

has about 40,000 people. I was thus able to see and inquire into the general features of the working of four well-defined groups of lines—first, among the densely-peopled eastern cities; second, in the central, producing States; third, a narrow-gauge system in a mineral district; fourth, a system traversing the more remote agricultural and pastoral districts.

In considering the remarks I have to make, it must be borne in mind that my visit was very brief, and that some of the salient points only of the enormous system—which, on the 31st December, 1887, was reckoned at 150,000 miles—could be touched in my inquiries; but, as I had an opportunity of consulting some of the best-known railway experts in the States, representing, in various ways, a very large proportion of the system, the information obtained may no doubt be taken in a general way as a fair indication of American practice.

To any criticisms I may appear to make it may be reasonably objected that the system is so vast and its growth so rapid that no individual who has not been intimately and professionally concerned in a large way for some years with railway management in the States can realise the great difficulties attendant on organization and working. In the year 1887, 12,000 miles of railway were opened.

When we consider the effect as regards the new traffic brought to existing lines, the new competition introduced, the supply of rolling-stock and engines needed, the great staff-changes which such rapid extension involves, and the effect on accommodation and appliances at existing stations and ports, it must be allowed that the difficulty attendant on meeting such an unparalleled development must be great, and we cannot but admire the wonderful way in which the services are conducted in the face of such a growth. At the same time, we should not therefore neglect to point out what appear to be defects which, in the absence of such difficulties, need not be permitted in other countries under much simpler conditions. I must not therefore be considered to be criticizing American railroad-management, but rather as endeavouring to point out those things which it is desirable for us to follow or to avoid.

In America, undoubtedly we find much more in railway management that is of value to us than we shall do, generally speaking, in Europe: not that railways in America are more perfect (they are, indeed, less so), or that their management is more efficiently or successfully carried on, but because the circumstances attendant on railways in this country differ less from our own than they do in Europe. After opportunities of seeing and learning something about the operation of Italian, Belgian, and French railways, and renewing my acquaintance with English railways, it seemed to me that the English were in advance of the rest; but we cannot follow the English practice in most ways, because we have not the population to work on, and because, physically, our lines are so much inferior, both on account of the physical features of the country and through their light construction, which it was necessary to adopt to suit the financial condition of so small a community as ours.

The United States had, at the end of 1886, about 138,000 miles of railroad; they are stated to have earned about $3\frac{1}{4}$ per cent. net on the total capital and debt. The previous year they earned $3\frac{1}{2}$ per cent.

In inquiring into particulars of working, statistics are often compared and criticized without knowledge of or reference to the conditions of working, thus leading to very erroneous inferences.

The primary use of railway statistics is to guide and inform the persons in charge, to enable them to control and regulate their working. The railways in the United States differ most widely amongst themselves in the conditions of working, and from the conditions under which the colonial lines subsist. We cannot judge by figures, unless we know the conditions, what may be the relative merits of the management.

It would be difficult to find out what rate of interest the United States railways pay on their cost, as the cost could not be known without an intimate knowledge of the history of each company. The capital stock and debt at the present time do not represent the actual cost of the lines. It has been modified in various ways. The enormous land-grants made to many companies are a disturbing element. The Northern Pacific Railroad, for instance, had land-grants of 48,000,000 acres. The great number of bankruptcies of railway companies is another disturbing element. For example, the report of the State Commissioners for 1886 says, with reference to the official railway statistics for the State of New York: "In consequence of the reorganization of the West Shore Railroad Company . . . its stock and debt was reduced from \$125,924,339 to \$60,000,000, and the cost of road and equipment from \$101,552,487 to \$60,000,000." Again, the Denver-Rio Grande Railway, I was informed, had been in the hands of a Receiver, and had been reorganized; and its present capital does not represent half its actual cost. Mr. Jeffry, General Manager of the Illinois Central Railroad, says, of the railroads in Illinois State in 1886, that twelve companies in the State of Illinois were then in the Bankruptcy Court in consequence of the undue lowering of rates. Instances might be multiplied in illustration of this difficulty. Another source of disturbance has been the "watering" of stock. In many cases also large sums of money have been contributed by towns and localities to companies, to induce them to provide accommodation or to extend their systems.

There is perhaps no element connected with working railways which affects the expense of working more than the rate of wages. Wages in our system probably absorb over £500,000 a year out of £700,000 expenses; and, unless this element is kept carefully in view, very erroneous inferences may be drawn in making comparisons with other systems. In the States the usual practice is to work ten hours a day. Unskilled regular labour seldom commands much more than \$1 per day of ten hours. Hire is usually at per hour—a dollar a day is 10 cents an hour. Comparing this with the rate paid on the New Zealand railways for unskilled labour, 6s. 6d. per day of eight hours, the latter rate is 19 cents an hour. In other branches of labour the difference is not so great: still, generally there will be a material difference in the average. In the Western States, where population is scanty, and where mining prevails, wages are higher—