vices. The coal consumed in the service is then calculated by allowing 70 miles per ton, and the quantity thus obtained is deducted from the total quantity apportioned to the freight service. This estimate of 70 miles switching per ton of coal consumed is taken from the observations of the Lake Shore and Michigan Southern Railway, extending over a number of years. It will be seen, therefore, that the results obtained are only close approximations to the absolutely true figures of this subject; but still they are sufficiently close to be valuable as comparisons.

The Table shows that the coal consumed in passenger traffic is less on the Lake Shore line than on any of the others, being 12·8 lbs. per passenger-carriage mile. Taking the average weight of the cars composing the passenger train at 16 tons, this would give a consumption of 0·8 lb. per ton hauled 1 mile; at the same time it is interesting to note that there is a consumption of 1·16 lb. per passenger moved 1 mile. The very large consumption of fuel per ton moved 1 mile in the passenger service, as compared with the freight-service, is undoubtedly due to the much higher rate of speed of the former, as compared with the latter. Confirmation of this is found on considering the figures applicable to the Hannibal and St. Joseph line. There the consumption per ton-mile in the passenger-service is less than that of either the Canada Southern or Michigan Central, and only very little greater than that of the Lake Shore line; whereas the consumption per ton-mile in the freight service of the Hannibal and St. Joseph line is very much greater than any of the others, being more than double that of both the Canada Southern or Lake Shore lines. This apparent anomaly is explained by the fact that the speed of the passenger trains on the Hannibal and St. Joseph line is much less than that on any of the others under consideration.

The consumption of fuel in freight-service on the Canada Southern and Lake Shore lines is nearly the same, with a small fraction in favour of the former, while on both lines it is less than on the Michigan Central, or Hannibal and St. Joseph. The amount of fuel consumed in moving 1 ton gross weight (including the fuel consumed in shunting) is barely $2\frac{3}{4}$ ozs.—a quantity which is surprisingly small. This is on the two first-mentioned lines; while on the Michigan Central and Hannibal and St. Joseph lines it amounts to 4 ozs. and 6·4 ozs. respectively.

In the latter part of the Table the amount of coal consumed in the switching or shunting work of the freight service has been deducted, and that consumed in the work of moving freight-trains