H. H. CUMMINGS.

AIR VEIL FOR GUN SIGHTS.

APPLICATION FILED APR. 9, 1908.

**1,072,828.** Patented Sept. 9, 1913.

*Fig. 1.*

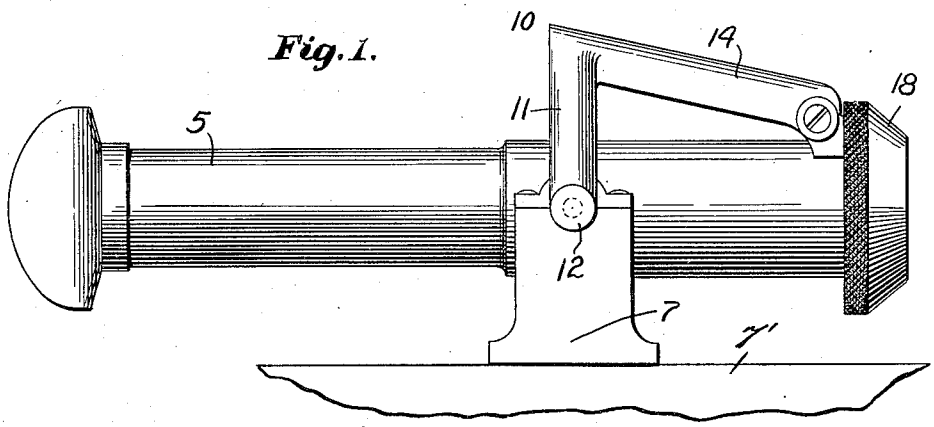



*Fig. 2.*

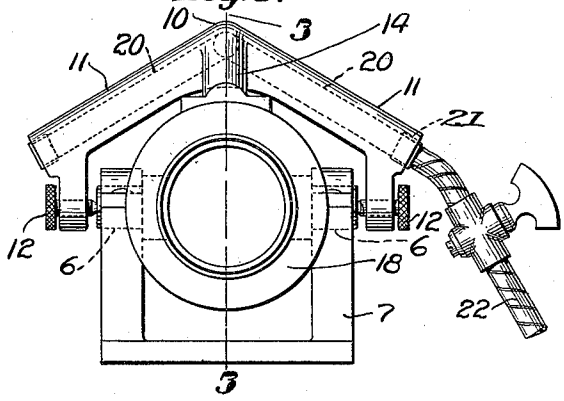



*Fig. 3*

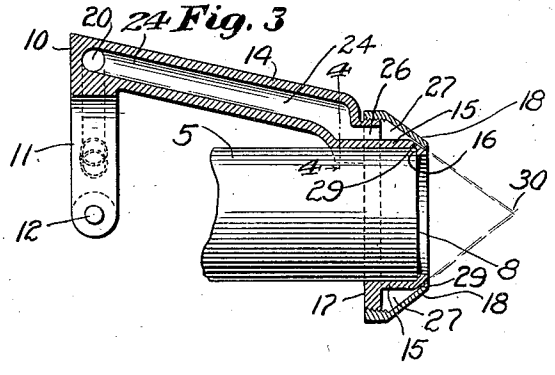
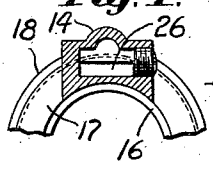



*Fig. 4.*




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# UNITED STATES PATENT OFFICE.

HENRY H. CUMMINGS, OF NEWTON, MASSACHUSETTS.

## AIR-VEIL FOR GUN-SIGHTS.

1,072,828. Specification of Letters Patent. Patented Sept. 9, 1913.

Application filed April 9, 1908. Serial No. 425,989.

*To all whom it may concern:*

Be it known that I, HENRY H. CUMMINGS, a citizen of the United States, and a resident of Newton, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Air-Veils for Gun-Sights, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

This invention relates to gun sights and the like; and pertains more particularly to telescope or similar sights used on the guns of naval vessels.

One object of the invention, among others, is to provide protective means for the objective lens of a sighting telescope, to prevent clouding of the lens by smoke or the condensation thereon of moisture. In another aspect the invention may serve to dissipate moisture or smoke tending to fog the telescope.

The character of the invention may be best appreciated by reference to the accompanying drawings which show, merely for purposes of illustration, one of the various embodiments of which the invention is susceptible.

