

I think the subsidy might be a little less than what is asked: a tri-monthly service might do at first.

I enclose you two articles of mine which appeared in the *Globe*.

I have, &c.,  
JULIUS VOGEL.

### Enclosure in No. 6.

Messrs. DENNY BROTHERS to Mr. J. GALBRAITH.

DEAR SIR,—

Dunbarton, 2nd December, 1878.

Herewith you have designs for the proposed mail steamships between the United Kingdom and New Zealand, and we give you the leading particulars, with a short general description.

The builders' dimensions are 400 x 45 x 34 feet, gross register tonnage about 4,215; the horse-power nominal to be 700, capable of developing 4,000, diameter of cylinders about 58 and 100, and 5-foot stroke; boilers with about 12,000 feet heating surface, and about 400 feet fire-grate. The whole machinery to be constructed with a special view for working safely in such a long voyage. The ship and machinery to have the highest class at Lloyds, and built under their special survey. Passenger accommodation—84, first class; 34, second class; 450, third class: the whole accommodation arranged and got up so as to afford the maximum of comfort attainable at sea. For the first and second class the furnishings for table and beds to be of the best manufacture, and liberal in supply. Most of the first class will be only two in a state-room, a few with only one, and a number of family-rooms will be provided. In respect of comfort to passengers in every way, all advantage will be taken of the experience of others and of ourselves to render the ships as perfect as can be.

The draft of water, fully laden and coaled, will be 24 feet. The ship would lighten at the end of the voyage about 3½ feet, the double bottom being filled with water. This double bottom will be throughout the ship, in order to adjust her trim as the coal gets consumed. It will also add to the strength of the ship, as well as being of great safety in case of damage being sustained in the bottom. Care will be taken to divide the ship with a proper number of watertight compartments, with simple contrivances to isolate various parts of her in the event of collision or other mishaps.

At an average draft of 21 feet the speed in trial will be 14½ knots; at sea, under ordinary circumstances, the average speed will be 12½ knots.

The sail-power will be sufficient to work the ship in the event of an accident to the machinery. The lower masts and yards of iron, with a complete outfit of spare sails.

For such a long voyage storage for an abundant supply of fuel must be given, and this is met by provision for about 2,400 tons in fixed coal spaces, which will be sufficient for the voyage under ordinary circumstances, and with about 400 tons to spare.

In addition to the liberal supplies mentioned for passengers, the other departments of the ship, in nautical instruments, sailmaker's and boatswain's stores, cordage, &c., will be efficient for such a service.

In the machinery department spare shafts, propeller-blades, valve-gear, and other duplicates to insure easy remedy at sea or abroad, will be placed on board.

In short, we have endeavoured in the designs submitted to you—and will make it our study if the service is to be established—to carry out the views laid down at the interviews between Sir Julius Vogel, you, and our senior, as to the ships being so carefully designed, constructed, and put to sea, as to justify the New Zealand Government in initiating a service which shall give satisfaction and lead to its extension.

We are, &c.,

James Galbraith, Esq., Glasgow

WM. DENNY AND BROTHERS.

TABLE A.—Earnings, Outwards, with Emigrants, Cabin Passengers, and Cargo.

	Tons.	Tons.	EARNINGS.						
			£	s.	d.	£	s.	d.	
Space in hold for cargo, &c., allowing for broken stowage	...	1,410	70 first-cabin passengers, at £70	4,900	0	0			
Deduct room allowed for stowage passengers' stores and water	225		25 second-cabin passengers at	875	0	0			
Ditto for first- and second-cabin passengers' stores and water	71		£35						
Ditto for steerage passengers' baggage	112		450 steerage passengers, at £18	8,100	0	0			
Ditto for first- and second-cabin passengers' baggage	95	503	907 tons cargo, at £3 10s.	3,174	0	0	17,049	0	0
			Less 10 per cent. brokerage commission to agents, and return primage	...			1,704	0	0
							15,345	0	0
			Less cost of victualling for first- and second-cabin and steerage passengers	...			4,925	0	0
			Net earnings outwards	...			£10,420	0	0

TABLE B.—Earnings, Homewards, with Passengers and Wool.

Space available for Cargo, 2,523 tons measurement.

EARNINGS.				70 first-class passengers £4,900				£	s.	d.	£	s.	d.
	£	s.	d.	£	s.	d.	at £70						
2,000 tons measurement greasy wool, equal to 1,000 tons weight, at $\frac{3}{4}$ d. per lb.	5,833	0	0				25 second ditto, at £35 875						
							50 steerage ditto, at £20 1,000						
									6,775	0	0		
									13,826	0	0		
523 tons measurement washed wool, equal to 174 tons weight, at $\frac{1}{4}$ d. per lb.	1,218	0	0				Less 10 per cent. commission and return primage	1,382	0	0	12,444	0	0
							Less cost of victualling, at same cost as outwards	...			2,125	0	0
											£10,319	0	0
	7,051	0	0										