F. GARDNER.

Pendulum-Berth.

No. 225,006. Patented Mar. 2, 1880.

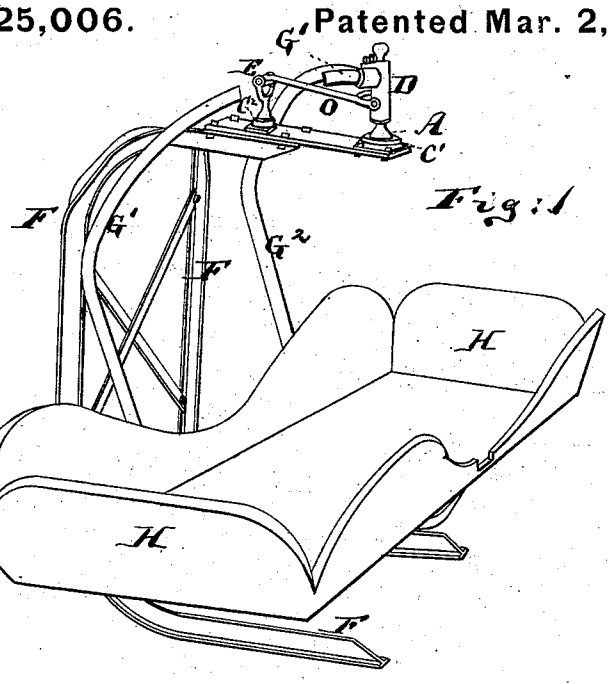


Fig: 1

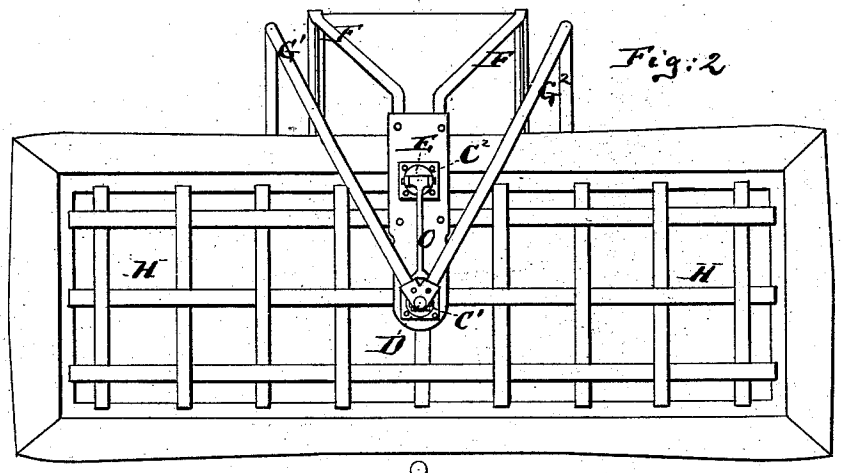


Fig: 2

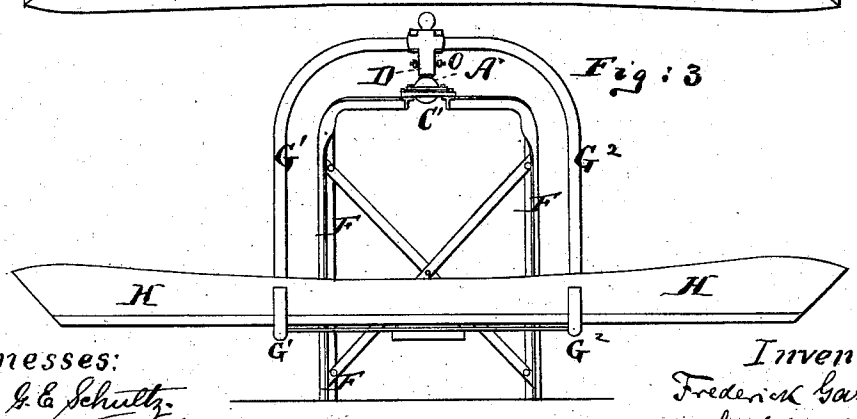


Fig: 3

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UNITED STATES PATENT OFFICE.

