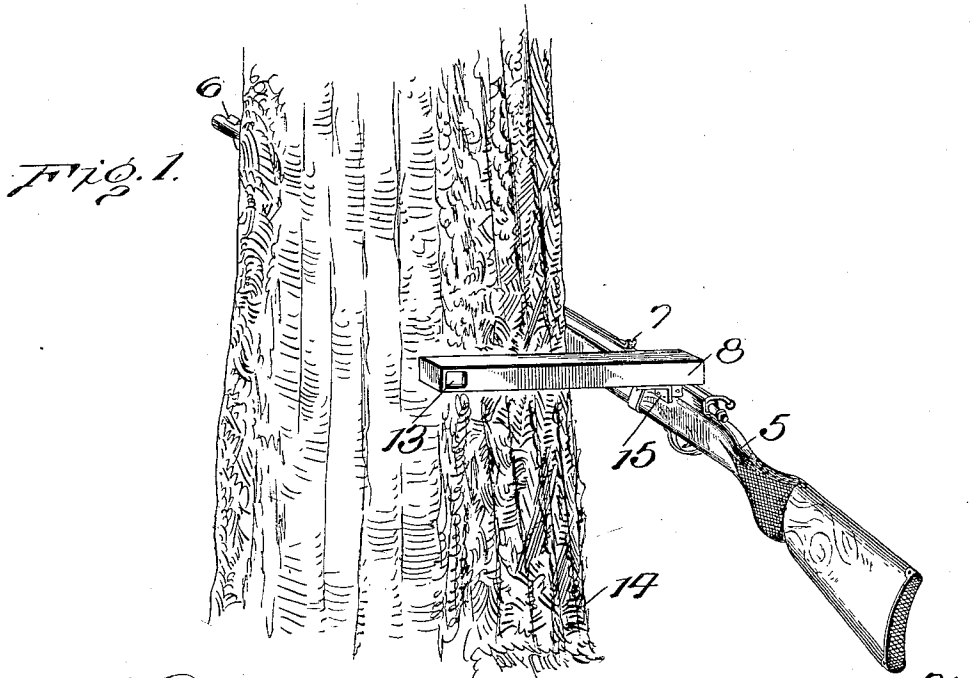
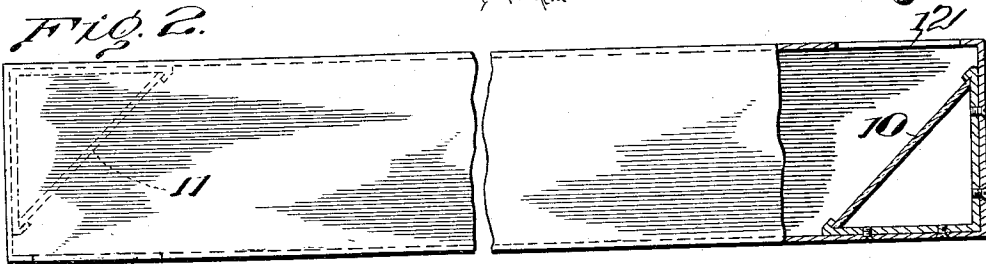
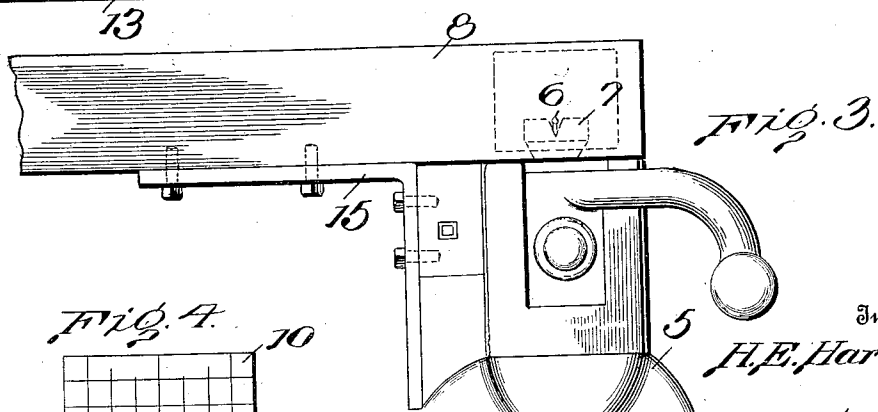
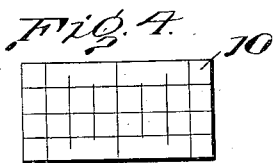


