

April 26, 1917.

tion, 8.6 per cent. looked one way only and 52 per cent. looked in both directions. Of 6,300 pedestrians observed, 49.1 per cent., or practically one-half of the total, looked neither way; 15 per cent. looked in one direction only, and 35.9 per cent. looked both up and down the track." The same company has tabulated the accidents on grade crossings which have happened during the last five and one-half years in an attempt to secure the reasons for these accidents with the following results:—

	Killed.	Injured.
Ignored train and its warning	35.0%	37.1%
Ignored train and its warning and warning of crossing bell, automatic and human flagman, and warnings of other persons	13.8%	12.6%
Ran into side of train	10.1%	15.3%
Stalled on track	7.8%	4.2%
Tried to beat train to crossing	16.0%	9.3%
Other causes	17.3%	21.5%
	100.00%	100.00%

This company during two years had 525 crossing gates broken by vehicles which drove into them when they were down.

In the United States during the year ending June 30th, 1916, there were 1,310 people killed and 3,184 injured on highway grade crossings of railways.

On the Central Railway of Georgia, 78,275 drivers of motor cars, motorcycles and horse-drawn vehicles were observed at railway crossings and of these 59,700 did not look in either way before starting across the railway, or in other words, about 75 per cent. took no precautions whatever, even though they were approaching the danger zone of the railway.

Nor do accidents always occur at dangerous crossings. At Thamesville, Ont., last year at the Grand Trunk Railway crossing, three people who were driving in an automobile were killed. The crossing was equipped with an electric bell, there was a red warning light designed to show the approach of a train, and 50 feet from the crossing there was a clear view of the track for two miles.

In order to make people be more careful, a law in Paris, France, was enacted which made it possible to arrest any pedestrian who was hit by a moving vehicle between street intersections. This resulted in the reduction of accidents by 50 per cent. On the other hand, any driver who was found guilty of breaking the traffic regulations had his license cancelled. The people soon learned that the proper place to cross a street was at an intersection where the vehicular and foot traffic was regulated by a police officer.

As was mentioned at the beginning of this paper, there are many other features of our highways that take their toll in accidents.

The narrow road with the high crown that compels motorists to stick right on the top and make the man with the horse move well off or lose control of him has caused more than one casualty. Besides the harm done to the road by continuous travelling in the same rut, the road with too steep a crown is dangerous. If it happens to be wet and slippery motorists, believing that it might be difficult to get back on the road, or fearing they would slide into the ditch, do not care to turn out.

If it is a man with a load of hay, there is a possibility of its overturning when he pulls out on the steep side.

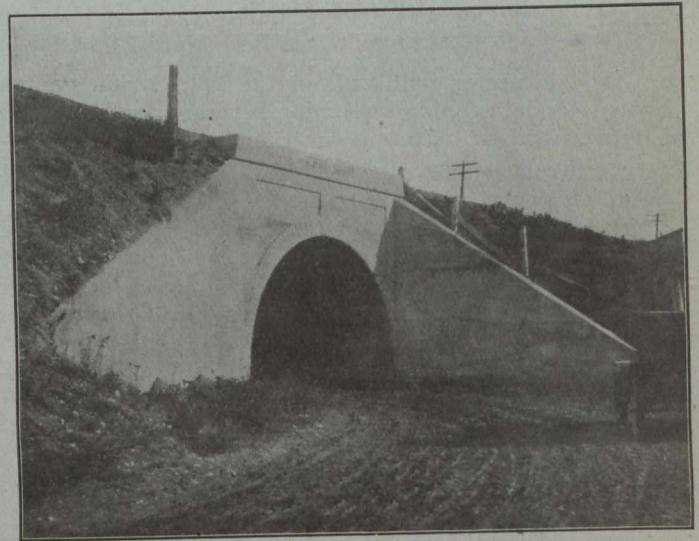
The width of road is pretty well governed by the traffic it has to withstand. It should have a crown that

would shed the water, and yet be wide enough so that traffic would be diffused over the whole surface. It should always be borne in mind when contemplating construction that immediately a road is built traffic will increase and the type of road should be designed with this increase of traffic in view.

The steep, narrow road on a hill with a sharp turn at the bottom is another source of danger and makes many anxious moments for the driver of a heavy load or a motor vehicle. Sometimes the brake refuses to act and he is going so fast that he cannot make the turn at the bottom and plunges headlong through the flimsy railing, causing destruction to the car and certainly injury to its occupants.

A dangerous condition like this can generally be averted by a change in the location of the approach to the bridge or of the bridge site itself; perhaps a longer, easier grade could be found or by raising the bridge the approach to it could be rendered less liable to cause a serious accident.

Owing to the nature of our early surveys there are many jogs and sharp turns on our roads. In one county



A Dangerous Turn in Road.

there are turns greater than 90°. It has caused this county no small amount to make these turns safe and still keep within the road allowance. This was done by raising the outside of the road by the addition of more stone, which enables the driver of a car to make the turn without a chance of an accident. An improvement on this is to lengthen the curve by using a piece of the land adjoining.

The grade of the steep hills could be reduced and the sharp turns eased, if the owner of the adjoining land could be brought to see the great benefit he would confer on the travelling public, and the words of commendation he would bring from everyone, if he would consent to sell it at a reasonable figure.

All narrow fills, approaches to bridges, and deep ditches, should be protected by a good strong guard rail. The deep ditches in the clay sections of Essex and Kent counties are very dangerous. When the clay road surface is wet it becomes so slippery that to turn out in some of the narrow places is a very hazardous undertaking.

These roads should be surfaced with any material that would reduce the slipperiness and a guard rail should be built at the edge of the ditch. Many of the ditches were dug years ago when the traffic was not as it is at present.