

exception, was compared thus, erected in New Zealand: American, £2,800; English, £2,700. Purchases made in America and England during the year 1878 (see full particulars further on) give the actual cost of the same types, delivered in port in New Zealand, but excluding erection and receiving—American, £1,986; English, £1,683. Or, giving an estimated price under present conditions for landing and erecting, and contingent expenses, the prices will be—American, £2,080; English, £1,780.

It will be evident that the comparison made in my memorandum of 1879 was too favourable to the American stock. Being afraid of overstating the case, the allowances made were too moderate.

The reasons that no explanation was given in my memorandum were, that the memorandum was written for departmental record only; the data from which I wrote were departmental, though not stated on the particular papers on which my remarks were written; and my remarks were published without my knowledge.

I now give a statement of the more recent importations from England and America; and, so that no incidental local charges may affect the comparison, the actual net cost per locomotive, as nearly as it can be made out, is given alongside in port in New Zealand, excluding any local charges for receiving, erecting, or otherwise:—

MAKERS,	Number of Engines ordered,	CYLINDER,		COUPLED WHEELS.			Cost per Engine.	Tractive Power for each effective Pound of Steam Pressure.	Cost per Unit of Tractive Power.	Date of Order.
		Stroke.	Diameter.	Number.	Diameter.	Wheel-base.				
(1.) Rogers ... ..	6	20	12	4	48	6 0	1,986	60	33 6 0	Jan., 1878.
(2.) Burnham, Parry, Williams, and Company ... ..	6	18	15	8	36	11 4	2,099	112.5	18 13 0	Jan., 1879.
(3.) Dubs and Company ... ..	4	20	14	6	42	10 0	1,683	93.3	18 0 0	June, 1878.

(1) *American* has leading and trailing bogies, 8-wheel tender, steel firebox, iron tubes, iron axles, cast-iron engine wheels with steel tires. The tender had cast-iron chilled wheels, which proved objectionable, and they were removed and replaced by wrought-iron steel-tired wheels of English make.

(2) *American* has leading bogie, 8-wheel tender, steel firebox, iron tubes, iron axles, cast-iron wheels, and steel tires.

(3) *English* has leading Bissel bogie, 6-wheel tender, copper firebox, brass tubes, Bessemer-steel axles, wrought-iron wheels, and steel tires.

These particulars, carefully compiled from official documents, conclusively bear out my former statements. (1) and (3) are the same types of engine of which I compared the cost under previous orders and different conditions.

The English goods, although it has larger driving-wheels than the American goods, proves to be much cheaper. Thus, while the relative cylinder-power of (2) to (3) is as 40:39, the relative cost is as 40:32.

The invoice prices, exclusive of all other charges, are, for (1), (2), and (3) respectively, £1,752, £1,844, £1,450.

The letters of Messrs. Evans and Breton contained the following statements:—

"ENGLISH RAILWAYS.		Miles.	AMERICAN RAILWAYS.		Miles.
London and North-Western ... ..	...	15,415	Boston and Albany ... ..	...	24,500
Midland ... ..	...	18,808	Erie ... ..	...	27,550
North-Eastern ... ..	...	17,290	New York Central ... ..	...	26,933
Great-Western ... ..	...	18,320	Pittsburg, Fort Mayne, and Chicago	...	31,737
		4)69,833			4)110,720
Average of all ... ..	...	17,458	Average of all ... ..	...	27,680

"The above gives an average of 10,222 miles for the American engines more than for the English. This is decimally 58 per cent. greater duty, and it was done on inferior tracks, in a more severe climate, over steeper gradients and sharper curves, and with heavier loads. It must be admitted, in making this statement, that the English engines no doubt showed a greater average speed than the American; but, with this admitted, they should show greater average mileage in the year."

Again,—

"The English engine is a very heavy affair, and, in running, it not only wears and tears itself very rapidly, but also the roadway, and it greatly, by its unsteadiness and jar, fatigues the drivers and firemen."

Again,—

"The American engines for the Colony of Victoria, and for the New Zealand Government railways, were ordered through Mr. W. W. Evans, Mem. Inst. C.E., who has an office in New York, at 66½, Pine Street. They were built and shipped under his direction entirely. The best American narrow-gauge engines cost, delivered f.o.b. in New York, as follows:—

" 1st class passenger (C) .. ..	£1,500 per engine.
1st class goods (D) .. ..	£1,600 per engine.
1st class goods extra (E) .. ..	£1,700 per engine."