(No Model.)

G. W. MERRILL.

ADJUSTING BINNACLE.

No. 438,777. Patented Oct. 21, 1890.

Fig. 3.

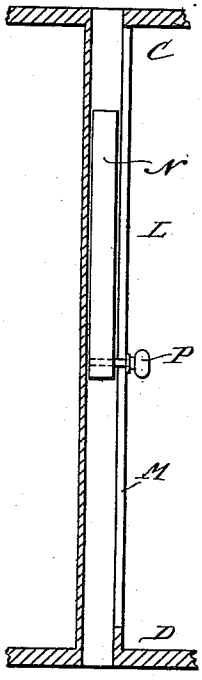


Fig. 1.

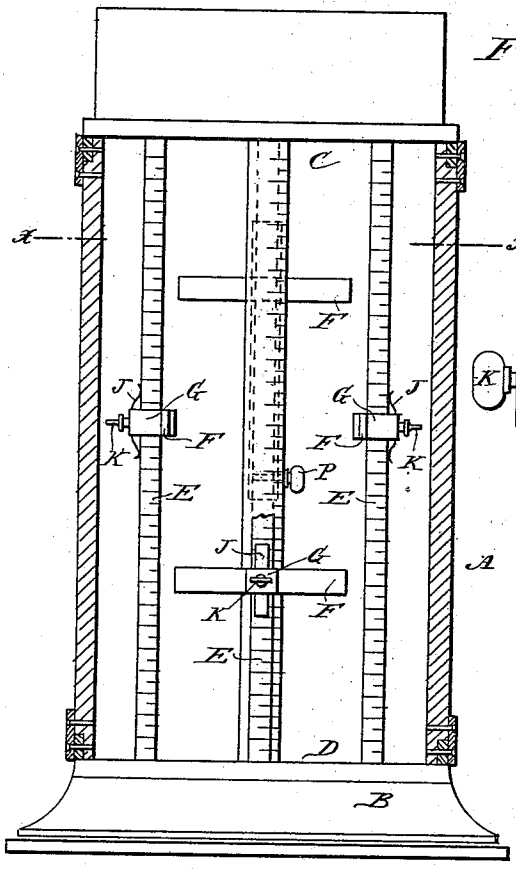


Fig. 4.

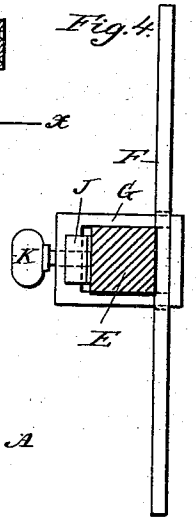


Fig. 5.

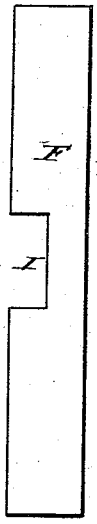


Fig. 6.

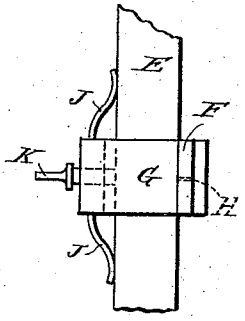
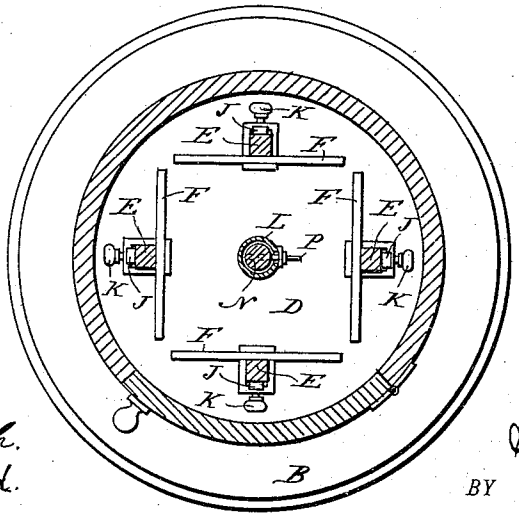


Fig. 2.



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GEORGE W. MERRILL, OF BROOKLYN, ASSIGNOR TO ROBERT MERRILL'S SONS, OF NEW YORK, N. Y.

ADJUSTING-BINNACLE.

SPECIFICATION forming part of Letters Patent No. 438,777, dated October 21, 1890.

Application filed January 28, 1890. Serial No. 338,368. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. MERRILL, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Compass-Adjusting Binnacles, of which the following is a specification.

My invention relates especially to devices employed for correcting magnetic deviation of ships' compasses, caused by the local attraction of iron, &c., of the hull or other metal in or about the vessel, and has for its object the provision of separate and independently-adjustable magnets, whereby great accuracy of adjustment may be obtained.

To attain the desired end, my invention consists, essentially, in several separate magnets horizontally supported by adjusting mechanism upon upright graduated bars within the box below a compass-support, and also in certain other novel and useful combinations or arrangements of parts and peculiarities of construction and operation, all of which will be hereinafter first fully described, and then pointed out in the claim.

In the drawings, Figure 1 is a view, in elevation and partial section, of my device. Fig. 2 is a horizontal section at line *x x* of Fig. 1. Fig. 3 is a vertical sectional view of the central bar containing the heeling-magnet. Fig. 4 is an enlarged top view of one of the horizontal magnets with its supporting-bar in section. Fig. 5 is a side elevation of one of the magnets. Fig. 6 is an enlarged view illustrating the method of securing the magnet in place.

Like letters of reference, wherever they occur, indicate corresponding parts in all the figures.

A is the main frame or case supported upon a base B.

C is a top plate, preferably made of brass, and D is a bottom plate.

E E E E are four vertical graduated bars secured to plates C and D.

F F F F are horizontal magnets arranged to fit into clamping devices, each consisting of a metal ring G, encircling a bar E, the ring being cut away, as at H, (indicated by the dotted horizontal line in Fig. 6,) thus leaving a lip at the outside of the ring, which projects upward and embraces the portion of the magnet above the part which is cut away, and indicated by the letter I in Fig. 5. The magnet F is also cut away, as at I, and fits into H against the side of a bar E.

J is a spring, which bears against the bar on the side opposite to the magnet, and K is a thumb-screw, which passes through the ring G and spring J, bearing against the bar E.

L is a central hollow bar slotted, as at M, and containing a vertical heeling-magnet N, adjustably held in place by a thumb-screw P.

When constructed and arranged in accordance with the foregoing description, my adjusting-binnacle will be found admirably adapted to the uses and purposes for which it is intended.

The heeling-magnet may be easily, quickly, and accurately adjusted to the required position and the horizontal magnets each adjusted independently of the others, and I am thus enabled to acquire much greater accuracy than has heretofore been possible in devices of the character to which my invention relates. When adjusted to a northern latitude, the position of the magnets may be noted, and if the vessel enters a southern latitude the magnets may be changed to suit the requirements. Upon a return to the northern latitude the compass may be readjusted by simply returning the magnets to their former position.

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

A compass-adjusting binnacle in which is comprised a compass-supporting case wherein are fixed four vertical rods, each of said rods being provided with a movable clamp and supporting a single horizontal magnet, arranged as set forth, and a hollow central rod wherein is supported a vertically-adjustable magnet, the said central rod being slotted for the reception of a clamping-screw, the whole combined and arranged substantially as shown and described.

Signed at New York, in the county of New York and State of New York, this 14th day of January, A. D. 1890.

GEORGE W. MERRILL.

Witnesses:
A. M. PIERCE,
GERTRUDE WARD.