

produce likely to constitute the business of the railroads. But under the excitement occasioned some years ago by the celebrated "battle of the gauges," the English Government resolved to reduce the gauge of future railroad extensions to three feet three and three-eighths inches. In cases, however, where a break of gauge was regarded as especially injurious, provision was to be made for a third rail to accommodate the broad gauge cars.

In explanation of this control exercised by the English Government over the railroad system of India, it is the result of the interest guarantee system. The Government does not advance the money for the construction of a railroad. It only guarantees private capitalists a certain amount of interest, the payment of which terminates when the railroads earn sufficient dividends to pay interest on the money invested. Pending this result the British Indian Government is entitled to be represented in the Board of Directors, and exercise a certain influence in the expenditure and management. It was under this system that the Government derived the right of establishing and changing the gauge.

Colonel Kennedy states that from the record of two years' traffic on one of the leading railroads in British India, the average range of specific gravity for forty three different classes of goods was from 224 cubic inches per ton of weight to five cubic feet of bulk per ton of weight, and that the actual average of two years' traffic was eighty cubic feet per ton, after making all due allowance for waste in stowage. This would give an average space of 640 cubic feet for the stowage of eight tons in the ordinary car of the five and one half feet gauge, the height of the load above the platform not exceeding five feet, and the centre of gravity of the gross load not exceeding five feet above the rails.

But when it came to pack eight tons of loosely pressed cotton measuring 1,488 cubic feet, or wool, measuring 1,120 cubic feet, on a wagon having only three feet three inches transversely between the wheels, and with only one-half the stability, it was found that the thing could not be done. It would be necessary to build the load twenty or thirty feet high, and render it top heavy. The fitness of a narrow gauge car running down an inclined plane to the nearest, port or general depot, to carry heavy minerals measuring from five to twelve cubic inches to the ton, and with the entire load of eight tons contained in eighty cubic feet of wagon space, could not be doubted, and possessed unquestionable advantages. But these advantages by no means applied to a railroad through agricultural and cotton districts where the cars must be broad and wide, and adapted for the transportation of more bulky commodities.

The plea of economy urged on behalf of the narrow gauge system is alleged to be wholly illusive. The Government estimates of the cost of constructing a railroad on the three feet three and three eight inch standard English gauge from Kotree to Mooltan (Indus Valley line) is placed at \$15,000,000; third rail on the Scinde and Punjab lines, \$2,600,000; total 17,600,000. While the cost of the standard gauge for the same line is estimated at \$16,700,000, a difference of \$900,000 in favor of the broad or standard gauge. The actual difference of \$1,700,000 in favor of the narrow gauge line, without the third rail, was found to be more neutralized by the increased cost of equipment or rolling stock, rendered necessary in order to render its actual working capacity equal to that of the broad gauge line. Mr. Molesworth, the Consulting Engineer of the British Government on State railways, gives another estimate of the comparative expenses of constructing the three lines which would increase the difference against the narrow gauge system to a sum of \$2,700,000.

The Government engineers also find that to perform the same—standard gauge—work with the narrow gauge rolling stock, it would require 1.45 the number of cars, with a corresponding increase of engine power. In the estimates of the Indus Valley Railroad the cost of rolling stock is estimated at \$7,215 a mile for standard (five feet six inches) gauge and at \$4,810 for an equal number of narrow gauge cars and locomotives. Adding four-fifths to the narrow gauge estimates in order to make the transportation facilities equal to the standard gauge will bring the cost of rolling stock up to \$6,660, making a difference of \$1,445 against the narrow gauge system. Private contractors of admitted responsibility actually offered to construct the proposed Indus Valley and Peshawar Railroad on the standard gauge plan for less money than the Government was prepared to spend on the narrow gauge line for the same distance, the gradients, curves, bridges, etc., to be in all respects equally substantial, and the broad gauge road to be completed in less time than it was proposed to construct the narrow gauge line.

Other evidence is also given in the reports purporting to show that the advantages of the narrow gauge system were altogether imaginary when compared with the broad gauge system. In fine, the Government engineers concur in representing the narrow gauge system as a failure and as a serious national misfortune so far at least as British India is concerned. It is not suitable to the country and the wants of the agricultural and business classes. One engineer condemns it as being the most costly, inconvenient and dangerous principle that could be devised for general traffic.—*Bulletin*.

