J. C. THOMPSON. 2 Sheets—Sheet 1.

SELF-LEVELING BERTHS FOR SHIPS, &c.

No. 193,837. Patented Aug. 7, 1877.

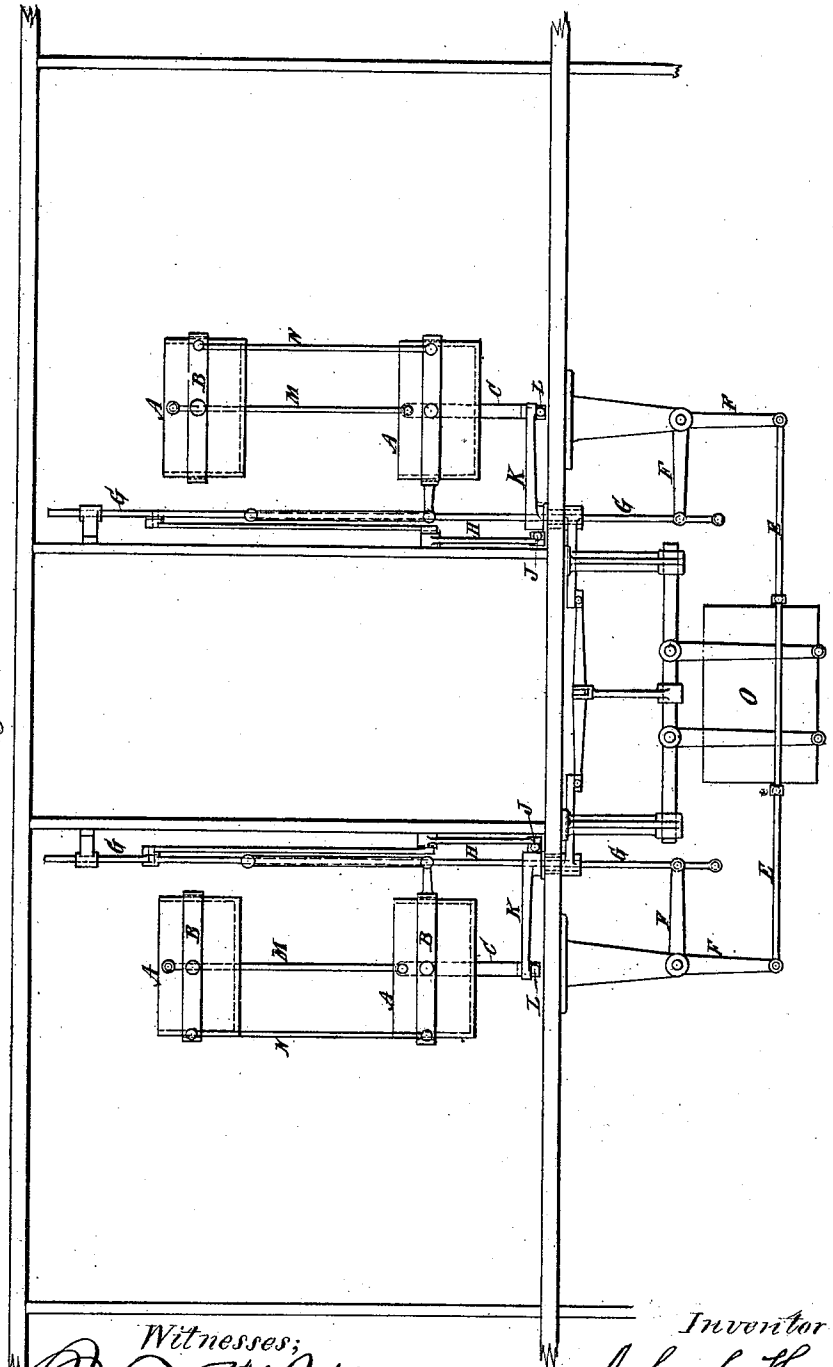


Fig. 1

Witnesses;
William H. Riblet
Mortimer J. Ennis

Inventor
John C. Thompson

N. PETERS, PHOTO-LITHOGRAPHER WASHINGTON, D. C.

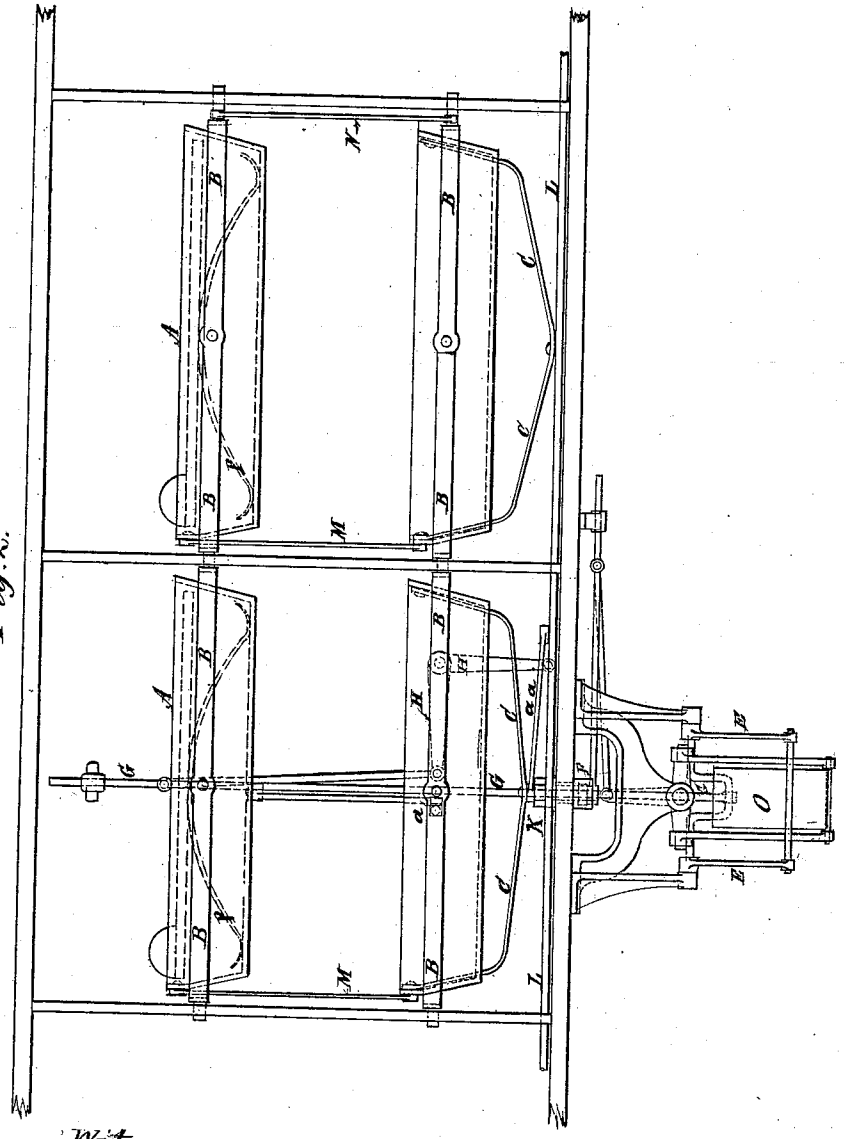
2 Sheets—Sheet 2.

J. C. THOMPSON.

SELF-LEVELING BERTHS FOR SHIPS, &c.

No. 193,837. Patented Aug. 7, 1877.

Fig. 2.



Witnesses;

Williams W. Riblet

Mortimer J. Evans

Inventor

John C. Thompson

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN C. THOMPSON, OF BROOKLYN, N. Y., ASSIGNOR OF THREE-EIGHTHS OF HIS RIGHT TO CHARLES FITZ, OF NEW ORLEANS, LA.

IMPROVEMENT IN SELF-LEVELING BERTHS FOR SHIPS, &c.

Specification forming part of Letters Patent No. **193,837**, dated August 7, 1877; application filed April 10, 1877.

To all whom it may concern:

Be it known that I, JOHN CALVIN THOMPSON, of Brooklyn, in Kings county, in the State of New York, have invented a new and useful Improvement in the Arrangements of the Berths, Cots, Settees, Cars, Lounges, and Chairs of Ships and other Vessels, the purpose of which is to prevent or to cure such sickness at sea as may be produced by the action of the vessel, which invention is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a transverse section of a part of a steamship or sailing-vessel. Fig. 2 is a longitudinal section of the same.

