G. DITTMAR.

DEVICE FOR PREVENTING SEASICKNESS.

APPLICATION FILED JUNE 27, 1906.

920,441.

Patented May 4, 1909.

Fig. 1.

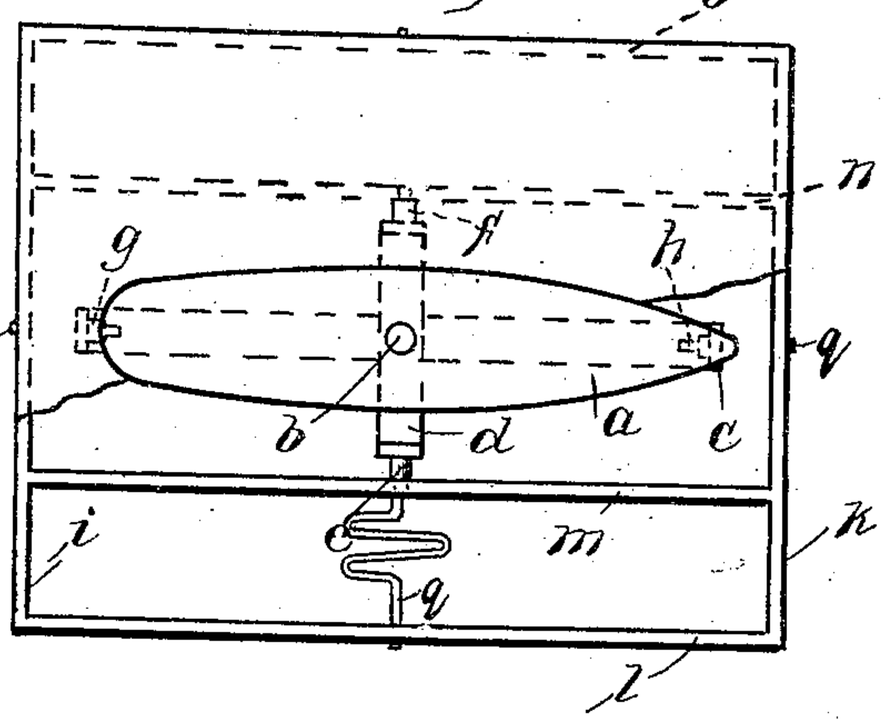


Fig. 2.

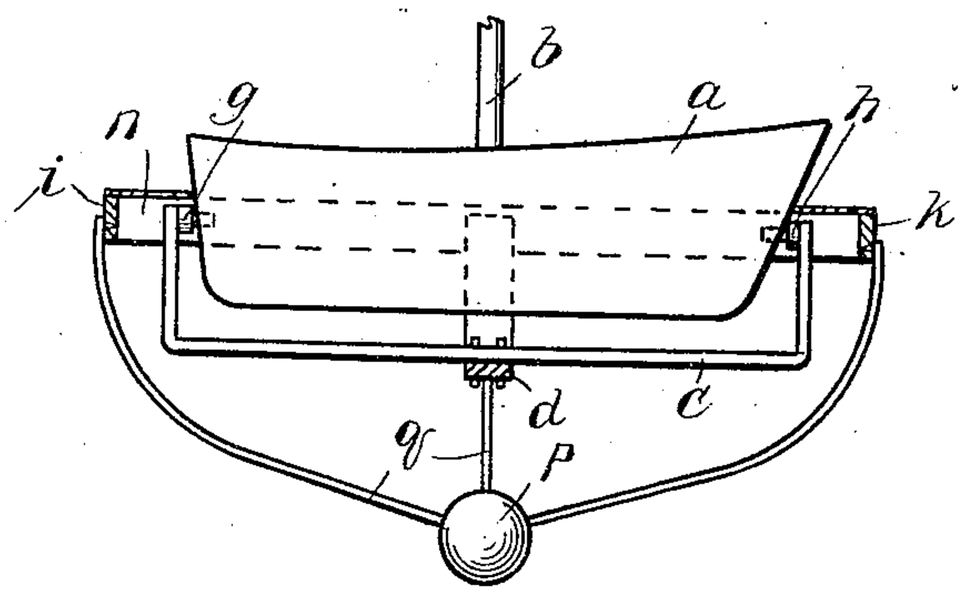


Fig. 3.

