

Australian voyage have not done, and consequently they have failed.

No one can fail to have observed that within these last two years steam, in long voyages, has apparently suffered a defeat. Clippers of all kinds, the 'Marco Polos,' 'Red Jackets,' and 'Morning Stars,' seem to have recovered their own again, and in the race round the world, sails have distanced the paddle and the screw. When the question comes to be examined, however, it is clear that it is the want of steam that has caused the failure: vessels, in short, as little fitted to make a passage of thirteen thousand miles, as the 'Sirius,' though by a lucky accident it managed to cross the Atlantic at the same time as the 'Great Western,' was to go a continuous stage of three thousand miles. They have all the expense of the new motive power without its full advantages, and, in consequence of their having to go out of their direct course to coal, they lose from twelve to twenty days on the passage. The tortoise in this instant has not fairly beaten her hare, because the latter has wilfully broken her leg.

Mr. Brunel, in constructing a ship of such large dimensions, is only doing for the long Eastern voyage what he did for the shorter Western one, namely, making her own coal bunkers the bank on which she can draw to any extent during her progress out and home, instead of employing from six to eight ships of 500 tons burthen each to carry fuel for her over half the globe, as the vessels at present running are obliged to do; a system which may be likened to the extravagance of a man who employs half-a-dozen porters to carry parcels which, by proper management, he could manage to stow in his own knapsack.

The Report of the Directors for the year 1853 puts the calculation with respect to her immense advantage, in carrying power so well, that we quote it entire:—

"In avoiding the delay of coaling on the voyage, your ships will also escape the great cost of taking coals at a foreign station. Coals obtained on the Indian and Australian route cost, on the average, including waste and deterioration, four or five times as much per ton as in this country. But your ships will take their amount of coals for the voyage from near the pit's mouth, at a rate not exceeding for the best quality, 12s. to 14s. per ton. On the voyage of existing steam vessels to Australia or India and home, the consumption amounts to from 4,000 to 6,000 tons; the cost of which would supply 20,000 tons if taken on board at some port in immediate communication with the coal field.

Each of the Company's ships will carry, besides their own coals, upwards of 5,000 tons measurement of merchandise, and will have 800 cabins for passengers of the highest class, with ample space for troops and lower class passengers. These you will not only be able to carry at rates much smaller than those by any existing steamships, but with an unprecedented amount of room, comfort, and convenience.

In thus determining the size of the ships your Directors believe that they are also obtaining the elements of a speed heretofore unknown; and if hereafter coals applicable to the purposes of steam can be supplied from the mines of Australia, the carrying capacity both for cargo and passengers will be proportionately increased. The great length of these ships will undoubtedly, according to all present experience, enable them to pass through the water at a velocity of at least fifteen knots an hour, with a smaller power in proportion to their tonnage than ordinary vessels now require to make ten knots. Speed is, in fact, another result of great size. It is believed that by this speed, combined with the absence of stoppages, the voyage between England and India, by the Cape, will be reduced to from thirty to thirty-three days, and between England and Australia to thirty-three or thirty-six days."

It may be objected that the route by way of Egypt, now that the railway is in progress and a canal is projected, will prove a too powerful competitor for the traffic round the Cape; but inde-

pendently of the inconvenience and tediousness of embarking and then re-embarking, which will be fatal to vessels containing such bulky cargoes as cumber the Australian steamers, it is asserted that the ocean path is the direct route to the focus of Australian connexion with Europe. Thus the navigable distances from Land's End to Port Philip are as follows:—

	Miles.
Via the Cape of Good Hope	11,818
" Cape Horn	12,700
" Gibraltar, Malta, Alexandria, Aden, Point de Galle, and Singapore, including transit through Egypt	12,034
" Panama including transit across the Isthmus	12,678

The General Association for the Australian Colonies have indeed recommended for the mail line the overland route as far as Aden, and from thence by way of Diego Garcia and King George's Sound to Melbourne, an estimated distance of 10,348 miles, which they fancy can be done in forty-four days. If the Eastern Steamship Company have not anticipated too great a speed for their vessel—and we scarcely think they have done so, considering that the 'Persia' has made fourteen and a-half knots with very far inferior powers of propulsion—this passage will be beaten by between eight and ten days without the expense and trouble of making a long land journey across the isthmus. Surely this, if it comes to pass, will go far to accomplish the Alnashar dream of the 'Times,' that the period will arrive when we shall be able to communicate with our friends at the antipodes in a month.

