xliii D.—2.

1 Class RA wagon (converted from old car under-frame and fitted with body for carriage of mails,) and 1 Z bogie sleeping-van (converted from old car). Three Class M lowside and 2 Class N timber four-wheel wagons were sold.

The following condemned wagons were written off during the year: Bogie stock: 1 Class R highside wagon, 4 Class RD highside wagons, 10 Class S sheep-wagons, 4 Class T cattle-wagons, 1 Class U platform wagon, 2 Class V frozen-meat wagons, 3 Class Z covered goods-wagons. Four-wheel stock: 10 Class G horse-boxes, 7 Class H cattle-wagons, 72 Class J sheep-wagons, 63 Class K covered goods-wagons, 108 Class L highside wagons, 4 Class La highside wagons, 25 Class M lowside wagons, 1 Class Ma lowside wagon, 3 Class MB work-train hoppers, 4 Class N timber-wagons, 4 Class W frozen-meat wagons, 1 Class X dairy-produce wagon, 2 Class Xa fruit-wagons, 10 Class XB fish, &c., wagons, 8 Class Y work-train hoppers, 4 Class YB work-train hoppers.

The carrying-capacity was increased by 1,453 tons.

During the year 20,874 wagons were passed through the workshops, of which 14,807 received

heavy repairs.

The following wagon stock was on order from the Government workshops at the end of the year: Bogie: 20 Class RB highside wagons, 5 Class Ug horse-boxes, 6 Class VB frozen-meat wagons. Four-wheel: 10 Class G horse-boxes, 40 Class H cattle-wagons, 470 Class La highside iron wagons, 100 Class M lowside wagons, 50 Class Q movable hopper wagons, 30 Class W frozen-meat wagons, 80 Class XA fruit, &c., wagons.

Tank-wagons.—During the year 18 rail tank-wagons were built for oil companies for the carriage of motor-spirit in bulk.

There were on order 7 rail tank-wagons at the end of the year.

Road Buses.—During the year 12 road motor-bus bodies were built and fitted on chassis in the Government railway workshops. There were 11 road motor-bus bodies on order at the end of the

Tarpaulins.—The tarpaulin stock on the 31st March, 1930, was 23,375. Five hundred new tarpaulins were manufactured in the railway workshops during the year, and 4,439 tarpaulins were replaced with a similar number of new sheets, 22,439 sheets were repaired in the workshops.

Axles.—During the year 772 car, van, and wagon axles were replaced with modern steel axles; 788 axles were prepared for new rolling-stock.

Train-lighting.—On the 31st March, 1930, there were 430 cars fitted with electric light.

Engine Headlights.—The total number of locomotives fitted with electric headlights on the 31st March, 1930, was 223.

## SIGNAL AND ELECTRICAL.

Mr. G. W. Wyles, A.M.I.E.E., M.I.R.S.E., Signal and Electrical Engineer, reports as follows:-

I have the honour to submit the following report on the signalling and block-working, communication services, and electrical work on the New Zealand Railways, for the year ended 31st

The signalling apparatus, block instruments, communications, and electrical-power installations

have been maintained in good working-order during the year.

Signalling.—The work done during the year is as follows: Double-line automatic signalling has been completed between Frankton Junction and Horotiu (6 miles 55 chains), and single-line automatic signalling between Horotiu and Mercer (34 miles 72 chains), completing the automatic signalling between Auckland and Frankton Junction. A single-line automatic section has also been installed and brought into use between Heathcote and Lyttelton (1 mile 66 chains).

In connection with the automatic signalling between Frankton and Mercer, the following stations have been equipped with colour-light signals worked automatically: Whangamarino, Te Kauwhata, Rangiriri, Ohinewai, Taupiri, and Kimihia, and the following sidings have been switch-locked and are automatically controlled: Firth's siding, Defence siding, Te Rapa, Ngaruawahia ballast-pit siding. At Huntly the mechanical signals have been superseded by colour-light signals and are worked

from the mechanical levers.

Special mention may be made in regard to the interlocking at Horotiu, where power interlocking has been installed and facilities given for switching this interlocking out when required. is done the signals work automatically, as also do the main line points from double to single line. This is the first case of an installation of automatic operation of points for main line traffic.

Power interlocking has also been installed at Ngaruawahia.

Home and distant signals with Wood's locks have been installed at Waitoki, Poukawa, Chaneys, Oio, Tauranga, Katikati, Te Puke, Edgecumbe, Wedderburn, Taneatua, Rock and Pillar, Matarae; and removed from Whangamarino, Te Kauwhata, Rangiriri, Ohinewai, Taupiri, Te Rapa, Ngaruawahia, Horotiu, Huntly, and Mangaiti, owing to their being superseded by other methods of signalling, or being no longer required.

Tablet locks interlocking siding-points with the tablet system have been installed at Walls End; Patea Freezing Co.'s siding (Patea); T. N. Wills' siding, Waverley; service siding, Oroua Bridge; service siding, Otaki Bridge, south end and north end; Whenuakura Bridge service siding, north end and south end; Texas Oil Co.'s sidings, Bunnythorpe and Masterton; Crichton grade-easement service siding; Kario Sawmill Co.'s siding between Erua and Pokako; New Zealand Central Fruit Board's private siding, Hastings; New Zealand Dairy Co.'s private siding, Taupiri; Manawatu River Bridge service siding; Mangaiti.