

I made some inquiries about the export of Oregon pine to the Australian market. I was informed that no rail-borne timber is exported; the supplies are generally drawn from Puget Sound. Timber is rafted distances of from three to four hundred miles to mills at the port of shipment, and has practically no land-carriage to pay, while freights to Australia by sailing-ship are practically as cheap as they are from New Zealand. In this way the timber from New Zealand is beaten out of the Australian markets.

Express Traffic.

The parcels-traffic, which in Europe and on the Australian and New Zealand lines is usually worked by the railways, is usually done by organizations called express companies. Railway companies as a rule will only take goods and live-stock by slow trains timed from ten to fifteen miles an hour, and do not deliver or collect them. The organizations for express business are of various descriptions. I made inquiries about one—the Adams Express Company, of Philadelphia, which has 7,000 employés and 2,500 horses, and operates over 23,000 miles of railways, receiving and collecting at all moderate-sized towns. This company generally pays the railway companies a fixed percentage of its gross receipts. Its books and accounts are open to the audit and inspection of the railway companies' officers. When this arrangement is not in operation it is usual for the express company to pay for its traffic at rate and a half first-class goods rates. The rates in operation for parcels and small goods are as follow :—

WEIGHT.	UP TO 20 MILES.		UP TO 60 MILES.		UP TO 150 MILES.	
	America :		America.		America.	
	Express Rate.	New Zealand : Parcel Rate.		New Zealand.		New Zealand.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
3lb.	1 0½	0 6	1 0½	0 6	1 0½	0 6
7lb.	1 0½	0 6	1 0½	0 6	1 3	1 0
14lb.	1 0½	0 6	1 3	1 0	1 3	1 9
28lb.	1 0½	0 9	1 5½	1 6	1 8	3 0
56lb.	1 5½	0 9	2 1	2 0	2 6	4 0
84lb.	1 8	1 0	2 6	2 9	3 1½	4 9
112lb.	2 0½	1 3	2 9	3 3	3 8	5 6

All other fast freight is dealt with at similar rates. Our small business really admits of no comparison with this traffic. This company, in Philadelphia alone, collects 14,000 parcels daily. The express companies, I understand, pay very much better than the railway companies, and absorb a large sum which otherwise would go to swell railway companies' profits if the latter did their own business.

Construction, &c.

The lines which I saw, except portions of the Denver-Rio Grande and parts of the Oregon Railroad and Navigation Company's line, are through very easy country, free from many heavy works, and with but little bridging. The bridging over the great rivers includes many well-known and stupendous undertakings; but against this are many thousands of miles of line on level plains, with very trifling earthworks or formation, and no grades or curves of any importance. The eastern lines use 70lb. steel rails, suitable for the fast expresses and heavy wheel-loads. The loads on the heavy rails are as much as 34,000lb. to an axle. On the 52lb. rails they do not exceed 17,000lb., which is the limit of our loads. More commonly a rail about 60lb. is in use; 52lb. steel is also very largely in use; and many lines have used rails as light as 30lb., such as are on the New Zealand branch lines. Great lengths of line are laid almost without ballast, there being large areas of country with none available. Soil and sand take its place.

On the other hand, 3,000 sleepers per mile are generally laid, as against 2,000 on our lines, so that the roadway is probably more expensive on the whole. Iron bridges are very rapidly taking the place of the older timber structures. The tendency, with the growth of population and traffic, has been to greatly increase the weight of rails, speed of trains, size of locomotive and stock. The eastern main lines are now probably using the heaviest engines and stock in the world, and they are also running the fastest express trains on a large scale. The necessities of their traffic have pushed their stock weight ahead of the strength of their bridges; it is generally admitted that extensive reconstruction and strengthening are essential, and many lines are engaged in these operations. Great areas of country are devoid of any timber, which has to be fetched long distances by rail. At Denver (Colorado), a city of 70,000 people, with extensive manufactures, and the head-quarters of the Denver-Rio Grande Company, the bulk of their timber travels 1,500 miles by rail—Oregon pine costing 22s. per 100ft., and durable oak timber 25s. per 100ft.

Owing to the heavy protective duties, steel rails, which cost us, imported into New Zealand, £7 per ton, cannot be procured in the States under from £9 to £10 per ton.

In engine-building, as is well known, the Americans use wrought-iron tubes and steel fire-boxes. Of late years also it is the practice to use steel boilers, and, in many instances, steel axles. The extended smoke-box has become pretty general. The Belpaire fire-box is now being very largely introduced. The Locomotive Superintendent of the Denver-Rio Grande, however, has adopted a special form of circular-headed boiler, which he considers simpler and more effective. Compound-cylinder locomotives, which have originated in France, and which are on trial in England, have not yet been introduced into America, but trials are about to be made with imported locomotives. The economy effected by their use is not such as to justify our incurring any great expense in introducing such features; but presently, when we want more engines, and have