

Specification of John Henry Johnson : apparatus for preventing sea sickness.

Contributors

Johnson, John Henry.

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183 Euston Road
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A.D. 1863, *7th August.* N° 1953.

S P E C I F I C A T I O N

OF

JOHN HENRY JOHNSON.

APPARATUS FOR PREVENTING SEA
SICKNESS.

LONDON:

PRINTED BY GEORGE E. EYRE AND WILLIAM SPOTTISWOODE,

PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY :

PUBLISHED AT THE GREAT SEAL PATENT OFFICE,

25, SOUTHAMPTON BUILDINGS, HOLBORN.

1864.





A.D. 1863, 7th AUGUST. N° 1953.

Apparatus for Preventing Sea Sickness.

LETTERS PATENT to John Henry Johnson, of 47, Lincoln's Inn Fields, in the County of Middlesex, Gentleman, for the Invention of "**IMPROVEMENTS IN APPARATUS FOR PREVENTING SEA SICKNESS.**"—A communication from abroad by Henry Giffard, of Paris, in the Empire of France.

Sealed the 2nd February 1864, and dated the 7th August 1863.

PROVISIONAL SPECIFICATION left by the said John Henry Johnson at the Office of the Commissioners of Patents, with his Petition, on the 7th August 1863.

I, JOHN HENRY JOHNSON, of 47, Lincoln's Inn Fields, in the County of Middlesex, Gentleman, do hereby declare the nature of the said Invention for "**IMPROVEMENTS IN APPARATUS FOR PREVENTING SEA SICKNESS,**" a communication to me from abroad by Henry Giffard, of Paris, in the Empire of France, to be as follows:—

This Invention relates to a peculiar construction and arrangement of apparatus to be fitted on board ships for the use of voyagers subject to sea sickness, and consists in the employment of a support, platform, or cradle suspended by means of elastic cords or metal springs some distance above the deck to allow for the vertical movement of the ship, the elastic cords or springs allowing for the pitching of the ship without imparting motion to the

Johnson's Improvements in Apparatus for Preventing Sea Sickness.

suspended platform ; these elastic cords or suspensory springs are secured to the masts or to special supports. Other elastic cords or springs disposed horizontally, and attached to the sides of the platform and to the masts or other suitable fixed points, serve to prevent any oscillating motion of the platform during the rolling of the ship. The platform may either be suspended above the deck line, when a ladder or flight of steps also supported by elastic cords or springs is required to gain access to the platform, or the floor of the platform may be level with the deck, a well or cavity being made in the deck beneath the same to allow of vertical play. These suspended platforms may be roofed in or left open, and provided with seats, beds, and other conveniences for voyagers. 5 10

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said John Henry Johnson in the Great Seal Patent Office on the 6th February 1864.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN HENRY JOHNSON, of 47, Lincoln's Inn Fields, in the County of Middlesex, Gentleman, send greeting. 15

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent bearing date the Seventh day of August, in the year of our Lord One thousand eight hundred and sixty-three, in the twenty-seventh year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said John Henry Johnson, Her special license that I, the said John Henry Johnson, my executors, administrators, and assigns, or such others as I, the said John Henry Johnson, my executors, administrators, or assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN APPARATUS FOR PREVENTING SEA SICKNESS**," a communication to me from abroad by Henry Giffard, of Paris, in the Empire of France, upon the condition (amongst others) that I, the said John Henry Johnson, my executors or administrators, by an instrument in writing under my hand and seal, or under the hand and seal of one of them, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great 20 25 30 35

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Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said John Henry Johnson, do hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement, reference being had to the accompanying Drawings, and to the letters and figures marked thereon, that is to say :—

The said Invention relates to a peculiar construction and arrangement of apparatus to be fitted on board ship for the use of voyagers subject to sea sickness, and consists in the employment of a supporting platform or cradle suspended by means of springs some distance above the deck to allow for the vertical movement of the ship, the springs allowing for the pitching of the ship without imparting motion to the suspended platform; these suspensory springs are secured to the masts or to special supports. Other springs disposed horizontally or nearly so, and attached to the sides of the platform and to the masts or other suitable fixed points, serve to prevent any oscillating motion of the platform during the rolling of the ship. The platform may either be suspended above the deck line, in which case a flight of steps and a gangway also supported by springs are required to gain access to the platform, or the floor of the platform may be level with the deck, a well or cavity being made in the deck beneath the same to allow of vertical play. These suspended platforms may be roofed in or left open, and provided with seats, beds, and other conveniences for voyagers.

And in order that the said Invention may be fully understood, I shall now proceed more particularly to describe the same, and for that purpose I shall refer to the several Figures on the Sheet of Drawings hereunto annexed.

Figure 1 of the Drawings is a Diagram showing the principle of the arrangement of spring for suspending the platform. A, A, A, is a flexible elastic spring or thin blade of metal; *b, c*, is a cord or rod attached to one end of the spring blade at *b*, guided at the other end *c*, and terminating in a ring or hook, the same arrangement being adopted for the rod or cord *d, e*, which is attached to the opposite end of the spring blade A.