As far as the commercial part of the speculation goes, we are of course incapable of giving an opinion. The value of the exports to the young empire, which is springing up with such rapidity in Polynesia, is, however, so great—in 1853 the declared value being £14,506,532—that we cannot conceive there would be any lack of cargo even for our Leviathan. That she will be *par excellence* the emigrant ship, who can doubt when we find that, with all her splendid accommodation, she will be able to take passengers of the first class for £65, of the second class for £35, and of the third class for £25.

Her great proportions will indeed almost deceive her passengers into the idea that they are sojourning in some noble mansion. Let us imagine her saloons blazing at night with gas, which will be manufactured on board and supplied to every part of the ship: let us picture to ourselves her magnificent sweep of deck filled with gay promenaders, listening to the band as she sails over a summer's sea; annoyed by no smoke, for in consequence of the use of anthracite coal, none will be emitted from her five funnels; and distressed by no motion, as in consequence of her length she will stride with ease over the waves of the Pacific. We might also dwell for a moment upon the mighty larder of our Leviathan prepared for her flight of five and thirty days, without a stoppage, across the ocean desert with a whole town on board; or we might draw a comparison between her and the Ark (which by-the-by had not half her capacity) as she receives on board her flocks and herds to furnish fresh meat for the passage. But we believe we have said enough to enable those who have not visited the rising edifice, to realize the vast extent of this latest experiment in ship-building.— And as a contrast to this fair side of the medal, let us fancy her rushing through the night in full career—an arrow 27,000 tons in weight, propelled by a bow of 3,000 horse-power. Can we without a shudder contemplate the possibility of a collision with such a resistless force? a line-of-battle-ship with a thousand hands on board cleft in two as swiftly as the apple by the shaft of Tell?

Every precaution will indeed be taken to avert such a catastrophe. The electric light will be fixed at the mast-head, so that in dark nights the ship will carry a moonlight atmosphere wherever she goes. In case of any fatal injury to herself, which could not well happen, boats have been provided capable of taking off her passengers.

Thus she will have two screw-steamers of 90 feet in length as paddle-box boats, and in addition to those she will carry a large number of the new collapsing, or bellows boats, as the sailors call them. These curious structures, the invention of the Rev. E. L. Berthon, expand and shut like a Gibus hat or the head of a carriage, occupying so little room that half a dozen of them of a large size can be stowed away in the same space as would be occupied by an ordinary jolly-boat, and seem to be as easily opened as a parasol or umbrella.

Canals in Pennsylvania.

<i>Schuylkill Navigation,</i> From Philadelphia to Port Carbon..	108 miles.
<i>Delaware Division of State Canal,</i> From Bristol to Easton.....	60 "
<i>Lehigh Navigation,</i> From Easton to Stoddartsville.....	84 "
<i>Union Canal,</i> From Reading to Middletown— main line.....	77
Branch to Pine Grove.....	22
Total.....	99 "
<i>Susquehanna and Tidewater,</i> From Columbia to Havre de Grace.....	45
Deduct for portion in Maryland... 13	
Pennsylvania portion.....	32 "
<i>Main Line of State Canal,</i> From Columbia to Hollidaysburg, east division.....	173
From Johnstown to Pittsburg, west division	103
Total.....	276 "
<i>Susquehanna Division of State Canal,</i> From Juniata Junction to Northum- berland	41 "
<i>West Branch State Canal,</i> From Northumberland to Farrands- ville.....	76 "
<i>Lower North Branch Division of State Canal,</i> From Northumberland to Pittston..	73
<i>Upper North Branch Division,</i> From Pittston to New York line.	94
Total.....	167 "
<i>Wisconsin Canal,</i> From Clark's Ferry to Millersburg...	13 "
<i>Delaware and Hudson Canal,</i> From Honesdale to Hudson river.	108
Deduct portion in New York.....	83
Pennsylvania portion.....	25 "
<i>Erie Canal,</i> From Beaver, on the Ohio, to Erie city.....	136
<i>French Creek Feeder,</i> From near Meadville to Evansb'g.	21
Total.....	157 "
<i>Pennsylvania and Ohio Cross Cut Canal,</i> From near New Castle to Akron... 78	
Portion in Ohio about.....	68
Portion in Pennsylvania.....	10 "
<i>Monongahela Navigation,</i> From Pittsburg to within ten miles of Virginia line.....	84 "
<i>Bald Eagle and Spring Creek Naviga- tion,</i> From Bellefonte to West Branch of Susquehanna.....	25 "
<i>Conestoga Navigation,</i> From Lancaster to Safe Harbor.....	18 "
<i>Youghiogeny Navigation,</i> From McKeesport to West Newton..	18 "
Total.....	1293 miles.
East of the Alleghany Mountains..	921
West " " " " " "	372
Total.....	1293 miles.

—Phila. Railroad and Mining Register.