

to handle electrically all trains going in and out of their great New York Terminal Station. Hundreds of trains daily and the smoke from all these locomotives eliminated, the noise of the exhaust steam and pounding drive wheels stopped entirely, and in place a smooth running quiet service comfortably and cleanly handling this immense traffic. Before long reaches of track in our country can be properly electrified there must of necessity be many difficulties to be surmounted, some of which may be of a difficult nature, but not impossible. Perhaps one of the worst will prove to be the snow trouble. Now whether a pantograph system or a third rail system is to be adopted I am not prepared to say, but I do feel safe in saying the ingenuity of our railroad men will get over the difficulty. Nearly all of our Canadian cities are passing smoke by-laws, and the electrification of sections of the roads at all cities would stop that trouble and pave the way for extensions until at last whole roads would be suitably equipped, and equipped in such a way as to largely increase the carrying capacity of the present trackage. The very fact that trains, both passenger and freight, following each other at shorter intervals than they do at present would go a long way in keeping tracks clear of snow trouble. The present electric locomotive is proving itself to be of great efficiency and also to be perfectly adapted for rapid work either on the level or on heavy grades. It is only natural that we can look for improvements in their construction that will meet the most exacting wants of any railroad, with our water powers all harnessed for the work and efficient steam power houses erected where the lines are out of the zone of the water powers it should not be many years before the steam locomotive will be a back number, and will only be used where the traffic is light, and one of our great 140 ton engines will be as much of a curiosity as is that old engine, the Rocket, to-day.

Some of the members present may say: well, the electrification of a railroad is too large a project, and the cost of it will be so great that it will never come. I do not expect to see any railroad undertake electrification of the whole service at once, but it seems to me perfectly plain that it will come, it fact it has arrived. It is here in sections, and there is no doubt but these sections will be increased in numbers, and eventually, each will be extended until whole divisions will be perfectly electrified. We may reasonably ask where it is likely a start is to be made, and from the foregoing facts they naturally point, first, to the most congested districts, and secondly to the most difficult points to maintain good train service, on account of unavoidable grades. Our leading Canadian roads all have numerous places where these difficulties are to be found. Take for instance the G.T.R. right here in Toronto, and let us examine the actual situation for a few minutes. Kindly bear in mind