D. BAKER.

Mariners' Compass

No. 163,838. Patented June 1, 1875.

Fig. 1.

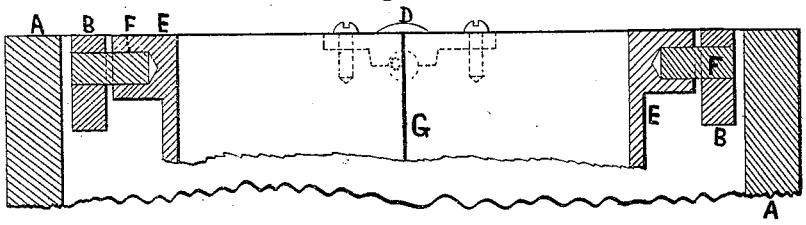
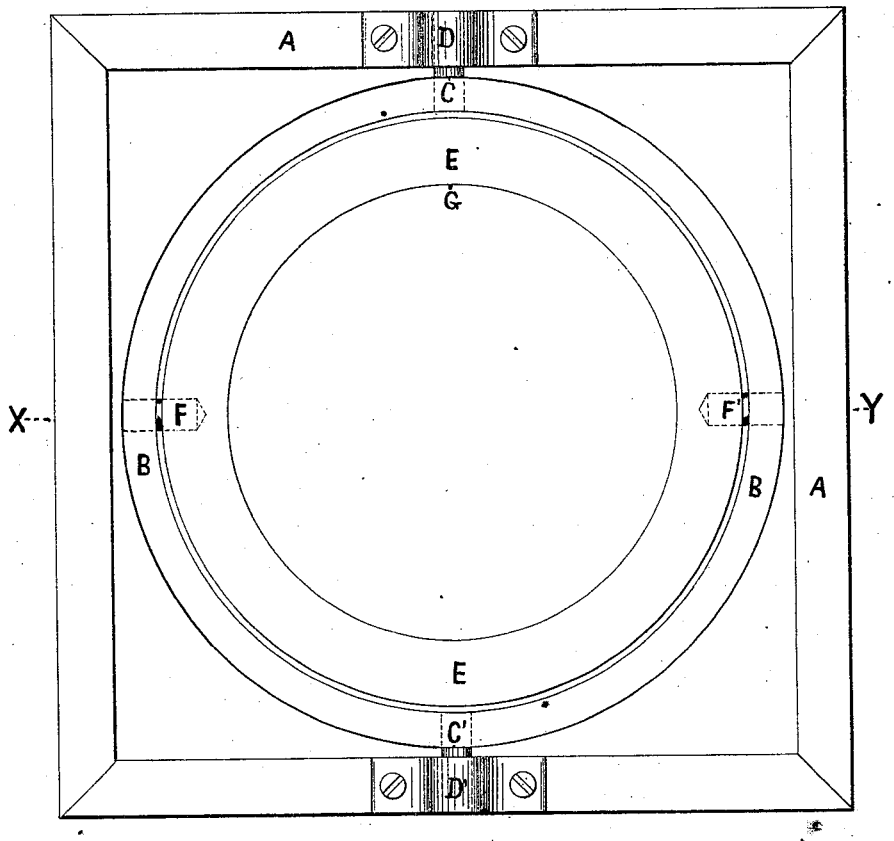


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

DAVID BAKER, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF HIS RIGHT TO WILLARD I. HUMPHREY, OF SAME PLACE.

IMPROVEMENT IN MARINERS' COMPASSES.

Specification forming part of Letters Patent No. **163,838**, dated June 1, 1875; application filed October 21, 1874.

CASE B.

To all whom it may concern:

Be it known that I, DAVID BAKER, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Mariners' Compasses, of which the following is a specification:

The nature of my invention consists in so constructing a mariner's compass that the axis of the outer gimbal-ring shall be in a line fore and aft of the compass-bowl suspended therein; and further in making the indicating-mark, known as the lubber-point, on one or both sides of the compass-bowl, and at a point in the direction of the said axis of the outer gimbal-ring, instead of being at right angles thereto, as heretofore constructed.

Mariners' compasses heretofore have been constructed so that the axis of the outer gimbal-ring was at right angles to a line passing through the compass-bowl fore and aft, (when in use,) which line is represented by a mark or marks on the inside of the compass-bowl, at a point fore or fore and aft, such mark being termed by mariners the "lubber-point," and is the guide, in connection with the compass-card, used in steering.

By such construction of the axis of the outer gimbal-ring, (when in use,) as to be athwart-ships or crosswise of the vessel, and having a fixed support, it will be seen that whenever the vessel is "heeled" or inclined to either side the gimbal-ring is also inclined, and while in this position any pitching motion of the vessel, as she rises and falls over the sea, causes the mark, called the lubber-point, on the compass-bowl, to move out of line with the vessel's direction, and thus misrepresent her true course.

This erroneous indication of a vessel's course is a great stumbling-block to the mariner, and is often attended with danger, particularly in stormy weather when near the coast, and is, doubtless, the cause of many disasters.

The object of my invention is to overcome these imperfections in mariners' compasses; and I find, after many experiments, that with a compass constructed according to my invention, however much the vessel may be heeled, her pitching motion, as she rises and falls over the sea, does not cause the so-called lubber-point to move out of true line with the vessel's course or direction, but her course is as truly represented by such mark or point as when the vessel is sailing in the smoothest water.

Figure 2 is a top plan view of a mariner's compass constructed according to my invention, the card being omitted. Fig. 1 is a vertical central section of the same at the point indicated by the dotted lines X Y, the lower portions being broken away.

A represents the compass-case of usual construction. B represents the outer gimbal-ring, and C C′ its journals or axis moving freely in bearings D D′ affixed at opposite sides, and on the top edge of case A. E represents the compass-bowl, provided with pivots F F′ which have their bearings in the gimbal-ring B, and at opposite sides thereof, being at right angles to the journals C C′ of gimbal-ring B. G represents a mark or marks or other means of indicating a point or line in the direction of the axis of the outer gimbal-ring, or other equivalent means therefor. This point or mark I have indicated by one or more marks upon the inside of the compass-bowl, and at a point in the direction of the axis of the outer gimbal-ring, and at one or upon opposite sides of the compass-bowl. A mark upon the top of the glass-plate, or on the top of the compass-bowl, or other means of indicating or designating the lubber-point, so-called, located in the direction of the axis of the outer gimbal-ring, would be sufficient to serve for the purposes contemplated.

Having thus described my invention, what I claim is—

1. In a mariner's compass, a mark or marks or other means of indicating a point or line in the direction of the axis of the outer gimbal-ring, as and for the purposes set forth.

2. A mariner's compass provided with means for indicating the lubber-point, placed in the vertical pane of the axis of the outer gimbal-ring, substantially as and for the purpose set forth.

DAVID BAKER.

Witnesses:

SYLVENUS WALKER,

GEO. A. BAKER.