I propose, by means of mechanical appliances or arrangements, to control the reposing or sleeping berth, cot, settee, car, lounge, or chair of each and every person using such, so as not to be affected by the rolling, pitching, or other motion of the ship or vessel containing them, and this I propose to do whether they are placed singly, or detached, or in conjunction. The means by which I propose to effect these arrangements are, first, by a controlling weight, placed in such a position in ship or vessel best suited to interfere the least with that ship or vessel's floating, sailing, or steaming capabilities; secondly, by an arrangement of levers, shafts, and rods or bars in connection with the aforesaid weight, which, being hung or suspended on rods, suspended by levers, hung on cross-heads, solid or tight fixed on a shaft running across or athwartship, and attached by devices to be explained hereinafter to each and every aforesaid reposing or sleeping berth, cot, car, settee, lounge, or chair, to control the same in such a way that while the weight, by reason of its inertia, from a plumb or vertical position, has in control all the motions of said berths, cots, cars, settees, lounges, and chairs, the vessel containing them may roll or pitch without the angle or inconvenience of such roll or pitch being perceptible to the occupant of such berth, cot, car, &c.—each and every berth, cot, car, &c., in all and any conditions of the ship or vessel's rolling, pitching, or other movement, remaining horizontal along and across.

In the drawings, A A represent the berths, cots, cars, settees, lounges, or chairs; B B, the frames suspending the same from either side in the center of the direction of their length, such frames being free to be controlled and to be held in a horizontal position by the inertia of the weight O during the rolling action of the ship or vessel. These frames are carried through or supported in the bulkheads or partitions by angular-edged carriers, or by friction-rollers, or other equivalent mechanical contrivances. C C, metal attachments to the top part of both ends of berths, cots, cars, &c., passing through the bottom, which is cut to allow of the rolling motion of the ship or vessel; thence bent angularly downward directly underneath the centers of the berths, cots, cars, &c., and meeting with and attached to or connected with rods, bars, or pitch-shafts L L, which are placed near the deck, and may be inserted in the deck if necessary to cross a passage-way or alcove; E E, frames hung around the weight O, which serve to control the motion of F F; F F, bell-crank levers controlling the motion or the inertia of vertical shafts G G. G G are vertical shafts being attached by means of link-work to studs *a a*, fixed on the sides of frames B B, to control the motion or the inertia of B B when the ship or vessel is in a rolling condition. These shafts are also, by link-work, attached to bell-crank levers H H, which control the motion or the inertia of shafts, rods, or bars J J. H H, bell-crank levers; J J, shafts, rods, or bars conveying the above effect of motion or inertia to any further series of berths, cots, cars, &c.; K K, levers controlling shafts, rods, or bars L L, which maintain the inertia of berths, cots, cars, &c., when the ship or vessel is in a pitching condition; L L, the shafts or bars connected with the metal attachments C C; M M, rods or bars keeping simultaneously the parallel position of the berths, cots, cars, &c., when there are more than one in a tier, and while the vessel is in a pitching condition; N N, rods or bars, keeping simultaneously the parallel position of the frames of berths, cots, cars, &c., when there are more than one frame in a tier, and while the vessel is in a rolling condition; O, the weight; P P, repulsion-springs

in the berths, cots, cars, &c., beneath the mattresses, cushions, or other fittings of such berths, cars, cots, &c., to nullify the recoil consequent upon any other motion of the ship or vessel not provided for or described hereinbefore.

I do not claim the springs P P, however, as they form the subject-matter of a separate application.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a series of berths capable of longitudinal and transverse vibration with a governing-weight, as and for the purposes described.

2. The combination of two or more berths capable of longitudinal and transverse vibration, with rods connecting the ends thereof, as and for the purposes described.

3. The combination of a series of berths capable of longitudinal vibration with a frame capable of transverse vibrations, as and for the purposes described.

4. The combination of two or more frames in which cots or berths are suspended, arranged one above the other, with a connecting-rod, as and for the purposes described.

5. The combination of a series of bars, pivoted to the ends of the berths, and a reciprocating rod, whereby a longitudinal vibratory movement is imparted to a series of berths.

6. The combination of a frame, arranged about the weight and bell-cranks, connected with the vertical reciprocating rods, through the medium of which the transverse vibrations of the weight are imparted to the bars in which the berths are suspended.

7. The combination of the reciprocating shafts J J, bell-cranks H, and rod G, whereby the motion of the shafts J may be transmitted to another series of berths, as and for the purposes described.

8. The crank K, connected by suitable rods or shafts to the weight O, whereby the longitudinal vibrations of the weight are imparted to the rod L, as and for the purposes described.

JOHN C. THOMPSON.

Witnesses:
WILLIAM H. RIBLET,
MORTIMER J. ENNIS.