound to show some reason why that location was adopted, and why the plan to which we seek to revert was not then carried into effect. Professional jealousy was the cause of the abandonment of the first survey and the selection of the second location. Professional jealousy, the same monster, rears its head to-day, and it is for this reason that the Chief Engineer of Canals refuses to listen to the propositions made by other engineers and practical men. Let me read to the House an extract from the address made by Mr. Samuel Keefer, at the meeting of the Canadian Society of Civil Engineers, at Montreal, a few weeks since. He said:

"It has been suggested that some reference should be made to the first construction of the Cornwall Canal, the enlargement of which is now in progress, especially to that portion of it between Moulinette and Mille Roches, where the breaches have occurred, and it is my intention to do so, not in this address but in a paper specially prepared with illustrations, to be read at one of the regular meetings of the society. Having spent nearly six years of my younger days as assistant engineer, under I. B. Mills and Colonel Phillipotts, resident engineers in its construction, I may claim the privilege of contributing the facts in relation to the condition of the banks that have come under my own observation.

"The much, however, may be said here.

"The canal and its banks were constructed of ample dimensions. The canal was 100 feet at bottom and 10 feet deep. The embankment was raised to fourteen feet above canal bottom, and made twelve feet wide at top with slopes on either side of two to one.

"That portion of the canal embankment on the upper reach, which for upwards of a mile in length, from Moulinette to Mille Roches, holds the water in the canal at a level of about twenty feet above the branch of the St. Lawrence, which runs alongside, is in fact founded upon the treacherous clay bottom in which were found springs of water, and in part in side-cutting permeated by streaks of sand. The embankment over this ground was formed with extra care, the earth being laid on in courses with carts, and where the outer slope ran out into the river it was protected by boulder stones along its outer edge. Where springs were found under the seat of the embankment they were led out to the river's edge by French drains, and where the streaks of sand were encountered in the side-cutting they were cut off by puddle trenches, six feet deep or more, and the bottom and side bank lined with puddle three feet thick from the puddle trench to high-water mark. This mode of protection was not continuous over the whole line, but was confined to such parts of the bank only as appeared to require it.

"Since the opening of the canal, there have been several breaches in this bank, the last and worst of all was the breach of last fall, which inflicted such serious damage upon the trade of the St. Lawrence last year."

It will be evident from that statement that the greatest care and prudence should be exercised before the Government undertake to carry out the work under the plans proposed by Mr. Page. The fullest evidence should be presented by him to the Government to show that a different condition of the banks can be brought about by the proposed plans, and a different condition of the foundations. I may say that in