

the sawdust which you find in the channel during the low water in the fall? A. I cannot answer that.

Q. So that you cannot say whether the sawdust does permanently fill up the channel of the river? A. There is no question about it, it is permanently filling up the channel of the river—encroaching upon the channel.

Q. Did you ever notice in the sawdust bank at McKay's Bay where the current strikes a body of sawdust there that it is cut down clean? A. Yes, but do you not see this has been piled up for years and as the water falls the sawdust must tumble over from the top.

Q. At McKay's Bay, there is a deposit of sawdust where it strikes the channel, is it just not as clean cut down as a ledge of rock? A. It does not strike the channel there, it is very deep water there.

Q. But there is a large deposit of sawdust there? A. Yes, but I have not been in to see it at all. It does not come near the channel at all. We pass a long way from it.

Q. You come pretty close to the shore in passing up by Rockcliffe? A. You see there are lots of logs in there, and the working of the current and the waves of the steamer move these logs, and, of course, would cause the sawdust to fall.

Q. Just immediately before you get to McKay's Bay, as you come round the point, you keep close to the shore? A. No, we keep straight up some distance from the shore. We are quite close to it at Rockcliffe.

Q. Do you not keep by the shore a little when you come round the point at McKay's Bay? A. No, we come straight up; we do not come within hundreds of yards of the sawdust shoal in McKay's Bay.

Q. You never made an examination of those bars in the channel yourself? A. No. I have stuck a pike pole into them.

Q. You know that these barges that navigate there draw 6 feet of water? A. Yes, and I know they were all aground last fall below Rockcliffe, at the point you speak of. The channel is altogether changed there. Formerly we had a good channel there, but now the channel is close to Hillman's mills. The closer we keep to the shore at Hillman's mill the better. We have found out a new channel in the low water last summer.

Q. The water comes down more violently now in the spring since the country has been denuded of the forest? A. Yes, I think we get rid of the snow more quickly.

Q. So that all the rivers running into the Ottawa, and the Ottawa itself, is subject now to heavier freshets and they come more suddenly? A. Yes.

Q. And these freshets bring down a larger quantity of debris than formerly? A. Certainly.

*By Honorable Mr. Clemow:*

Q. The current is much stronger on top than below? A. Yes, it is much greater on top than in the bottom of the river.

Q. Therefore, the debris would be taken off by the heavier current? A. Yes, and might never strike the bottom at all.

*By Mr. Christie:*

Q. Do you know whether the place where the barges stuck last summer was a sand bar or a sawdust bank? A. It was sand and sawdust mixed—lots of sawdust. We found this new channel last fall, near Hillman's mills, by accident, from the fact that all the barges were aground in the channel—the barges of Mr. Bangs as well as those of Mr. Murphy.

*By Honorable Mr. Clemow:*

Q. Have you discovered any difficulty in managing your boilers from the sawdust? A. Yes, in going through the sawdust we find that we have to keep two injectors in the boiler, and the engineer has to work them by opening one and shutting the other. The sawdust gets in and opens up the valves of the injection pipes and holds them there, and the water runs out of the boiler. The engineer attributes