2 Sheets—Sheet 1.

D. PARKS.

Self-Leveling Berth for Vessels.

No. 197,886. Patented Dec. 4, 1877.

Fig. 1.

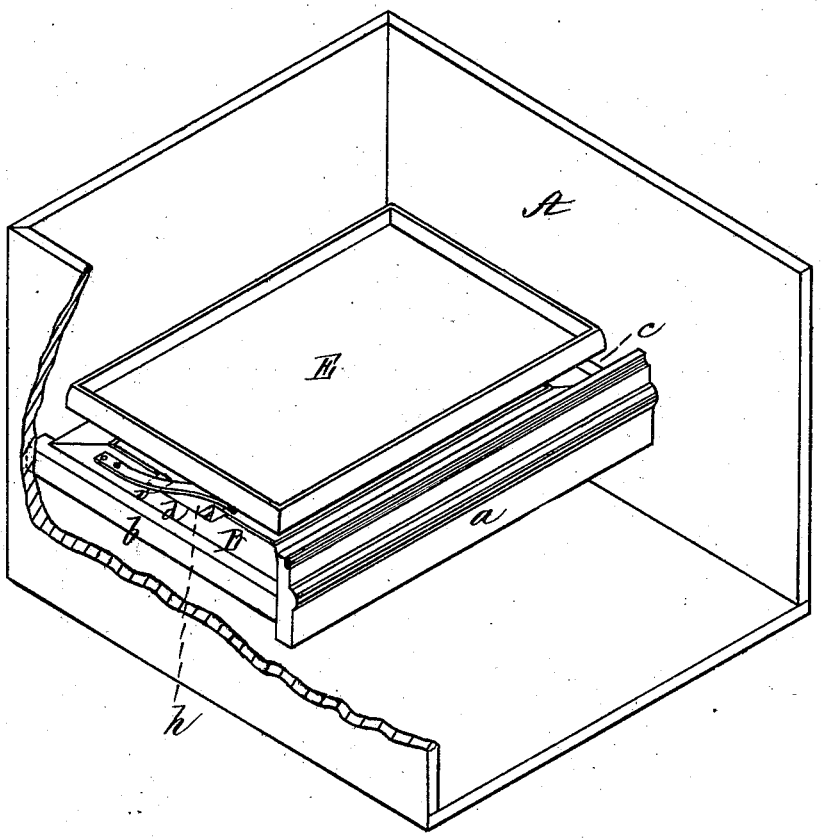

Fig. 4.

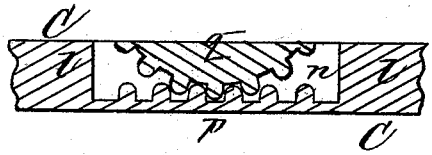

Fig. 5.

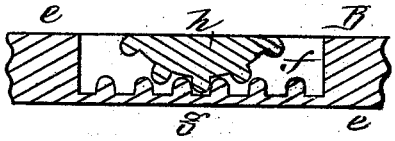

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Fig. 2.

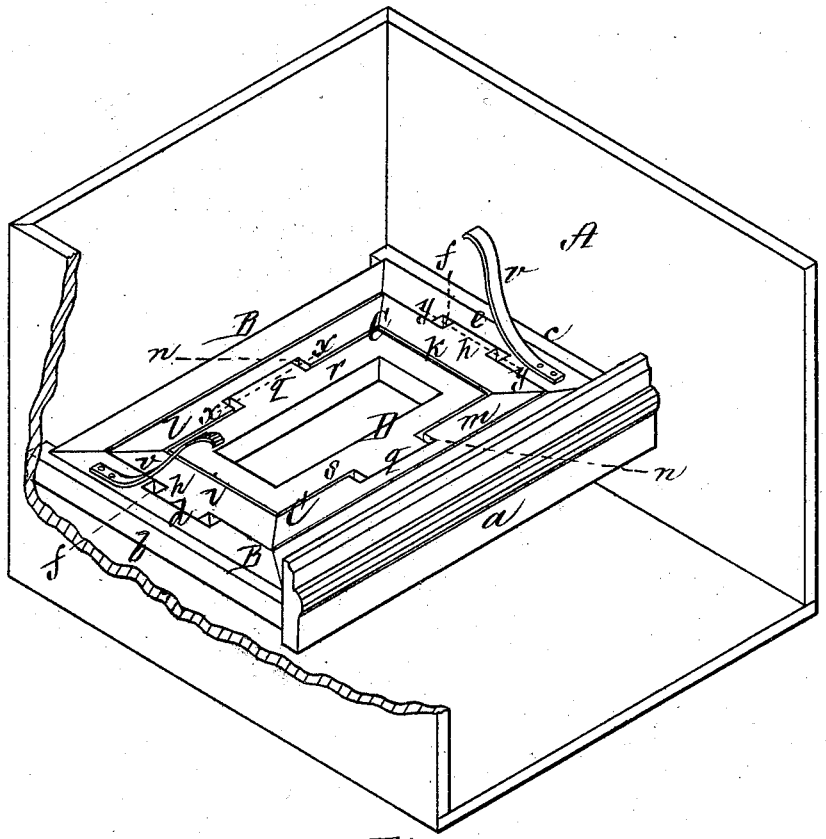
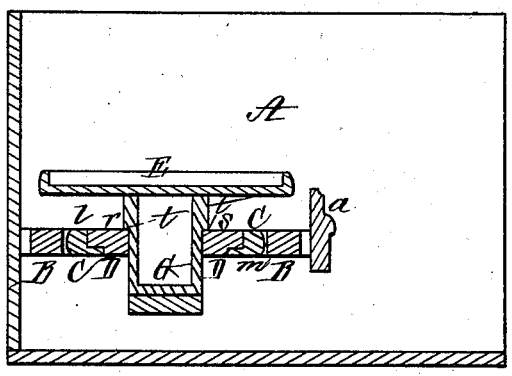


Fig. 3.



