

Locomotive Co., to prepare the designs in collaboration with him. As a result it was decided to modify considerably the

wheel direct in marine engine style, and that the frame of the plough should resemble a bridge girder to thoroughly

cutting knives and scoops of exceedingly thick plate, and all other construction in proportion, would have resulted in a weight that was impractical. A wheel, however, was built which was quite different from any others and which was immensely strong. The wheel was made of cast steel. As no facilities were avail-

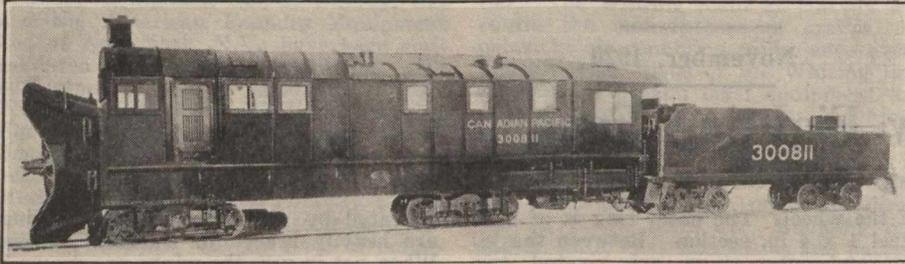


Fig. 34. Canadian Pacific Ry. Heavy Rotary Snow Plough.

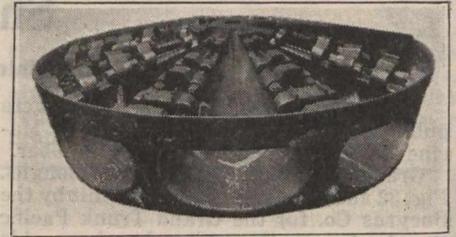


Fig. 38. Assembled Wheel, without Cutting Knives.

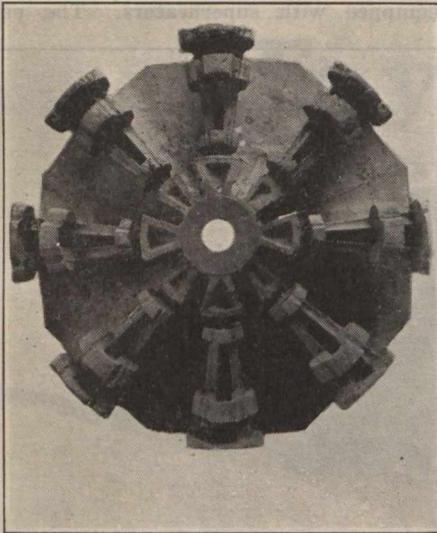


Fig. 35. Front of Center Casting.

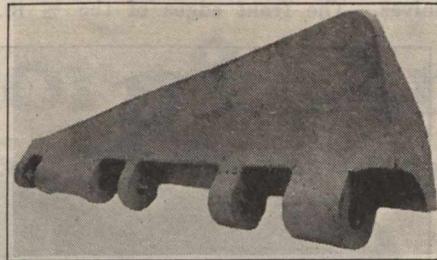


Figure 39.



Figure 40.

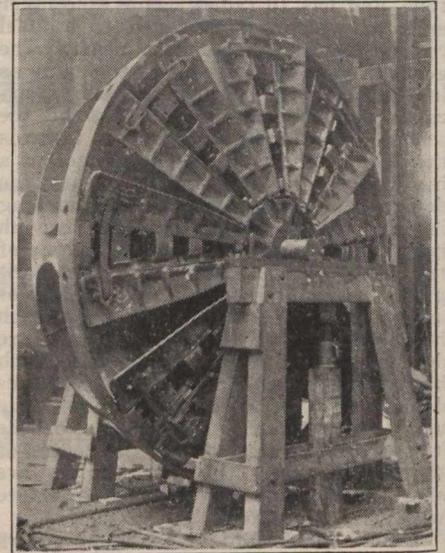


Fig. 43. C.P.R. Heavy Rotary Snow Plough Wheel, being balanced.

