

REPORTS FROM HEADS OF BRANCHES.

MAINTENANCE.

Mr. F. C. WIDDOP, M.Inst.C.E., Chief Engineer, reports as follows :—

The track, structures, buildings, and appliances have been maintained in good order and repair.
Permanent-way.—The relaying done during the year was as follows :—

	Miles.
Main line 100 lb. relaid in 100 lb. material	$\frac{1}{4}$
Main line and branches, 53 lb., 55 lb., 56 lb., 65 lb., and 70 lb., relaid with 70 lb. material	28 $\frac{1}{2}$
Main line and branches, 53 lb. and 56 lb., relaid with 55 lb. material	$\frac{1}{2}$
Main line and branches relaid with second-hand 53 lb. and 56 lb. material removed from main line	6
Total relaid for year	35 $\frac{1}{4}$

Sleepers.—The number of new sleepers placed in the track during the year was 179,212.

Ballasting.—197,664 cubic yards of ballast were placed on the track.

Slips and Floods.—During the year the Kaihu line between 11 $\frac{1}{4}$ m. and 13 $\frac{1}{4}$ m. was flooded on several occasions causing slight delay to traffic. Minor slips and washouts occurred on the Kaikohe and Waihi Branches.

Owing to heavy rain on 25th July, 1927, considerable damage was done on the North Auckland line, floods, slips, and washouts occurring at various places between 73 m. and 176 m. and causing train delays. A flood and slip also occurred on this line at Tahekeroa tunnel on the 11th August, 1927, causing a slight delay to trains.

On the 27th July, 1927, a large slip occurred on the main line at 26 m. 50 ch. between Karaka and Paerata, about 10,000 cubic yards of earth coming down in a deep cutting. The main line was completely blocked and passengers had to be transhipped. Traffic was restored on the 29th July, 1927.

On the 27th December, 1927, a slip occurred at 68 m. 70 ch. main line near Taupiri Bridge. The bank at side of line dropped about 15 ft. for a distance of 60 ft. to water-level of river. There was no delay to traffic.

On the 28th May, 1927, a slip of 100 cubic yards of clay came down at 203 m. 75 ch. (spiral) Main Trunk line, but there was no serious delay to traffic.

A very heavy fall of snow occurred between National Park and Taihape on the night of the 20th July, 1927. Tablet and telephones were crippled, but there was no damage to track.

On the 28th November, 1927, a slip containing a large stone (1 $\frac{1}{2}$ tons) came down at 277 m. 10 ch. near Mangaweka, and blocked the line for three hours.

After heavy rain on the 18th December, 1927, several slips occurred between 272 m. and 273 $\frac{1}{4}$ m. between Utiku and Mangaweka, blocking the line for five hours.

On the 30th July, 1927, at 10 p.m. a slip of about 800 cubic yards occurred at 1 m. 25 ch. Manawatu line, burying the line for 1 chain. A train ran into the obstruction, and derailed engine and twelve empty wagons. Traffic over this portion of the line was suspended until 6.30 p.m. on the 2nd August, 1927. A further 500 cubic yards had to be removed from the top of cutting before traffic could be resumed.

On the 29th April, 1927, and 28th November, 1927, the sea-wall between Ngahauranga and Petone was breached, and track damaged owing to heavy seas.

Several slips causing slight delays to trains occurred between 25 m. and 31 m. 69 ch. Gisborne section (between Waikohu and Otoko).

No serious damage was done by floods and slips in the Canterbury District during the year although it has been necessary to keep putting in stone on the embankment of the Bealey River. 13,931 cubic yards of stone were used for protective-works in this district during the year.

On the 26th July, 1927, a slip occurred at 18 $\frac{3}{4}$ m. Otago Central (between Hindon and Deep Stream) completely blocking the line, and causing derailment of engine and wagons of passing train. Line took four days to clear.

Owing to heavy rains the line between Riverside and Gladfield on the Outram Branch was blocked for traffic from 3 p.m. on the 7th, to 3 p.m. on the 8th September, 1927.

In September, 1927, exceptionally heavy rains caused several washouts and slips on the Lawrence Branch. On the 7th September all trains were cancelled on the branch. Traffic was resumed between Milton and Lawrence on the 8th September, but not between Lawrence and Miller's Flat until the 12th September.

In repairing damage caused by the slip of embankment at 29 $\frac{1}{2}$ m. Catlin's River Branch (between Tawanui and Puketiro), 2,606 cubic yards of rock and clay filling and 207 cubic yards of ballast were used.

Bridges.—These have been maintained in good order. A large number of bridges have been overhauled and repaired, also a number renewed in rolled steel joists. Bridge-strengthening to allow heavier engines to run has continued on a number of lines.

Water-services.—These have received the necessary attention. Electric pumping plant has been installed at a number of stations, thus reducing the cost of pumping.

Wharves.—The wharves under the control of the Department have been efficiently maintained.