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UNITED STATES PATENT OFFICE.

DANA PARKS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SELF-LEVELING BERTHS FOR VESSELS.

Specification forming part of Letters Patent No. **197,886**, dated December 4, 1877; application filed November 13, 1877.

To all whom it may concern:

Be it known that I, DANA PARKS, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Ships' Sleeping-Berths, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a ship's sleeping-berth constructed in accordance with my invention. Fig. 2 is a perspective view of the frames which support the bed-bottom. Fig. 3 is a vertical transverse section through the center of the berth. Fig. 4 is a vertical section on the line *x x* of Fig. 2, enlarged; and Fig. 5 is a vertical section on the line *y y* of Fig. 2, enlarged.

The object of my present invention is to provide a vessel's sleeping-berth in which the bed-bottom shall at all times remain in a horizontal plane, irrespective of the motion of the vessel in pitching or rolling, thereby removing the causes which induce sea-sickness, and adding to the comfort and ease of the occupant; and my invention consists in a bed-bottom provided on its under side with a weighted projection, fitting into a frame pivoted within another pivoted frame, thereby forming the connecting medium between the bed-bottom and pivoted frames, the points at which the frames are pivoted being in lines at right angles to each other, by which construction and arrangement the frames are free to swing in a longitudinal or lateral direction, as the vessel pitches forward or rolls to one side, thus constantly preserving the equilibrium of the bed-bottom as desired; and my invention also consists in certain details of construction, to be hereinafter described.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents the compartment or state-room in which the berth is located; *a*, the longitudinal berth-board; and *b c*, transverse strips secured to the sides of the compartment at the head and foot of the berth, each of these strips being cut away so as to form a ledge or shelf, on which rests the under side of an open rectangular frame, B. The transverse pieces *d e*, forming the head and foot of this frame B, are each provided with a recess, *f*, at the bottom of which are a series of teeth, forming a straight rack, *g*. Within these recesses *f* fit segmental toothed projections *h*, extending out from the head and foot pieces *i k* of another open rectangular frame, C, which is thus pivoted within the outer frame B, the teeth of the projections *h h* engaging with the teeth of the racks *g g*.

The side pieces *l m* of the frame C are also provided with recesses *n*, at the bottom of which are formed racks *p*, these recesses being opposite each other and in a line at right angles to a line passing longitudinally through the center of the frame B. Within these recesses *n* fit segmental toothed projections *q*, (similar to those *h*,) extending out from the side pieces *r s* of an inner open rectangular frame, D, which is thus pivoted within the frame C, the teeth of the projections *q* engaging with the teeth of the racks *p*.

E is the bed-bottom of the berth, extending down, from the under side of which, and firmly attached thereto, is a rectangular projection, G, weighted at its lower end, if desired, and provided on its sides with shoulders *t*, the portion of the projection G below the shoulders passing through and fitting snugly within the inner frame D, and by this means the bed-bottom is connected with and supported by the pivoted frames C D; and as these frames are free to swing in a longitudinal or lateral direction, as the vessel pitches forward or rolls to one side, the balance or equilibrium of the bed-bottom will be constantly preserved, and it will thus remain in a horizontal position irrespective of the movement of the vessel, whereby the liability of sea-sickness is avoided, the ease and comfort of the occupant promoted, and the danger of his being thrown out of the berth in heavy weather entirely avoided.

To the head and foot pieces *d e* of the frame B, and near its diagonal corners, are secured the lower ends of two light flat metallic springs, *v*, which are curved, as shown in Fig. 2, the upper ends of these springs bearing against the under side of the bed-bottom, and serving to relieve it from jar or concussion in all di-

rections, while the construction of the pivots of the frames *c d* and their bearings render them less sensitive, and, consequently, the bed will not be so tremulous or vibrate so rapidly as would be the case if the frames were hung on ordinary pivots.

The rectangular projection G, which is hollow, may be provided with a door or drawer, and be used for holding clothes or other articles, in which case the berth-board *a* would be hinged, so as to be capable of being raised, to facilitate access thereto.

It is evident that a ship's table may be constructed in a manner similar to the berth above described without departing from the spirit of my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the pivoted frames C D, pivoted at points in lines at right angles to each other, of the bed-bottom E, provided with weighted projection G, forming the connecting medium between the bed-bottom and pivoted frames, substantially as herein shown and described.

2. The frames C D, with their pivots, consisting of toothed projections *h q*, in combination with the racks *g p*, on which they rest, substantially as and for the purpose described.

3. The combination of the frame B, provided with the springs *v*, bed-bottom having weighted connecting projection G, and the pivoted frames C D, the several parts relatively arranged with each other, substantially as herein shown and described.

Witness my hand this 9th day of November, 1877.

DANA PARKS.

In presence of—
N. W. STEARNS,
P. E. TESCHEMACHER.