NEW RAILROADS IN THE UNITED STATES.—The mileage constructed in the several States and Territories during 1872 were as follows: Alabama, 134; Arkansas, 156; California, 195; Colorado, 105; Connecticut, 25; Dakota, 234; Delaware, 26½; Florida, 10½; Georgia, 46; Illinois, 686½; Indiana, 183; Indian Territory, 149; Iowa, 452; Kansas, 445; Kentucky, 142; Louisiana, 3; Maine, 62½; Massachusetts, 37; Maryland, 190; Michigan, 571; Minnesota, 307; Mississippi, 22; Missouri, 314; Nebraska, 212; Nevada, 18; New Hampshire, 43; New Jersey, 103; New York, 435; North Carolina, 60; Ohio, 456½; Oregon, 82; Pennsylvania, 251; South Carolina, 88; Tennessee, 15; Texas, 391; Utah, 57; Vermont, 31; Virginia, 49½; Washington, 40; West Virginia, 76; Wisconsin, 459½. The total is thus 7,364½ miles—an increase of 12.1 per cent. for the year, the aggregate being larger than last year, and the rate of increase a little less. The statements of mileage for the whole country have always hitherto been quite incorrect, and we presume are still somewhat so, but adopting the figures of one of the tables given in the last issue of "Poor's Manual," which are probably more nearly correct than for any previous year, the total length of the completed railroads of the United States was 68,216 miles at the close of 1872.

THE BREAD SUPPLY.—Importation of grain and flour into the United Kingdom:—

	1872. cwt.	1871. cwt.	1870. cwt.
Wheat	41,121,180	39,315,392	33,218,964
Barley	14,792,295	8,513,928	7,524,599
Oats	11,383,654	10,955,501	11,350,997
Beans	2,852,631	2,975,073	1,627,264
Peas	1,289,011	1,028,662	1,968,963
Maize	24,157,657	16,620,719	17,517,769
Wheatmeal	4,397,886	3,993,542	5,262,153
Total	99,974,304	83,302,817	78,470,709

SHIPPING OF THE MARITIME PROVINCES.—The total number of vessels owned in Yarmouth at the present time is 248 with a total tonnage of 95,932 tons, an increase of 750 tons over the previous year. This list comprises 3 steamers, 33 ships, 84 barques, 6 brigs, 25 brigantines, and 97 schooners. During the year, 21 Yarmouth vessels measuring 7,354 tons were lost, and 20 vessels measuring 8,788 tons were sold, so that it necessary follows that 16,892 tons of shipping must have been added to the marine of Yarmouth during the year. From a schedule which will be found in another column, it will be seen that the new vessels added to the shipping of Yarmouth during the year aggregated 14,800 tons, and numbered 21, consisting of 4 ships, 11 barques, 2 brigantines, and 4 schooners. The tonnage added to St. John during the year aggregated 37,302 tons, and the number of vessels was 86, consisting of 8 steamers, 12 ships, 21 barques, 33 barquentines, 1 brig, 4 brigantines, 35 schooners, and 3 woodboats. Halifax added 46 new vessels, measuring 14,606 tons, to its registered list during the same period, consisting of 1 ship, 16 barques, 1 brig, 5 brigantines, and 23 schooners. The comparison, therefore, between the three leading shipowning ports of the Maritime Provinces of new vessels added during the year is as follows:—

St. John,	86 vessels,	of 37,302 tons.
Yarmouth,	21 "	14,800 tons.
Halifax,	46 "	14,606 tons.

From this it will be seen that St. John continues to retain the lead it has held for so many years, and has added to its shipping during the year over 8,000 tons more than Halifax and Yarmouth combined; yet this is stated without prejudice to either of these ports, both have done well, especially Yarmouth, which is, we believe, ahead of any town of its population in the world in the matter of shipowning. We have not, at the present moment of writing, the means of stating exactly the amount of tonnage registered at the port of St. John, but it is not less than 250,000 tons. The tonnage of Halifax is probably between 85,000 and 90,000 tons.

It should be noticed also that most of the vessels belonging to these three ports are of a superior class, and that of late years especially a great improvement has taken place in the character of provincial vessels. Of the 248 vessels owned by Yarmouth 33 are ships and 84 barques, forming about 90 per cent. of the entire tonnage of the port—the same state of things prevails to a large extent in St. John, where about 80 per cent. of the tonnage of new vessels were ships and barques. Great as have been the achievements of Yarmouth we are glad to observe that the efforts of its citizens in the construction of ships are to suffer no abatement during the present year, and that 21,500 tons of shipping are now being built, or have been contracted for by Yarmouth shipowners—a larger amount by the way by several hundred tons than the entire tonnage owned by Yarmouth in the year 1854.—*St. John Telegraph*.

DAGNER OF DECKLOADS.—The serious loss of life and property through vessels carrying deckloads has arrested the attention of English underwriters. It was stated at a recent meeting of insurance associations that thirty vessels carrying deckloads and belonging to the North of England, had been lost on their voyages from Quebec to the United Kingdom last fall, and that fifty per cent. of the large fleet which left the St. Lawrence in the fall of the year, timber laden for England, were either lost or missing. It was computed that the actual loss in ships' cargoes this winter, through the abandonment of large vessels laden with timber from America, in the Atlantic, was between £200,000 and £300,000; and the larger proportion of the loss, with the fearful sacrifice of life which ensued, was owing to vessels carrying deck cargoes.