construction of a road. That road is responsible for $70,000,000, or $132,000 per mile. The Pennsylvania Railway Company shows, by the following return, taken from their report, that their rates are remunerative :—

	Receipts.	Expenses.	Net earnings.
Main line	0·740	0·441	0·299
Philadelphia and Erie	0·576	0·365	0·211
Line east of Pittsburg	0·804	0·518	0·286
New Jersey	1·365	1·081	0·284

I desire to dwell on a point which may appear of a purely technical nature, because the transport by rail, at a low cost, is the great problem of our time. Political economy must necessarily deal with this question as well as practical economy. It is impossible for railways to maintain themselves unless their working expenditure is very low. A good authority on those matters, Mr. Chanute, consulting engineer of the New York, Lake Erie and Western Railway Company, has given particular attention to that point ; and after laborious research and study as to the composition of the various trains on the New York Central, he has come to the conclusion that the actual cost to a company for freight traffic on its line is as follows :—

Nature of Freight.	No. of tons per car.	Distance run in miles.	No. of cars in a train.	Running expenses per car.	Cost per ton per mile.
				$	cts.
Cattle	10	440	30	16 13	0·344
Grain	12	298	35	8 77	0·245
Flour	11	448	35	13 18	0·268
Canned goods	10	298	35	8 77	0·294
Pork	10	440	35	12 95	0·292
Wool	5	440	35	12 95	0·588
Tobacco	11	440	35	12 95	0·027
Oil	10	440	35	12 95	0·292
Leather	8	142	35	4 18	0 003
Paper	10	114	26	4 15	0·004
Hay	10	73	26	2 66	0·364
Butter	10	42	26	1 53	0·364
Cheese	10	26	26	0 95	0·369
Iron	12	440	35	12 95	0 245
Hosiery	5	440	35	16 15	0·731
Boots	8½	440	35	18 13	0·464
Dry goods, carpets	9	440	35	17 99	0·432
Sugar and liquors	10	440	35	16 95	0·383
Coffee	10	440	35	19 05	0·433
Crockery	10	440	35	19 35	0·439
Toys	6	440	35	16 85	0·636

We must add to this, cost of loading and unloading about 50 cents per ton, altogether, which, for a distance of 3,000 miles, gives a merely nominal amount. But, in making those calculations, we must not forget that the proportion of cost bears upon the whole traffic of the railways mentioned, the local traffic as well as the through traffic. All economists, as well as practical railway men, agree in saying that the local rates must be calculated on a different scale from the through rates. In fact, the localities through which a railway line runs derive a direct benefit from the line, and must contribute towards its success in a manner proportionate to the value accruing to them from it. The through traffic must not be charged with the expenditure for the administration and maintainance of the road ; so that the running cost of that traffic must not exceed a third of the running cost of the local traffic. Consequently, instead of saying that a freight train costs $1 per mile, it ought not to cost, as regards through traffic, more than 50 or 60 cents at most; this being considered the exact proportion, the Canadian Pacific will then be enabled to carry, with profit, the freight of the east at a price of ½ or ¾ of a cent per ton per mile. When I say that ½ of a cent per ton per mile is the possible rate which could be fixed in the future, I know that I shall meet with some approval in this House. The hon. member for Durham said, on the 15th December, 1880, that it was possible for a railway to realise profits with a rate of ½ of a cent per ton per mile. Speaking of the St. Paul and Manitoba, the hon. gentleman said :

"A reasonable tariff should be 1½ cent per bushel per 100 miles, or 17½ cents for the 1,300 miles. In fact, I believe that the tariff from St. Paul

Mr. Chapleau.

southward is much lower than 1½ cent per bushel, and, as a consequence, a much larger proportion than what that tariff would amount to is collected by the St. Paul and Manitoba Railway."

Being 60 pounds per bushel, and 37½ bushels per gross ton, 1½ cent per bushel would give 49¾ cents per ton, making, for 100 miles, within an insignificant fraction, exactly ½ of a cent. per ton per mile. My opinion, as I have said before, is that through traffic can be profitably carried for ½ a cent. per mile. That traffic should not be charged with the cost of administration, nor with office or station charges, which should be charged to local traffic ; and if the actual wear and tear of rolling stock, the fuel and handling, be taken into account, a tariff of ½ of a cent. per mile per ton would leave a margin for profit, the cost price of haulage not exceeding ¼ of a cent per ton per mile. The laws of commerce are now being revolutionised. The tendency to sacrifice everything to celerity is growing constantly. Competition has necessitated rapidity. The costly steamers have driven away the sailing vessels. The desire to forestal one's neighbor in the acquirement of every new article is, to day, one of the mainsprings of trade and commercial life. When I said that the transhipment of freight would entail a disadvantage against the Canadian Pacific route from Asiatic ports, I should have added that the cost through Suez Canal is increased by the toll rates on the canal, viz. :

		Fr. Centimes.	
Canal toll	Per ton	9 50	$1 90
Anchorage	"	0 2	0 00½
Towage	"	2 0	0 40

Added to that is the disadvantage of being obliged to have comparatively small steamers for that trade. It has been established that a steamship drawing 23 feet of water touched bottom fifty times during the voyage. Then you have the increased rates of insurance, in consequence of the dangers of the canal and its approaches; that increased expenditure represents not less than 2 per cent. In one word, the whole question is reduced to this : The difference between the two routes, from Liverpool to Yokohama, is the difference which exists between 2,911 miles of railway transportation, from Coal Harbor to Montreal, and 4,305 miles of transportation by water, including the passage through the Suez Canal.

	Miles.
The distance run by steamer from Liverpool to Yokohama is	11,275
The distance between Yokohama to Coal Harbor, and from Montreal to Liverpool, being	6,970
There remains	4,305

of the Suez route to bring against the 2,911 miles of transcontinental railway remaining to complete the Canadian Pacific Railway route. The extra cost of transhipment by the Canadian route is compensated for by the canal tolls and other charges, with the additional rates of insurance on the Suez route, so that we remain with the difference of cost between 2,911 miles of rail and 4,305 miles of water transportation. I do not hesitate in saying that the gain in time and the gradual reduction of railway tariffs will inevitably turn the scales in favor of our Canadian route. If I am told that a difference of thirteen days in the voyage is not important to the merchant, which I deny, I say that sailing vessels employed from Yokohama to Coal Harbor would not lengthen the time of the voyage as compared with the Suez route, and would reduce the rates from Liverpool to Yokohama in the following proportion :—

From Liverpool to Yokohama the rates are, on the average, $38 per ton, or about ½ of a cent per ton per mile.	
From Yokohama to Coal Harbor, by a sailing vessel, the freight would cost	$ 3.48 per ton.
From Coal Harbor to Montreal (¾ cents p. mile)	21.83 "
From Montreal to Liverpool (¼ cent per mile)	6.97 "
	$32.28

Leaving, in favor of the Canadian route, a difference of.... $6.10 per ton.