Additions and alterations were made to the following installations: Auckland, railway-yard and locomotive-yard; Rotorua, additional lights installed on platform and in yard and cottage No. 148; Lambton, railway-yard; Addington, locomotive workshops; Port Chalmers, lighting of export wharf.

The following work has been done in connection with electrification of machinery in locomotive workshops: Newmarket, electric welding plant has been installed and brought into use; Frankton Junction, 7½-horse-power motor has now been installed in the machine-shop; Gisborne, 2 7½-horse-power motors have been installed at the locomotive depot Addington, 7 additional motors have been installed and brought into use, making a total of 23 D.C. and 15 A.C., aggregating 204 horse-power D.C. and 273½ A.C., or a total of 477½ horse-power.

*Level-crossing Automatic Alarm-bells.*

Five level crossings were fitted with automatic electric warning-bells at the following places: 127 m. 49 ch. (near Turakina); 24 m. 12 ch. (near Maharahara); 36 m. 78 ch. (near Piripiri); 33 m. 26 ch. (near Paraparaumu); 5 m. 48 ch. (near Khandallah). The present number now in use is 35. The installations have given satisfaction during the year.

*Expenditure.*

Particulars of expenditure for the Signal and Electrical Branch for the year ending 31st March, 1920, are as follows:—

| New works— | £ | s. | d. |
|---|---|---|---|
| Signalling and interlocking | 22,248 | 13 | 1 |
| Electric tablet working | 1,147 | 3 | 8 |
| Telegraph and telephone facilities | 1,749 | 8 | 0 |
| Electric light | 3,127 | 18 | 7 |
| Electric motors, &c. | 2,127 | 6 | 11 |
| Level-crossing alarms | 1,647 | 2 | 0 |
| Total | £32,047 | 12 | 3 |

| Maintenance— | £ | s. | d. |
|---|---|---|---|
| Signalling and interlocking | 23,140 | 18 | 0 |
| Electric block, telegraph, and telephone lines | 23,092 | 7 | 2 |
| Lines, &c., maintained by Post and Telegraph Department | 1,753 | 8 | 6 |
| Electric light | 6,080 | 4 | 0 |
| Electric motors, cranes, fire-alarms, level-crossing bells, &c. | 1,832 | 12 | 4 |
| Total | £55,899 | 10 | 0 |

## LOCOMOTIVE.

Mr. E. E. Gillon, Chief Mechanical Engineer, reports as follows:—

*Locomotives.*—On the 1st April, 1919, there were 620 engines in service, and on the 31st March, 1920, there were 616 engines. Eight second-hand tank engines were sold and written off stock; four new heavy tank engines, 4–6–4 type, Class Ww, were built in the Government railway workshops.

In the Government railway workshops to date 191 engines have been built, and twenty-four old locomotives have been rebuilt. Five hundred and thirty-one locomotives passed through the workshops during the year, the details of work done being as follows:—

| Particulars. | Number and Type. | | | | | Total. |
|---|---|---|---|---|---|---|
| | Four-cylinder *Balanced-compound* Tender Engines. | Tender Engines. | Tank Engines. | Fell Engines. | Single Fairlies. | |
| Number passed through shops | 59 | 192 | 262 | 8 | 10 | 531 |
| Built new | .. | .. | 4 | .. | .. | 4 |
| Re-erected | .. | .. | 5 | .. | .. | 5 |
| Thoroughly overhauled | 23 | 44 | 65 | 3 | 3 | 138 |
| Heavy repairs | 20 | 62 | 67 | 4 | 4 | 157 |
| Light repairs | 16 | 86 | 121 | 1 | 3 | 227 |
| Painted | 16 | 54 | 68 | 2 | 7 | 147 |
| Paint touched up | 33 | 110 | 89 | 5 | 2 | 239 |

Included in the above are five engines for Public Works Department and one engine for a private line.