G. K. CALHOUN.

ATTACHMENT FOR MARINERS' COMPASSES.

APPLICATION FILED MAY 10, 1910.

994,569. Patented June 6, 1911.

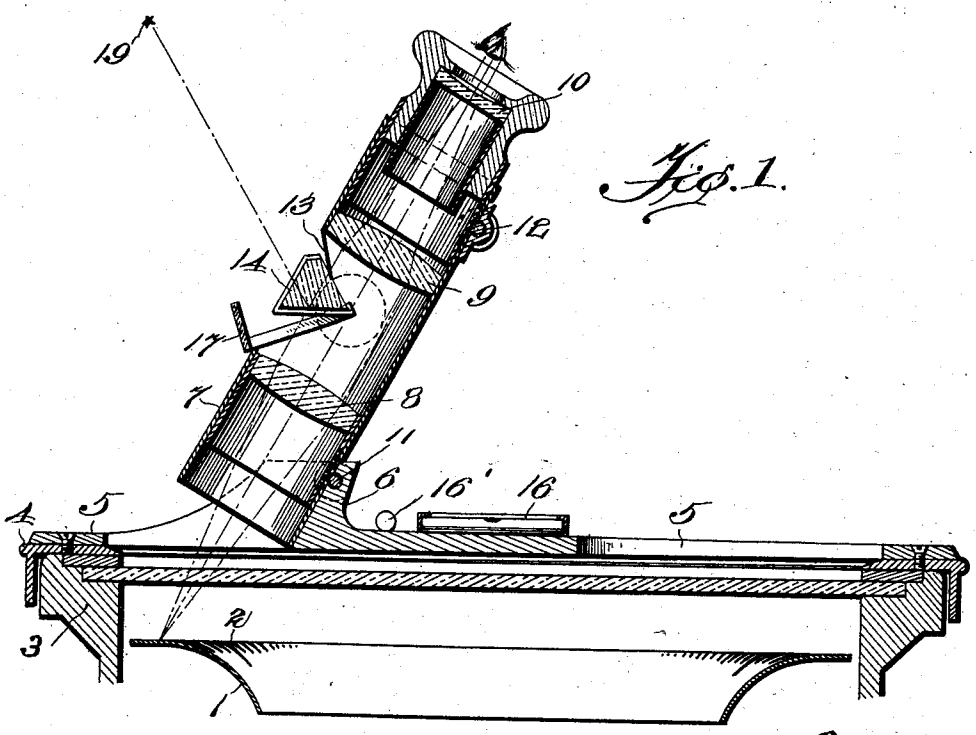

Fig. 1.

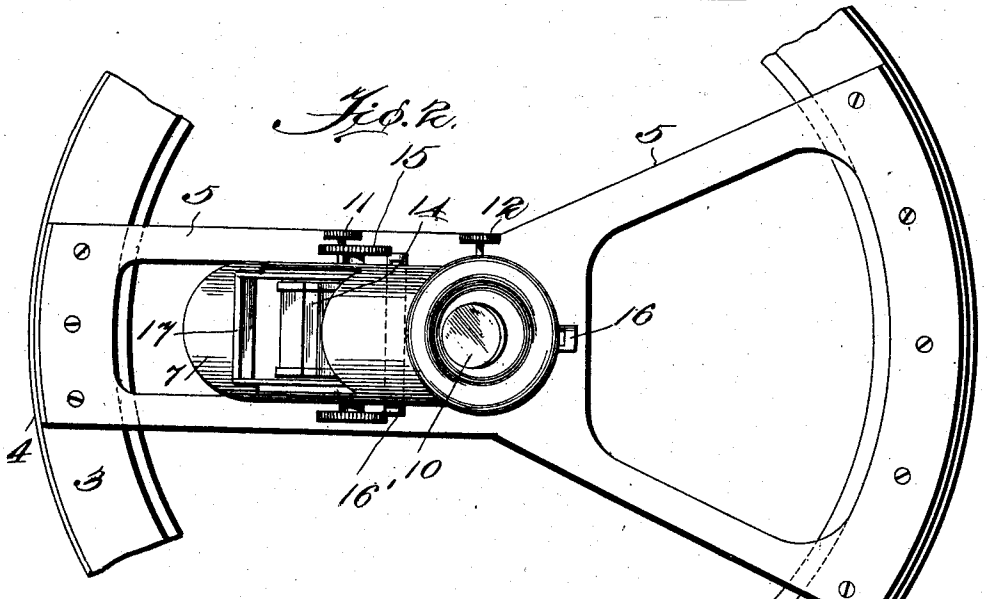

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR MARINERS' COMPASSES.

