

**Rebuilding Long Broom Sweepers.**

The Levis County Ry. has rebuilt two of its long broom sweepers recently. They are 14 years old and have seen probably the most severe service of any in existence, in some years being in continuous service for 6 weeks at a time without a day's break. The weather conditions in Levis are about the worst to contend with on the American continent. The summer, although short, is often exceedingly hot, and the winter long, with severe frosts and an average of 110 to 120 in. of snow. The district served by the company is fairly open, one-third on



Rear end of rotary snow plough, Levis County Ry. showing cutting blades and fan paddles, which run at 1,200

tions was approximately \$250 each car.

The whole of the work was carried out under the direction of H. E. Weyman, Master Mechanic, and by order of A. K. MacCarthy, Manager.

**The Edmonton Radial Railway Deficits, Etc.**

The Edmonton Radial Ry., which is owned by the City of Edmonton, Alta., was opened for traffic Nov. 9, 1908, with a two car service along Jasper St. and Norwood Boulevard, there being then 2 miles of double track and 4 miles of sin-

sweepers. During 1916 the car mileage was 2,031,490; number of passengers carried 10,564,799; and gross receipts \$520,255.40. In order to meet operating charges and capital charges, which amounted to \$146,970.19, the city's general funds were called upon to provide something over \$120,000. The total deficiency, which has had to be met by the tax payers to the end of 1916 is \$700,000. The total debenture debt for the railway at the end of 1916 was \$3,074,856.20, against which there is a balance at the credit of the sinking fund of \$366,698.82. The interest charges are \$146,970.69, and the fixed charges for repayment of principal are \$86,140.65.

These facts and figures have been brought out in the course of the controversy now going on in the city as to the prospects of the railway. It is pointed out that the cost of operation was reduced during 1916 from 21.5c a car mile to 18.4c, and it is claimed that with continued economical management, and an increased population, the expenses will ultimately be met. Others claim that there has been unfairly charged against the railway, the cost of paving the 4 ft. strip between tracks, and for some time the railway was charged with the entire cost of maintaining this strip. This has now been reduced to 25% of the cost. Power costs over \$100,000 a year, on the present basis.

J. H. Moir, Superintendent, estimates that with an additional 5,000 passengers a day the railway would be self-sustaining. In referring to the question of one-man cars, he says: The era of their general adoption on street railways is not far distant. However, he sees difficulties ahead of the scheme when applied to the Edmonton system, where the basis of traffic is the rush-hour long haul period to the outlying residential points. On some of the lines railway tracks must be crossed, and extra precautions would

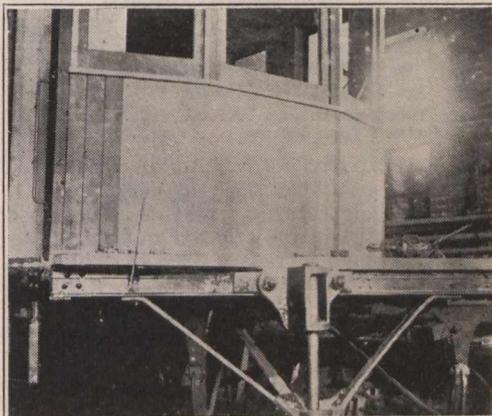


300 h.p. rotary snow plough, Levis County Ry., operating in 9 ft. of snow

high ground and two-thirds on low ground, along the south shore of the St. Lawrence River, and all too well situated for snow and storms.

These sweepers had both their exposed ends rotted and broken away, also the ends of the side sills, the end sills and two end crossings, as well as the front body posts, otherwise the main bodies of the cars were in fairly good condition. The reconstruction was so arranged that the main body of the car would be untouched, including the part of the side sills and the crossings which were good, also bearing in mind future depreciation of these parts, so that they can be replaced with steel, when it becomes necessary, with little expense.

All the rotten or damaged parts were removed (some fell out) and a new steel underframe was constructed, so that it could be slid under the body and bolted to it. This steel underframe has side sills of 6 x 6 x 5/8 in. angle, end sills and all crossings of 5 in. I beams. Two 4 in. I beams were inserted between the end sill and crossing, and a 4 in. channel was placed between them to carry the draw bar arrangement. The wheel frame was rivetted. The total weight of the broom gear, draw bars and side wings was thus placed on the steel frame. The frame was then slid under the car body, which was lowered on to it and bolted. Steel angle body corner posts were then erected and riveted and the old remaining side sills, crossings, etc., were braced and connected by 6 in. angle plates. The rest of the car was finished off with the necessary wood. The cost of these altera-



End of reconstructed sweeper, Levis County Ry., showing steel underframe



Reconstructed sweeper, Levis County Ry., after a snow storm

gle track laid. At the end of the first year of operation there were 8 miles of track, with 10 cars in operation. The total car mileage was 253,740, the number of passengers carried was 1,812,746, and the gross earnings were \$80,461.56. At present the system has the following mileage: permanent double track, 34.9 miles; permanent single track, 0.280; temporary double track, 7.6; temporary single track, 9.5; sidings, 0.211; spurs, etc., 1.0; and terminals, Y's and loops, 0.3—a total trackage of 53.9 miles. Of this 29.3 miles were built during 1913, as were also the elaborate car barns at Cromdale, where 60 cars can be accommodated. The rolling stock consists of 79 p.a.y.e. passenger cars, 7 work and street sprinkling cars, and 2 street

have to be taken by means of watchmen. Furthermore, the scramble for cars in the rush hours, owing to the exodus to the outlying portions of the city, already taxes the resources of the two-man cars. In the event of half the present schedule being operated with one-man cars, the saving in wages would not amount to more than \$27,000.

H. W. Dyson, who resigned his position as Comptroller, British Columbia Electric Ry., Vancouver, recently, to become General Manager, Yorkshire & Canadian Trust Co., Ltd., there, went to Vancouver from England in 1910, as assistant to George Kidd, then Comptroller, now General Manager. Mr. Dyson was appointed Comptroller in 1914.