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not require the same amount of force to haul a vehicle with wide tires as it does to haul one with narrow ones. Municipalities should consider the regulating of traffic in this regard.

Most of the European countries have laws regulating the width of tires on vehicles. In France the market wagons have tires from 3 to 10 inches in width, usually from 4 to 6 inches. Not only have they wide tires but in most of their four wheeled freight wagons the rear axle is 14 inches longer than the fore axle, so that the rear wheels run on a line about an inch outside of the line of the fore wheels; instead of being a road destroyer they are a veritable road maker.

The following width of tire to load may be recommended:

Load on each wheel.		Wagon without springs.		Wagon with springs.	
500 lb. to 1,000 lb.		2½ inches.		1½ inches.	
1,000 " 1,000 "		3 "		2 "	
1,600 " 2,000 "		4 "		3 "	
2,000 " 3,000 "		6 "		4 "	

In order to encourage the use of wide tires in the State of Michigan they have a law granting a certain reduction in taxes to those who use wide tires.

Vehicles on springs are much easier on roads than vehicles without springs.

Wheels of large diameter do less damage to roads than smaller ones and cause less draught.

ROAD MACHINERY.

Machinery for road making effects a great saving in the expense of making and repairing roads, besides doing the work in much shorter time. Every municipality should have a sufficient number of road machines or graders to assist in keeping their roads in a proper state of repair and to construct new roads when required. There are various kinds on the market, mostly made of steel, and if used properly will pay for themselves in one season. Each municipality should also have either a horse or steam roller. A good horse roller is preferred for general road work; it should weigh about 3 tons and be so constructed that it could be weighted to 7 or 8 tons by stones or pig iron. The advantages of a light roller are, that in rolling soft material it will not stick, or push the material in advance of the roller, and when the bed is rolled with the light roller and becomes hard and smooth, weight can be added to the roller to any desired extent. These rollers should be made so that the tongue could be reversed from one side of the roller to the other, thus preventing turning around at the end of the stretch. Such a roller as the above can be purchased for \$200, and its value in making and maintaining roads cannot be estimated.