

(8) *Nature of Thoroughfare*.—Intersection, (19) 18; railway-crossing, (7) 9; nature or condition of road (bad surface or bend, &c.) helped accident, (48) 51; road conditions not a factor, (98) 143.

Although the railway-crossing accidents are only 2 more than last year, they account for 20 deaths.

(9) *Location*.—(a) North Island: Auckland City and environs, (29) 25; Wellington City and environs, (16) 19; other towns, (20) 31; country, (57) 88. (b) South Island: Christchurch City and environs, (13) 14; Dunedin City and environs, (4) 8; other towns, (8) 11; country, (25) 25.

This shows that the increase lies chiefly in the North Island country districts.

(10) *Causes of Accident*.—Breaches of law: Excessive speed in circumstances—(a) But not exceeding 20 miles per hour, (33) 6; (b) exceeding 20 miles per hour, but not exceeding 35 miles, (35) 25; (c) exceeding 35 miles, (18) 32.\*

On wrong side of road, (24) 38. Did not comply with "off-side" rule, (7) 7. Passing standing tram, (3) 0. Other passing breaches, (9) 4. Failure of driver to signal—Motor-vehicles, (3) 0; other vehicles, (2) 0. Breaches of law relating to railway intersections, (7) 11. Vehicle without rear reflector or with inefficient one, (2) 2. Faulty brakes, (8) 9. No lights or inefficient lights (including horse-vehicles and bicycles), (22) 17. Glaring headlights, (4) 10. Faulty steering-gear, (3) 4. Faulty tires or wheels, (4) 8. Driver's mild intoxication a factor in accident, (12) 26. Driver's severe intoxication a factor in accident, (3) 7. Driver unlicensed or inexperienced, (5) 2. Straying stock, (1) 1. Other breaches of law, (5) 2.

Other causes: Bad weather conditions, (19) 4. Vehicle being reversed, (3) 2. Sun-dazzle, (2) 0. Obstruction to view by parked motor-vehicle, (4) 5. Driver's physical defect a direct cause, (4) 0.

Motorist and pedestrian—Motorist at fault, (17) 9; pedestrian (not intoxicated) crossing or on road, without care or getting confused, (17) 30; pedestrian intoxicated, (5) 5; children on streets, (2) 7; infant (under six) not under proper control, (9) 1; other causes of pedestrian accidents, (6) 1.

Causes not included above, (4) 22.

The larger number of accidents apparently occurring at the higher speeds and due to not keeping to the left is noteworthy; also the increase in cases of driver's intoxication and glaring headlights.

## MECHANICAL DEVELOPMENTS DURING YEAR.

### THE ELECTRIC TROLLEY-BUS.

Until quite recently the trackless trolley-bus as a class of public passenger-vehicle has been represented in New Zealand by one small vehicle only of an early type. The inauguration during the year of trolley-bus service for several miles outwards from Christchurch with large capacity single-deck vehicles of modern design and attractive appearance draws attention to the potentialities of this type of vehicle.

The trolley-bus is growing in popularity both in Great Britain and in the United States of America, and in this latter connection statistical figures recently published show that the percentage increases for the United States of America for the year 1930 compared with the previous year have been as follows: 83 per cent. increase in the number of companies operating trolley-buses, 174 per cent. increase in the number of buses, 143 per cent. increase in the number of routes, and 170 per cent. increase in the mileage run.

### TIRES.

Perhaps no section of motor-vehicle production has made more progress within the year than the tire-manufacturing branch has done. Not only are they extending the life of tires of ordinary types and sizes by improved methods of construction, but are also offering, on the one hand, "balloon" tires of exceptionally large carrying-capacity—viz., 4 tons per tire—and, on the other hand, tires of moderate load-capacity at relatively low air-pressures, which in turn give safety and added comfort to the traveller.

The system of rating the gross load capacity of commercial vehicles per medium of their respective tires and in keeping with the tire load and inflation schedules as published and recommended by associations representing the interests of both chassis-makers and tire-manufacturers is likely to become general throughout Great Britain and the United States of America.

### OVERSEA MECHANICAL TRANSPORT COUNCIL.

An outline of the activity and objective of the Oversea Mechanical Transport Directing Committee was given in my annual report for last year, and it is pleasing to now report that the committee has been able to carry on with, and has achieved some success in, the work of developing mechanical transport for the economic benefit of our Empire.

In the first quarterly bulletin issued during the year it is reported that, after considering the respective merits of alternative designs for the 40-ton pay-load unit, it was decided to proceed with the combination tractor with two 20-ton trailers, and much experimental work has been and is still being done on a section and on parts of the patented track proposed for the job.

Naturally, more progress has been made with the lighter tractor, with 15-ton pay-load multi-axle trailer unit, and it is expected that a detailed report upon the experiments and investigations of this useful type of vehicle will be available shortly.

\* As in many cases the only source of information re speed was the driver himself, these figures are not a reliable guide.