

Time did not allow of my going to Germany, so that, beyond travelling over the railways through Alsace and Lorraine, I saw nothing of the German working. The same remarks apply to the Swiss railways, which I merely travelled over from Como to Balse through the Saint Gothard tunnel.

The carriage- and wagon-stock is interchanged by all the European countries, except Russia and Spain, whose gauges differ from that of the rest of Europe. Continuous brakes are adopted, both Westinghouse and air-brakes: the different systems in operation cause great trouble. Many of the carriages are fitted with two kinds of continuous brakes, and with hand-brakes also, to allow of through running; but great difficulties occur in practice through such differences. Sleeping-cars are provided by a special company, and are run by the railway companies all over the Continent; a charge is made by the carriage company in addition to the first-class fare charged by the railway company. The cars I saw were not so commodious as those used in South Australia and Victoria.

Refreshment arrangements vary very much. In some cases time is given at the stations. In others, dinner- and luncheon-baskets are obtainable by previous order: these may be carried in the train and left when done with. To some trains dining-cars are attached, built on the American pattern. Where lines have easy gradients dining-cars are doubtless very convenient; but on lines with steep gradients, where a few tons of extra load is of great importance, they would be objectionable.

As regards rates and fares, I have, as stated, forwarded some of the official data thereon, and I have also inquired about the English rates; but the latter, on account of the system of rating, do not allow of a review being readily made. I may at the same time remark that comparisons of rates and fares in operation in different countries, where conditions differ widely, are not of much value. The rate of wages is the main factor in working expenses. Rates of freight which might yield handsome profits in Belgium would involve heavy losses in New Zealand, where the rate of wages is about three times as great. The rates of wages in Victoria and New South Wales are probably higher than in New Zealand; but those in New Zealand are in advance of those in the United States, and still more so of those in Europe. In any examination of the question therefore this point must not be overlooked.

Throughout the systems I visited, the lighting of passenger-stations by electricity has been very generally adopted, and in some cases electricity has been applied to lighting goods-stations, to facilitate wagon-sorting and -shunting at night: an interesting example of this class of work was shown to the members of the Railway Conference at Milan. Signals by trumpet are pretty generally used in sorting instead of by the whistle. These stages of railway-working are not yet reached in the colony, where the traffic is light.

I have alluded to the systems of primary control which I observed on the Continent, which comprise State lines worked by private companies, under a limited Government supervision, State lines worked for the Government by a professional Board directly answerable to the Minister of the department, and private lines worked under the directions of Boards of directors.

Whatever system of primary control may prevail, on all railways the practical working rests with professional officers, and the departmental divisions fall naturally into the same groups, with similar systems of control, and subordinate duties with but slight differences in detail, except in respect to rating, where the English system of keeping rates in books at each station differs very considerably from the system of publishing all the rates in one book, as is done on the Continent of Europe, and in all the English colonies that I am acquainted with.

While at the Milan Conference I made general inquiries about the railway practice in Chili in some respects. The conditions in Chili are, briefly, that the railways, at present, have only one outlet to ports; they have a much smaller mileage, a population nearly three times that of New Zealand, and a much lower rate of wages. Precise particulars of rates, &c., have been promised to me, and will be forwarded to the colony. Chili is a great wheat-growing country, and is therefore a competitor with the Australasian wheat-exporting colonies. It is expected shortly that the Chilean railway system will be connected with the east coast of America, bringing it much nearer the European markets: it will therefore be of interest to know more about its practice.

The working of the English railways by the principal companies, in most respects, appears superior to the Continental systems which I saw. The speed of passenger trains, the rapidity of despatch of goods, the class of passenger accommodation, and the train accommodation are in advance.

With respect to lighting of trains, by the courtesy of the General Manager of the Great Northern Railway, I was able to travel on and examine one of their suburban trains which is lighted by electricity. I also visited the London, Brighton, and South Coast Railway, and received information from the company's electrician on the subject. The latter company has had the electric light in trains for some years, and is extending its operations. The system in use is to drive a dynamo off the axle of the van of the train, which is also fitted with accumulators, with which the carriage-lamps are connected. In other places the dynamo has been driven by a separate engine on the locomotive; but in practice this has not been found convenient. The Electric Lighting and Storage Company undertakes to furnish movable storage batteries, which can be charged at permanent stations, and placed in each carriage. From what I learned, it seems likely that electric lighting will be gradually introduced on English railways, as it is preferred to gas and is superior to oil. Gas is extensively used on the English lines as well as oil, but, like oil, gas very frequently is a very inferior light. So far as I have observed, I have seen no lighting better than or even equal to that obtained from kerosene in the American lamp used in the American type of carriages. Gas-lighting must add very materially to the load of the vehicles and to the cost of their maintenance, and it involves costly plant at numerous points on the line, and, with the prospect of electricity becoming more generally introduced, it does not appear a practice which would be advisable to commence.