

the exhibitions in a building provided for this exhibit. Processions could be given daily in the ring, and a final race, starting in the ring, encircling it once or twice, thence to a point twenty or thirty miles into the country and return, to finish by again going round the ring. Manufacturers would enter a contest of this kind as much for advertisement as for the prize money, and should, in the writer's opinion, be willing to pay a reasonable entrance fee. There is no reason why both London and Toronto should not include a motor-vehicle contest in their attractions and prize lists, and it is to be hoped that the directors of these exhibitions will give it due consideration. London can offer exceptionally good accommodation. A race from the city to Lucan or Strathroy would be an ideal run: roads that are good in all weathers, with grades just enough to give a good test, and plenty of villages along the route for frequent relay stations. The vehicles might be divided into two classes, one class for electric motor vehicles and another for carriages driven by internal combustion engines and other small motors, that carry their fuel in small receptacles, enabling them to take enough for the complete trip. The former might show up to good advantage in preliminary tests, processions and short trips, but, as has been proven by previous races, the latter could make the best time in a long road race. Should these few rambling remarks, or any personal assistance, be of any value to exhibition directors or private individuals with a desire to further the advancement of this industry in Canada, the writer will be more than pleased. One thing is certain, the motor-vehicle has come to stay, and our country should, as usual, be well to the front in the improvement and manufacture of them.

MUNICIPAL CONTROL OF STREET CAR, WATER AND GAS PLANT.

The city of Glasgow, Scotland, owns and operates its street car plant. Thirty-nine per cent. of the fares in that city average one cent per journey, and the average of all fares is below two cents. The cars are run by horses, yet a large profit on the investment is realized by the municipality. All authorities agree that horses are more expensive than electric traction. When the city took possession of the plant, as they were empowered to do, the company refused to sell their horses to them; 3,000 horses were required to operate the plant, and these had to be purchased wherever they could be got. Some of these horses were diseased, and in consequence 1,500 were laid off sick, the city being put to great expense in caring for and replacing them. To harass the municipality the old company put on a line of busses operated by their old horses and ran them at low fares, carrying on a fierce competition. The municipality, however, took no notice of this and kept on their way, reducing the hours of labor for their men, supplying them with uniforms and improving their plant, and established a reduction in the fares of 33 per cent. in spite of their misfortunes, opposition and expense in reorganization. They realized a profit the first year of \$111,000, one-third of which was set aside to cover depreciation, one-third to cover improvements, and \$40,000 given to the city for the reduction of municipal taxation.

In the city of Liverpool, England, and Berlin, Germany, the street car fares are two cents per trip. On the Liverpool elevated railway, double-track dock line, seven miles in length, the fare is four cents inside and three cents outside, with lower fares morning and

evening for workmen. The Liverpool surface tramway's rails are level with streets, there being no obstruction whatever from curb to curb; the car wheel flanges run in a narrow groove, so that the most delicate buggy wheels are in no danger of being caught. The average fare on all the tramroads owned by companies in Great Britain does not exceed three cents per trip. In most of the cities the tracks are deflected to the side-walks at all stopping places, allowing the passengers to get out without encountering the mud and danger of crowded streets.

Notwithstanding the great cost of the Liverpool elevated electric railway—it being built practically regardless of expense to insure a first-class line in every respect—the passenger fares are stated to be 45 per cent. over the running expenses. This line runs its cars practically without noise or vibration, there being no gearing either on the motors or the axles. The motors are attached direct to the axles by a sleeve of larger inside diameter than the axle, to allow it play. This sleeve is attached to armature and drives the axle by a sliding coupling, which does away with great wear of the gears, as used in America, as also the noise, rattle and vibration common to geared motors. In the city of Berlin the elevated roads are operated by the state. On these a yearly ticket is sold for \$4.50 to go in and out of the city, a distance out of five miles, as many times in the day of each year as the holder desires, a possible daily average of ten miles for one cent. These roads are making a clear profit of forty per cent. on their passenger traffic, without reference to their light freight and other sources of revenue.

Budapest, the capital of Hungary, has a very successful surface electric railway, with no trolleys or wires in sight, the electric connections being below the surface. The rails are as in Liverpool, Glasgow and other British cities, level with the street. The fares are two and a half cents per trip, on which a very large profit over expenditure is realized. The foregoing statements give about the general average of receipts and expenditures in European cities.

The capital of the Union Traction Company in the city of New York is set down to the credit of the company as being \$139,000,000. The whole of the tracks in the control of this company, including power houses, cars, motors, overhead systems, etc., did not cost more than \$27,000,000, including street paving, etc. It could be duplicated for this amount of money. The actual investment did not exceed \$20,000,000 at the outside. The franchise is capitalized at \$119,000,000, or six times the total value of the plant. What is this but wholesale robbery of the people?

The city of New York should have six-sevenths of the profit shown in this, and the company one-seventh, instead of the whole of it, this being the proportion that the city and the company contributed to the realization of the profit. This matter is now occupying the attention of the cities of San Francisco, Chicago, Detroit, Philadelphia and Boston, in all of which three-cent fares are demanded, or municipal control of the roads.

The city of Toronto bought its street-car system in 1891 and operated it for six months. In that time it realized a profit of \$25,000 per month. Yet by some means a company got possession of this valuable franchise for \$8,000 per month less than was actually realized by the city for the six months that it ran the railway. Since that time a new power plant has been put in and the road run by electricity. It is well known