By superposing a number of these blade springs connected one with another a sufficient vertical elasticity will be obtained, but such an arrangement would be in many respects inconvenient by reason of the great altitude to which such series of springs would have to be carried to afford the requisite amount of vertical play, as the extension afforded by the fluxure of each spring would not be more than about one-third of the length of such spring when in a state

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of rest. This objection applies still more forcibly to the horizontal springs for preventing lateral oscillations in the platform.

In order to obviate these objections, and still maintain the same principle in the application of the springs, it is proposed to adopt the modification shown in Figure 2, in which A represents the blade springs, which are bent by the 5 action of the short arms of the levers *b*, *c*, on the two ends of the springs. These levers work on fulcra *d* fixed to each corner of a double frame *e*, which bears the strain of the springs and of the suspended weight, and prevents by means of suitable stops the undue flexure of the springs. The load to be suspended is attached at *c*, and consequently the elastic play is increased in pro- 10 portion to the length of the levers. It is advisable that the spring blades should present an equal resistance throughout, as it is important to reduce their weight to a minimum, as well as the weight of their accessories. By placing several pairs of these springs and their levers one above the other the desired amount of play will be obtained, and by placing others on the side of 15 the former springs the desired strength or resistance for supporting the weight of the platform and its occupants will be afforded should this strength not be obtained from a single series of springs. It is preferred to tie together the several series by transverse bars placed at each end of the frames at *f*, so that in case of any of the springs in one series breaking, the whole may still 20 remain supported. Allowance should also be made for the weight of each pair of springs and their levers, the upper springs being rather stronger than the pair below in proportion to the additional weight of the lower springs and levers which they have to carry.

Figure 3 represents the combination of several series of springs and levers 25 which carry the platform suspended at *o* by a universal joint, and which platform is guided laterally by two vertical stays or masts *m* passing through the guides *n* with or without rollers at the extremity of the bar *p*, which connects the several pairs of springs. The platform may either be suspended above the deck, as shown, and approached by a light bridge or gangway resting upon 30 a fixed flight of steps, or it may be suspended so as to be level or nearly level with the deck, in which case a well must be formed to receive the platform when the hull of the vessel rises.

Having now described and particularly ascertained the nature of the said Invention, and the manner in which the same is or may be used or carried 35 into effect, I would observe, in conclusion, that what I consider to be novel and original, and therefore claim as the Invention secured to me by the herein-before in part recited Letters Patent, is, the general construction,

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arrangement, and combination of apparatus to be applied to sea-going ships and vessels, substantially in the manner and for the purpose herein-before described.

5 In witness whereof, I, the said John Henry Johnson, have hereunto set my hand and seal, this Fifth day of February, One thousand eight hundred and sixty-four.

J. HENRY JOHNSON. (L.S.)

LONDON :

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Printers to the Queen's most Excellent Majesty. 1864.

management, and consideration of applicants to be applied to the same rules
and rules, and especially in the manner and for the purpose mentioned
in the Act.

In witness whereof, I the said John Henry Johnson have hereunto set
my hand and seal this 17th day of February, One thousand eight
hundred and sixty-four.

J. HENRY JOHNSON. (Sd.)

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Printers to the Queen's most Excellent Majesty. 1864.

FIG. 1.

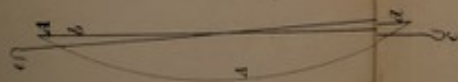


FIG. 3.

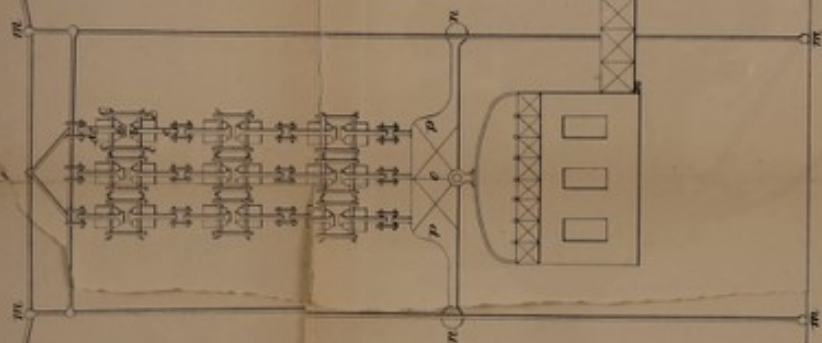
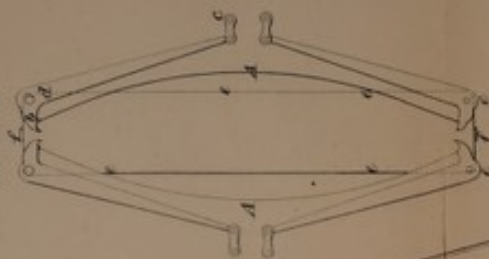


FIG. 2.



The filed drawing is partly colored