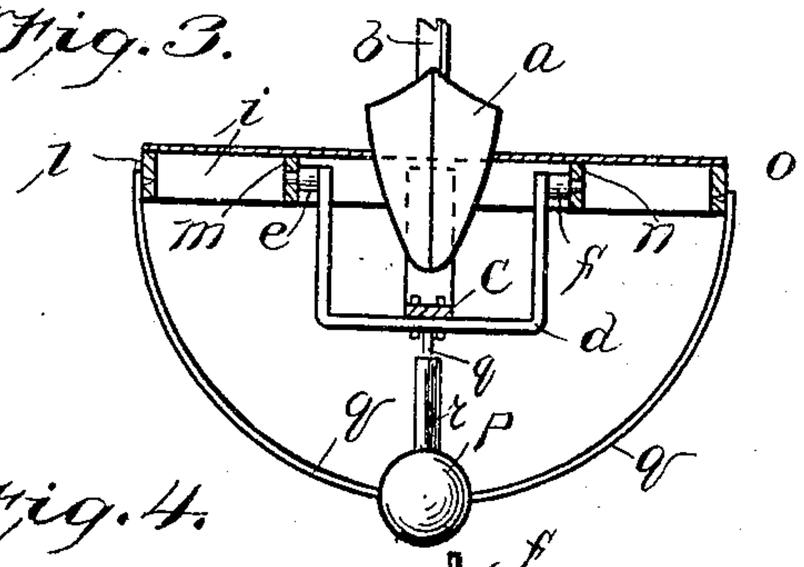
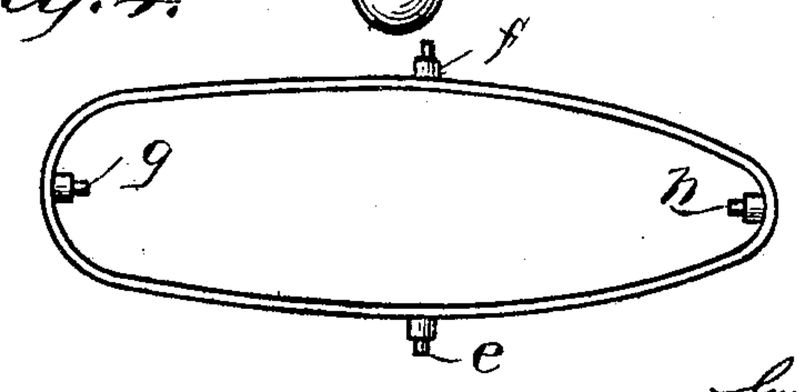


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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DEVICE FOR PREVENTING SEASICKNESS.

No. 920,441. Specification of Letters Patent. Patented May 4, 1909.

Application filed June 27, 1906. Serial No. 323,630.

To all whom it may concern:

Be it known that I, GUSTAVE DITTMAR, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Devices for Preventing Seasickness, of which the following is a full, clear, and exact specification.

The devices employed heretofore for avoiding seasickness consist of seats or berths suspended in a self-leveling manner, so that the occupant maintains an erect position while the ship is rolling or pitching. Also vibratory seats have been proposed. The operation of the present invention deviates entirely from this kind of arrangement.

The object of the present invention is a device, by which a traveler can readily recognize all the intricate deviations of the vessel from the horizontal, and in following the motions in his mind, his stomach is steadied and he has the same pleasure as an old weather-beaten sailor. To this end a small model of a ship's hull is rigidly secured anywhere on board of a vessel, with its longitudinal axis parallel to the axis of the ship, and a self leveling frame suspended therefrom, is covered with a thin fabric or paper representing the water surface. Thus any inclination of the vessel on the level of the sea is truly copied in the cabin, saloon or any other place, where the model is secured.

In the accompanying drawing, forming part of this specification, the invention is illustrated and Figure 1 is a plan view of the device. Fig. 2 is a side elevation, partly in section. Fig. 3 is an end view with parts shown in section. Fig. 4 is a modified form of the inner frame with the pivots.

