

*Westinghouse Brake.*—All new engines and rolling-stock built for North and South Island Main Lines and Branches are equipped with the quick-acting Westinghouse brake before being placed in service. Efficient arrangements are in force for the examination and upkeep of the Westinghouse brake. The work of equipping the engines and rolling-stock on Whangarei and Gisborne Sections with the Westinghouse brake has been put in hand.

*Car-lighting.*—The oil-gas manufactured at the five separate Pintsch gas works amounted to 9,994,930 cubic feet, costing 2s. 1'31d. per 100 cubic feet. The rise in cost was due to the increased price paid for oil.

On sections not provided with Pintsch gas cars are lighted with acetylene gas, and practically all the cars on the isolated sections are now supplied with this system of lighting.

*Motor-cars, Culverden-Hanmer.*—Cars in service have been kept in good and efficient working-order.

*Steamers.*—The Railway Department's steamers on Lake Wakatipu have been maintained in good order. A new steamer was completed and put into commission during the year.

*Re-tareing Wagons.*—Whenever wagons are in workshops for repairs the tare weight is checked and adjusted before the wagon goes into service again; also, at intervals not exceeding twelve months, the tare weight of all goods-wagons in service is checked and adjusted.

*Sheep-wagons.*—The work of fitting grated floors to all the older wagons is now completed. All new live-stock wagons are built with grated floors. These grated floors are found to be of great assistance in carrying live-stock in good condition.

*Renewals and Replacements.*—During the year under review six old cars, one brake-van, twenty-two wagons, and 2,374 worn-out tarpaulins were written off and replaced with six new cars, one new brake-van, twenty-two new wagons, and 2,374 new tarpaulins. In accordance with the practice of the Department the cost of the new cars, brake-van, wagons, and tarpaulins was debited to working-expenses.

Seven new bogie cars are in hand (cost debited to working-expenses) for replacing old cars sold, and old cars which will be written off when the new cars are completed.

*Train Running and Mileage.*—There has again been an increase in train-mileage. Compared with 1911-12 the increase in 1912-13 is 644,537 train-miles, or equal to 7·7 per cent., and 779,847 engine-miles, being equal to 6·9 per cent.

The following table shows particulars of the expenditure per train-mile:—

| Year.          | Train-mileage. | Engine-mileage. | Cost, in Pence, per Train-mile. |                       |        |
|----------------|----------------|-----------------|---------------------------------|-----------------------|--------|
|                |                |                 | Locomotive Branch.              | Car and Wagon Branch. | Total. |
| 1912-13 ... .. | 9,016,224      | 12,089,925      | 22·18                           | 6·02                  | 28·20  |
| 1911-12 ... .. | 8,371,687      | 11,310,078      | 21·32                           | 5·99                  | 27·81  |

The increased cost per train-mile has been mainly caused by the extra cost of fuel and wages.

#### MAINTENANCE.

Mr. J. Burnett, Chief Engineer, reports as follows:—

*Permanent-way.*—The track has been maintained in good condition. The following relaying has been done during the financial year:—

|                                                                                                        | Miles. |
|--------------------------------------------------------------------------------------------------------|--------|
| Main lines, 53 lb. and 56 lb. relaid with 70 lb. steel material .. ..                                  | 83½    |
| Branch lines, 40 lb. relaid with second-hand 53 lb., &c., steel material removed from main lines .. .. | 20     |
| Branch lines, 40 lb. relaid with new 55 lb. steel material .. ..                                       | ¾      |
| Total relaying for the year .. ..                                                                      | 104½   |

Short supplies of sleepers prevented a greater length being done.

Between 125½ m. and 126½ m., Wanganui district, near Turakina, an improvement of the alignment from minimum 6-chain to 15-chain curves, preparatory to relaying, has been put in hand as a charge to working-expenses.

The work of fitting sharp curves with check-rails to lessen the wear on outer rail has been continued.

*Sleepers.*—235,378 sleepers were put into the track during the year. Respacing to provide the standard number of sleepers to strengthen the track has been gone on with so far as the supply permitted.

*Slips and Floods.*—Traffic on the North Island Main Trunk was twice interrupted by slips in the Ohakune district, where, in two places, deviations of the line had to be made. In such country there is great liability to interruptions by slips.

A heavy storm did some damage to the sea-wall between Kaiwarra and Petone.

In the South Island heavy rains were experienced in July and November, 1912, and in March of this year, causing delays to traffic. In the latter month exceptionally heavy floods did considerable damage to the main line and all branches (except the Tapanui, which was not damaged) in the Inver-