994,569. Specification of Letters Patent. Patented June 6, 1911.

Application filed May 10, 1910. Serial No. 560,473.

To all whom it may concern:

Be it known that I, GUY K. CALHOUN, midshipman, U. S. Navy, a citizen of the United States, stationed at Washington, in the District of Columbia, have invented certain new and useful Improvements in Attachments for Mariners' Compasses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to attachments for mariners' compasses and has for its object the production of a simple and inexpensive device which will enable the bearing of a distant object or heavenly body to be read off with greater accuracy and ease than has heretofore been possible.

To these ends, the invention consists in the novel details of construction and combinations of parts more fully hereinafter disclosed and particularly pointed out in the claims.

Referring to the accompanying drawings forming a part of this specification in which like numerals refer to like parts in all the views:—Figure 1, is a sectional view of an attachment made in accordance with my invention; and, Fig. 2, is a plan view thereof with certain parts broken away.

1 indicates the usual compass card with the graduations 2 thereon, and 3 the supporting rim of the compass bowl. Over the rim 3 I rest a ring 4 to which is attached the bracket 5 carrying the supporting lug 6 on which is mounted the outer tube 7 of a telescope. This telescope is provided with any suitable combination of lenses, such as 8, 9 and 10, the lens 8 being adjustable by the means 11, and the lens 10 being adjustable by the means 12. Near the center of the telescope, its barrel is cut away as at 13, and in the space thus provided is pivoted the prism 14, which may be adjusted by the means 15. 16 is a level to indicate when the bracket 5 is in a horizontal plane and 17 is a shading means which may be swung up into position to shut off the light when the sun is observed.

The operation of my invention is as follows:—Suppose the bearing of a heavenly or other distant object 19 is to be observed. The lens or eye-piece 10 is adjusted until the image of the distant object as seen reflected through the prism becomes plain, the ring 4 being turned in azimuth until the prism 14 is in the same vertical plane as the body 19, and said prism being properly adjusted by the means 15. Said prism will then occupy such a position that its reflecting surface will be at right angles to said vertical plane. The lens 8 is then adjusted until the compass card is clear and the image of the body 19 appears projected on the graduations 2. At the same time, of course, care is taken to see that the levels 16 and 16′ show the bracket 5 to be in the horizontal position. By the means just described, it is evident, that the bearing of an object 19 may be obtained with ease and accuracy, and that if such object be the sun the shading means 17 may be turned up to prevent injury to the eyes.

It is evident that those skilled in the art may vary the details of construction and the arrangement of parts without departing from the spirit of my invention and, therefore, I do not wish to be limited to such features, except as may be required by the claims.

What I claim is:—

1. In an apparatus for taking bearings, the combination of a compass card; a telescopic device provided with lenses adapted to be focused on said card; and a prism for reflecting the image of a distant object through the eye-piece of said telescopic device, substantially as described.

2. In an apparatus for taking bearings, the combination of a compass card; a telescopic device provided with lenses adapted to be focused on said card; and means carried by said device for reflecting the image of a distant object through the eye-piece of said telescopic device, and causing said image to appear projected on said card, substantially as described.

3. In an apparatus for taking bearings, the combination of a compass card; a plurality of lenses adapted to be focused on said card; a reflecting means located between said lenses adapted to reflect the image of the object to be observed through one of the same; and means for moving said lenses and reflecting means in azimuth, substantially as described.

4. In an apparatus for taking bearings the combination of a compass card; a compass bowl in which said card is mounted; a bracket adapted to rest on said bowl; a telescope mounted on said bracket; means for

adjusting the lenses of said telescope; a reflecting means mounted in said telescope; and means for adjusting said reflecting means to cause the image of the object observed to be reflected through the eye-piece of said telescope and to appear projected on said compass card, substantially as described.

5. In an attachment for mariners' compasses, comprising a bracket adapted to be supported by the compass bowl; a telescopic device provided with lenses supported by said bracket; a reflecting means associated with said telescopic device; and means for adjusting said lenses and adapted to enable the observer to cause the image of a distant object to appear projected on the compass card, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

GUY K. CALHOUN.

Witnesses:
T. A. WITHERSPOON,
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