a represents the hull of a ship, with a rod or mast *b* by which the body *a* can be secured to the ceiling of a cabin or to a bracket on one of its side walls. In fastening the hull *a* care should be taken that its longitudinal axis be parallel to the axis of the vessel, so that all deviations from the water line by rolling and pitching of the vessel be truly followed by the small model *a*, and can be observed in the cabin on an artificial water level, which consists of a gravity controlled frame covered with light canvas or any kind of fabric or paper. This water level frame or outer frame is connected to the hull *a* by means of an inner frame, carrying four pivots in the following manner. I form the inner frame either of two yokes *c* and *d* set crosswise to each other and firmly united in their middle, as shown in Figs. 1 to 3, or I make the frame of metal as shown in Fig. 4 in shape approximately like the hull *a* on the water line, securing the pivots by welding, brazing or in any other suitable manner. The pivots *e f g h* are arranged in pairs crosswise to each other, one pair being directed outward, and the other pair being turned inwardly. In the example illustrated the pivots in the longitudinal axis *g h* are turned inwardly and are projected into holes of the body of the hull *a*, drilled into the same on the water line, in line with its longitudinal axis, thus forming a pivotal connection, and allowing the frame to swing like a pendulum. The outer pivots *e f* are designed to enter into holes of the outer canvas covered frame, representing the water level. This frame can be built up in any suitable manner, as shown it is composed of two cross-bars *i k* and four longitudinal bars *l m n o*, the inner ones, *m* and *n* having perforations in the middle of their lengths to receive the pivots *e* and *f*. The top surface of this frame is covered with a piece of fabric or paper, the middle of which has been cut out to allow the body *a* to fit in. I preferably leave a small space between the hull and the cut edge of the fabric, or I cut slits transversely all around about $\frac{1}{4}$ of an inch apart, so that the hull is allowed freedom of motion. A weight *p* controlling the outer and inner frame is suspended by wires *q* the free ends of which are secured to the outer bars of the canvas frame at any suitable place. The wires *q* are preferably made very thin and of steel, so that the weight is suspended elastically. To increase the elasticity, each of the wires *q* may have a number of zig-zag bends, as shown in Fig. 1. But the connection of the weight *p* with the outer frame may simply be made rigid. When made resilient, as described, the weight is provided with a rod *r* which projects vertically from the weight and extends almost to the crossing point of the yokes or to the hull *a* when the shape of frame Fig. 4 is employed, leaving only a distance of about an inch. This allows the observer to recognize the rising and sinking of the vessel as a whole on a long wave, for the weight and rod will not follow readily, and in rising will show an increased distance between the yoke and the end of the

rod, or a decreased distance when the vessel goes bodily down in a valley between two waves.

In using the device for instance in a cabin situated about amidships, say on the starboard side, the hull *a* should be provided with a mark, such as a dot of ink or color, a small piece of paper, a nail or a pin, at a place corresponding to the said cabin. The occupant fixes then his eyes steadily on said mark. He will then easily recognize every motion of the vessel. A roll toward port will bring the starboard side cabin high up above the water level, and the marked part of the model *a* will rise correspondingly out of the canvas frame. Should the vessel in this position be raised bodily on the crest of a long wave parallel to the length of the ship the weight *p* with the rod *r* will recede from the yoke owing to the resiliency of the elastic supporting wire, and the gravity of the weight. Then while going down in a valley between two waves, the vessel may roll over to the starboard side, which again will be clearly shown. It is similar when the model is used in a fore cabin for instance on the port side. Each time the bow is lifted high up above the waves, or is plunged down, the model rises correspondingly out of the artificial water level or sinks down. In a passenger steamer a number of the models should be secured in different places, cabins, saloons etc. so that the travelers may sit or stand around to observe it.

Having thus described my invention what I claim is:

1. Device for preventing sea-sickness composed of a model of a ship's hull, rigidly secured on board of a vessel, and of a light gravity controlled frame pivotally attached to said model in a self leveling manner.

2. Device for preventing sea-sickness composed of a model of a ship's hull, rigidly secured on board of a vessel, and of a light gravity controlled frame covered with a thin material to represent the water level, pivotally attached to said model in a self leveling manner.

3. Device for preventing sea-sickness, composed of a ship's hull, rigidly secured on board of a vessel, of a light canvas-covered and gravity controlled outer frame, and of an inner frame provided with four pivots, arranged cross-wise in pairs diagonally opposite to each other, one pair of said pivots being directed inwardly to engage the hull and form with the same a pivotal connection, the other pair being directed outwardly adapted to pivotally engage the light canvas-covered frame suspended under the influence of gravity.

4. Device for preventing sea-sickness, composed of a ship's hull, rigidly secured on board of a vessel, of a light canvas-covered and gravity controlled outer frame, and of an inner frame provided with four pivots, arranged cross-wise in pairs diagonally opposite to each other, one pair of said pivots being directed inwardly to engage the hull and form with the same a pivoted connection, the other pair being directed outwardly adapted to pivotally engage the light canvas-covered frame, of a weight resiliently suspended from said frame and of a rod extending from the weight into the vicinity of the hull substantially as described and for the purpose set forth.

In testimony whereof I affix my signature.

GUSTAVE DITTMAR.

In the presence of—

GEO. HEINICKE,

F. DITTMAR.