

points, and to replank the sluice-ways with hardwood. Posts were planted in piers and the corners faced. The stop-log hoisting gear was also repaired and improved, and stone-filling done where required.

Dumoine River.—At the head of the High Falls slide, it was necessary to provide flatted timber for the extension of the booms.

WORK OF RECONSTRUCTION.

At *Calumet Station*, on the Ottawa River, a flat dam near the outlet of the third or lowest slide at this station, had been wrecked; it was rebuilt across the channel, and a timber apron provided to receive the impact of the cribs which have to pass this somewhat dangerous rapid. A new apron was also placed at the foot of the second or long slide, with suitable chain attachments.

Petewawa River.—Certain works in connection with the boom and piers near the mouth were rebuilt, as well as the foundation of the governing dam at Crooked Chute; and at Half Mile Rapid, a flat dam was reconstructed and some improvements effected in the channel above Bois-dur Station. At McDonell's station, the superstructure of the slide was widened, and for the most part rebuilt and the entrance pier extended. At the foot of the slide, the slide piers were rebuilt.

The heavy snow fall during the winter of 1892-93 in the Ottawa Valley, and more especially in the regions surrounding the sources of the main river and its principal tributaries, taken in connection with the copious rainfall at the time of the break up in the spring, had the effect of raising the waters to such a pitch as has not been experienced by the people of this district since the memorable year of floods (1876). Such a heavy body of water carrying with it sheets of ice of very great thickness, due to the unusually low temperature prevalent in the winter months, had a disastrous effect on the works under my control at many of the stations; for instance, on the 20th of April, a large sheet of ice was driven by a gale of wind from near the mouth of the Mississippi, and against the current of the Ottawa, to the range of boom piers near the mouth of the Madawaska, and cut ten of these piers down to a level below the then existing water mark. On the 23rd of April, the middle section of the dam at Little Rapids on the Madawaska, was carried away, and at a later date, very considerable damage was done to the head works at High Falls, Ragged Chute and Chain Rapids on the same stream. At the last mentioned station (Chain Rapids), the upper portions of the dam and the bulk-head were destroyed by fire, which, by some means, reached the works; its origin is not definitely known, but it is supposed that it had spread from a hunting party's camp fire that had carelessly been left to burn out. On the Coulonge, the main boom at the head of the Chute gave way, and on the 6th of May, the resident slide-master reported that a fall of stone from the precipitous banks had broken through the slide. On the Petewawa, on the 19th of May, the dam at the First Chute gave way and wrecked 200 feet in length of the single stick slide; while a break took place in the boom at the mouth, as well as at the end of the dam at the third chute.

At the Carillon slide, on the Ottawa, the lower apron was displaced, and at the Chaudière station, the side piers of the slide, and the lower booms were considerably disturbed. At Chenaux station, the main boom near the island broke without any escape of logs or timber, and at Portage du Fort, part of the side pier of the slide was carried off, and breakages caused to the booms.

In many of the above cases such repairs as were practicable were speedily executed, and the works made available for the purposes of the lumbermen, but in some instances, such as at the breakage of the dam and slide at the first chute on the Petewawa, and the cutting down of the boom support piers near the mouth of the Madawaska, temporary expedients had to be resorted to, to admit of the passage of timber and saw-logs, and it will not be possible to put these works in a thorough state of repair until the season of low water and after all the timber has passed. The same remarks apply to other damaged foundations which will only be accessible at the season of lowest water. When the water was at its highest register, an immense pressure was put on the works, and it was with the greatest difficulty that