In the drawings: Figure 1 is a side elevation of sighting means exemplified by a telescope, in combination with protective means therefor arranged to pass a current of air across the objective end of the telescope; Fig. 2, an end elevation of the apparatus shown in Fig. 1, viewed from the right in the latter figure; Fig. 3, a section on the line 3—3 of Fig. 2; and Fig. 4, a detail section on the line 4—4 of Fig. 3.

Referring to Fig. 1, the exemplary sighting means, *i. e.* a telescope 5, is mounted upon horizontal trunnions 6, journaled in brackets 7, supported in any desired or practicable relation to the gun 7′ which is to be aimed. The objective end of the telescope is at 8. Mounted coaxially with the trunnions 6—6 is a frame 10 which (Fig. 2) straddles the telescope by arms 11, 11 having on depending lugs trunnion screws 12, 12 seating at their tapered adjacent ends in appropriate apertures in the trunnions 6—6. The frame 10 has a forwardly projecting arm 14, having preferably integral therewith a sleeve 15, encircling the objective end of the telescope and having an annular, internal rabbet 16 which fits over and seats against the rim of the telescope. The sleeve 15 has a threaded flange 17 upon which is screwed a frusto-conical shell 18. One or both of the arms 11, 11 is hollowed to provide a conduit 20 (see dotted lines Fig. 2) each extremity of the conduit being threaded at 21 to receive a plug of a preferably flexible pipe 22 which may have a suitable valve as shown. The conduit 20 communicates with a second conduit 24 extending through the arm 14 of the frame 10, and the conduit 24 communicates at its forward end by a port 26 with an annular chamber 27 between the sleeve 15 and the frusto-conical shell 18.

The interior face of the shell 18 is preferably frusto-conical; and the end of the sleeve 15 may be also frusto-conical, having a face 29 substantially parallel to the adjacent inner surface of the shell 18. Thus by appropriately adjusting the shell 18 on the threaded flange 17 a frusto-conical aperture, of any practicable size, may be caused to intervene between the shell 18 and sleeve 15. The aperture between the shell 18 and sleeve 15 is intended to supply a passage through which air or other gaseous medium may be rapidly moved in order to agitate the air in the vicinity of the end of the telescope, so as to prevent accumulation of smoke or moisture, or to dissipate already accumulated smoke or moisture, thereby preventing or correcting any tendency to befog the telescope and obstruct the sighting operation. For example, the pipe 22, may be connected with a source of heavily compressed air, such as is commonly employed for blowing out guns after firing, and said compressed air traversing the conduits 20 and 24 will pass through the port 26 into the chamber 27, and will be ejected with great force through the preferably restricted air passage between the shell 18 and sleeve 15. The described preferred conformation of the air passage is such that the air will be forced from the chamber 27 in a conical sheet, having substantially the shape indicated by dotted lines in Fig. 3, and focusing at 30. Such a sheet provides what may be aptly called an "air veil," which may be substantially impenetrable by dust, smoke, moisture or the like, which would tend to befog the telescope. Aside from this provision of a protective veil, an air current such as described would serve to dissipate

already accumulated dust, smoke or the like, whether it be employed continuously or intermittently.

While the invention explained by reference to the preceding specific disclosure has great and peculiar advantages when applied to a sighting telescope, the scope of the invention is not necessarily restricted to such application; and the subjoined claims are to be so interpreted, except where expressly limited by the inclusion of a telescope as an element of the recited combination.

The invention is not limited, of course, to the specific construction and organization hereinbefore described, since the illustrative apparatus is susceptible of various modifications, additions and omissions which will appear to those skilled in the art.

Claims:

1. The combination of means to assist in sighting a gun, with means to direct an air current across said gun sighting means to inclose the same by an air veil.

2. The combination of a telescope with a frame associated therewith having conduits leading to a frusto-conical air passage, constructed on the dimensions of a cone having its apex in front of the objective end of the telescope.

3. The combination of a telescope with provision for conduits and an air passage constructed to deliver a current of air at the objective end of the telescope, and means to enlarge and restrict said passage.

4. The combination with a piece of ordnance, of a sighting telescope therefor, and means constructed to inclose the objective end of the telescope by a wind veil.

5. The combination with a piece of ordnance of a sighting telescope therefor, means to provide a conical wind veil inclosing the objective end of the telescope.

6. The combination of means to assist in sighting a gun, with provision for inclosing said means by a wind veil.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

HENRY H. CUMMINGS.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."