FREDERICK GARDNER, OF BRYSWATER, ENGLAND.

PENDULUM-BERTH.

SPECIFICATION forming part of Letters Patent No. 225,006, dated March 2, 1880.

Application filed January 9, 1880. Patented in England, March 29, 1879.

To all whom it may concern:

Be it known that I, FREDERICK GARDNER, of Bryswater, in the county of Middlesex, England, have invented a new and useful Improvement in Pendulum-Berths, to be employed in connection with ships or vessels, for which I have obtained English Letters Patent for fourteen years, dated the 29th day of March, 1879, and of which the following is a specification.

My said invention consists in an arrangement of mechanism for suspending a platform or cradle in or upon a ship or vessel in such a manner that it shall always maintain a horizontal position, irrespective of any motion of the vessel caused by the action of the sea.

In the specification of an invention for improvements in apparatus to be fitted in or to vessels for preventing sickness at sea, for which English Letters Patent were granted to me bearing date the 19th of October, 1876, No. 4,047, I have described the frame supporting the platform or cradle as being suspended from a vertical rod, the upper end of which is connected to a ball-and-socket joint. This arrangement, however, renders necessary the employment of weights to act as a counterpoise to the platform. By the following arrangement of mechanism, forming the subject of this invention, the necessity for the employment of the said counterpoise is obviated.

In order that the nature of my present invention may be clearly understood, I will now proceed to refer to the accompanying drawings, in which—

Figure 1 is a perspective view of the apparatus; Fig. 2, a top view of the same, and Fig. 3 an end view.

The same letters of reference indicate like parts in the several figures.

To the lower end of a post, D, is connected a ball-and-socket or universal joint, A, which is supported by a beam or any suitable framework, F, attached to the side or other desired part of the ship, and to the upper end of the said post D is connected the frame $G' G^2$, carrying the platform or cradle H, the said frame being so formed as to allow of the platform being under the point of suspension. Part of the frame G' is shown broken, so that the connection of the rod O with the post D and another post, E, may be clearly seen. C' and C^2 show the sockets in which the balls on the lower ends of the posts D and E work in this instance. These sockets are formed on a plate which is rigidly connected with the frame F. In order to control the action, and to prevent the twisting or relative displacement of the post D and berth or platform H, the second post, E, is provided, at the lower end of which is the ball-and-socket or universal joint already referred to.

To the upper end of the post E is hinged or pivoted the bar or rod O, the opposite end of which is hinged or pivoted to the post D. The two posts D and E are thus connected together in a position parallel, or nearly so, to each other, and such relative position is always maintained when the mechanism is in action. The employment of the said joints and mechanism connected therewith, and the attachment of the frame-work $G' G^2$, carrying the platform or cradle H, to the post D above the point of suspension A, tend effectually to maintain the said platform or cradle steadily in a horizontal position at all times, notwithstanding the effects of any motion of the sea upon the ship or vessel.

With the view of giving greater steadiness to the cot, I attach to its under side a weight or weights which may be capable of ready adjustment. This weight has the effect of preventing the cot being so readily put out of level by the occupant when changing his position, and also for steadying it during ingress and egress.

For still further steadiness, when desired, I may apply several hinged flaps, formed by preference of wood. These are fitted to each end of the cot and at the side. They may be lifted or lowered at will. They are made of sufficient length to touch the vessel at side and under the cot, so that it may practically become a fixture when so desired. This feature may be also accomplished by other and similar means—as, for instance, by attaching cords to the vessel and leading them to the cot, where, by any simple appliance, they may be readily made fast or slacked out by the occupant.

Having thus described and ascertained the nature of the said invention, and the manner in which it is to be performed, I would observe, in conclusion, that what I consider novel and original, and therefore claim as constituting my invention, is—

The combination and arrangement of the posts D and E with their balls and sockets, or universal joints, and with the rod O, frames F G′ G², and cot H, substantially as and for the purposes hereinbefore set forth and described.

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