

think, in the end, he will have to "walk the plank" in the interest of the country. No government can keep him.

Here is Mr. Ellis' explanatory letter:—

"SUPERINTENDENT'S OFFICE,

"WELLAND CANAL,

"ST. CATHARINES, May 13, 1889.

"A. P. BRADLEY, Esq.,

"Secy. Dept. Railways and Canals.

"SIR,—In reply to your letter No. 78397, I beg to state that I was sorry not to have had the pleasure of the usual visit of the Chief Engineer when the water was drawn off the canal, so that I could have shown all he asks for so much more satisfactorily than by writing. I could have shown him the dangerously rotten condition of things in several places that I dare not any longer postpone renewing and rebuilding, without putting myself in the position of being held accountable for the loss of human lives and the consequences arising therefrom to the Government as well as to myself, and also the possible accidents from rotten gates, lock walls undermined, &c., that might lead to serious accidents and washouts, stopping navigation and throwing hundreds out of employment in the mills and factories.

"I may say that I have made it a rule wherever possible (believing it wise and my duty) in renewing and rebuilding to do so always with stone and iron, instead of wood, thus putting an end to any more decay and expense of repairs.

"The bridge I have just completed across the important raceway that runs alongside Lock 24, Albert street, Thorold, over which a great deal of traffic passes, was built of wood long ago, and has for some time past been a cause of much anxiety to me, having become unsafe, and I provided for its rebuilding last fall by boating down a large quantity of the old surplus stone from Welland that came out of the old lock at that place for the purpose, and attacked the job the moment the water was drawn off, took away the old rotten bridge, and built the present permanent structure. The foundations proved very treacherous and troublesome, and I had to go down deeper than I expected. The banks on each side were consequently high, and threatened to slip, but by putting on a big force and working nights (by electric lights put up on purpose) and days, every available hour, we got the foundations put in, and the masonry built up to the high water mark. Within the two weeks advertised the water would be out of the canal, and the mills above started as usual. Since that I have carried the walls up, put iron girders across (twenty feet width between walls), turned segment brick arches across between the girders, filled up spandrels and flushed all up with concrete, covering same with coal tar, put on the old macadam and allowed traffic over again as usual the end of last week. This bridge has cost a good deal, but it is a permanent structure, and will never cost a dollar any more for renewals or repairs.

"The accompanying photo. was taken when the walls were, say about two-thirds the height.

"It was in building this bridge where all the overtime was made that was enquired about, except by the men on new canal, who had to attend to broken cables and during nights. The temporary bridge that I threw across the Chippewa Creek last year was again utilized in this case across the canal above Lock 24, the same piles and top work being used very advantageously, and without delaying travel a minute.

"I had everything ready to submit for Chief Engineer's approval, expecting him up, as he has always been, every spring since I have been here, and I shall be greatly disappointed if he does not say an excellent and suitable job has been done.

"*Masons.*—The stone work both sides of entrance to Lock 1, new canal, above the head gates, were seriously displaced. These were all taken up, and put in place, well drilled and backed up by widening the walls at that point. This was mason's job, also pointing all weirs where needed, some retaining walls were rebuilt, and the walls of the bridge near spoke factory, Merriton, across the wide race there had become unsafe and had to be put in order, and paving done to prevent foundations being seamed under. The weirs along the old canal generally require some pointing every season to keep them in proper order, and masons attended to that work last month.

"The four machinists enquired about (as the accountant designates them) are handy men. Two have the entire and special responsibility of looking after and keeping in order the water wheels and shafts of the locks throughout, and have to examine them all carefully daily; the other two attend to the rest of the lock gates and weir machinery, and cables throughout. Breakages often happen in the night, when overtime is made by them in attending to same.

"*The Carpenters* are employed at so many different places it is almost impossible to convey by writing, in a letter like this, anything but a mere outline. A great deal of time has been consumed making and putting on new bridge for the lock gates; many binders have been put on gates replacing broken ones; one of our large scows has been partially rebuilt, so as to be ready, when the Chief Engineer proceeds with the concreting work at Port Dalhousie; similar rebuilding of scow is going on at Dunnville. The old bridge across old canal above Lock 2 has had to be partially rebuilt or lives would have been lost. The bridge across Choplin's race had to be overhauled also. New rack about 70 feet long had to be made, and piles driven to support it above Lock 25, old canal. Temporary bridge across canal built above Lock 24; bulkhead built on Lock 23 level. The floats protecting the various bridges, new canal, have required a good deal of attention and are considerably broken up. Carpenters have to attend to a great variety of jobs always, to see that everything is ready for the opening of navigation. The foundation of bridge, Albert street, Thorold, had to be put in; the locks and lock gates examined and faced up in several places and put in working order throughout, also the weirs and aprons throughout, and these latter items consumed a good deal of time.

"*The Laborers.*—Time has been taken up to a great extent in digging out old or 'started' snubbing posts, and substituting better and stronger; in many places much has to be done in that way to keep safe. Various leaks are generally discovered after frost goes out—there have been a number of these—which have to be properly attended to and puddled; overtime often has to be made at such jobs, stone loaded and unloaded. Welland and Thorold—Stone quarried for backing for Albert street bridge, fences built in several places where notice has been served by adjoining owners of suits for damages unless attended to. The opening of ditches and culverts throughout the entire distance of all three of the canals after the spring and winter floods and freshets requires a large amount of time from all our gangs of laborers; also, filling up slips and washouts, bad ruts in tow-paths and ends of bridges, and culverts which get washed out. Driftwood and logs have to be attended to everywhere before opening of navigation. Floats at Port Colborne and elsewhere—after ice disappears—require attention. The toll house at Dunnville has been removed back some ten feet and made available for lock-tender's residence. Beach gravel has been scowed for lake to Dunnville embankment. The excavating required down to foundation of Albert street bridge and wheeling it away for both the walls and then wheeling it back again as masonry was built up,