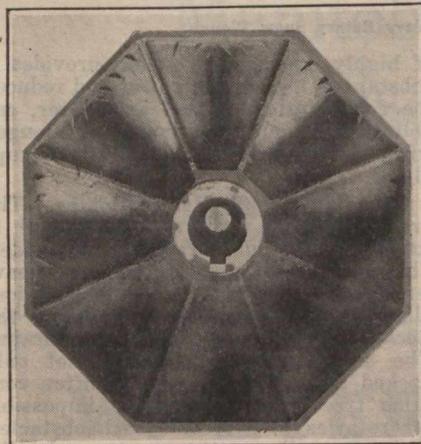


Fig. 36. Rear of Center Casting.

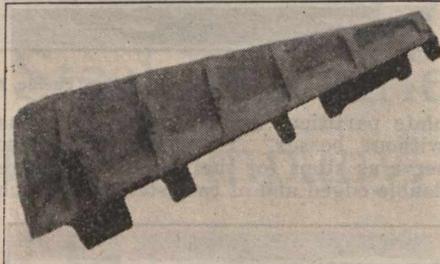


Figure 41.

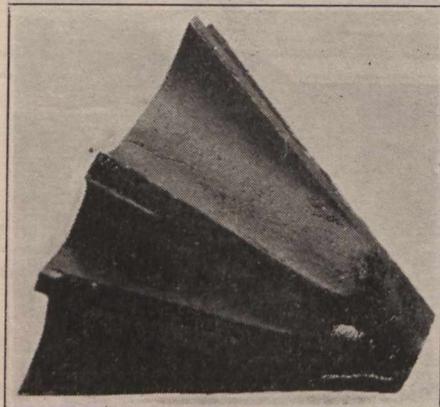


Figure 42. Cutting Knives and Nose Piece.

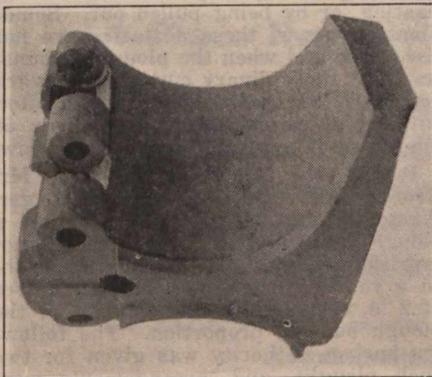


Fig. 37. Cast Steel Segment.

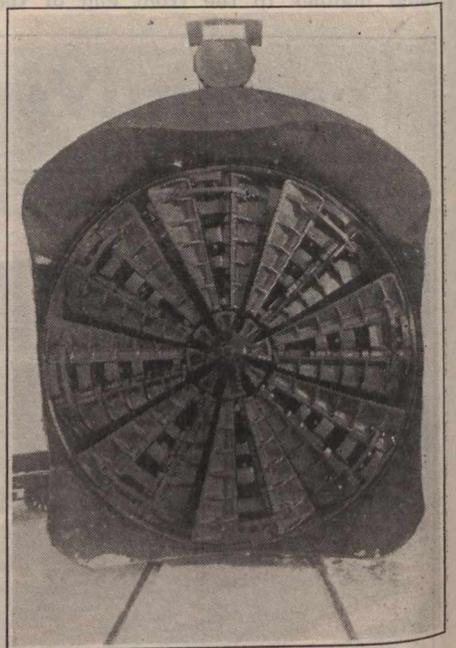


Fig. 44. Completed Wheel in Place, on C.P.R. Heavy Rotary Snow Plough.

construction of existing ploughs. It was Mr. Vaughan's idea that better results could be obtained by driving the plough

support the casing or hood. This idea has been justified, as the ploughs operate with practically no vibration. It was decided to build the ploughs, incorporating these ideas. The finished ploughs are shown in figs. 33 and 34, and are the largest and most powerful that have ever been built.

The design of a tremendously strong and rugged wheel was one of the most important problems. To have made the

able for machining or annealing a casting of the required size, a built-up construction was used. The center casting, the front and back of which is shown in figs. 35 and 36, was made in octagon form 80 in across the flats. Fig. 37 shows one of