H. E. HARTNEY.
PERISCOPICAL SIGHT.
APPLICATION FILED MAY 4, 1915.

Patented Mar. 28, 1916.

1,176,893.



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PERISCOPICAL SIGHT.

1,176,893.

Specification of Letters Patent.

Patented Mar. 28, 1916.

Application filed May 4, 1915. Serial No. 25,825.

To all whom it may concern:

Be it known that I, HAROLD EVANS HARTNEY, a subject of the King of England, residing at Winnipeg, Province of Manitoba, Canada, have invented certain new and useful Improvements in Periscopical Sights, of which the following is a specification.

This invention relates to improvements in fire arm attachment and in its more intense aspect to devices of a periscopical nature adapted to enable one to properly aim and discharge a gun with which it is associated without exposing the person operating the gun.

One of the objects of the present invention is to provide a device or periscopical sighter, of the above general character, which will be simple in construction and cheap to manufacture.

A further object is to provide a device of the above character which will be reliable and efficient in use and operation at all times.

A further object is to provide a device of the first above mentioned character adapted to be attached or removed from fire arms of standard make at will.

Other objects will be in part obvious from the annexed drawings and in part indicated in connection therewith by the following analysis of this invention.

This invention accordingly consists in the features of construction, combination of parts and in the unique relations of the members and in the relative proportioning and disposition thereof, all as more completely outlined herein.

To enable others skilled in the art so fully to comprehend the underlying features thereof that they may embody the same by the numerous modifications in structure and relation contemplated by this invention, drawings depicting a preferred form have been annexed as a part of this disclosure, and in such drawings like characters of reference denote corresponding parts throughout all the views, in which—

Figure 1 is a perspective view showing the general manner of use and operation; Fig. 2 is a partial sectional plan view of the periscope attachment; Fig. 3 is a rear elevational view showing the positioning of the device with respect to the line of sights, and Fig. 4 is a detail view of one of the mirrors suitably marked to enable the operator to make proper allowance for variations in wind and elevation.

Referring now to the drawings in detail and more particularly to Fig. 1, 5 denotes an ordinary service rifle of any desired type, although it is to be understood that the periscope attachment is applicable with slight modifications to various other forms of fire arms. This rifle 5 is provided with the usual front sight 6 and notched rear sight 7 on the upper part of the barrel and immediately behind which is detachably secured a periscope attachment 8 projecting laterally at right angles to the line of sight and lying in the same horizontal plane therewith. This periscope comprises a rectangular tubular member as shown more clearly in Fig. 4, about an inch and a half wide and three quarters of an inch in depth, and a total length of approximately nine inches, although it is, of course to be understood that these dimensions may be varied at will. At one end of this tube 8 is a mirror 10 positioned at an angle of 45° with respect to the line of sight and parallel to a second mirror 11 at the opposite end. Small openings 12 and 13 are positioned opposite or adjacent these mirrors whereby the objective mirror 10 will reflect the line of sights as shown clearly in Fig. 3 to the observation mirror 11 clearly in view of the soldier or operator concealed behind an embankment or protection 14, as shown in Fig. 1. One of these mirrors, preferably the field mirror 10, is graduated in the manner shown in Fig. 4 to enable the marksman to compensate for errors due to windage and the effect of gravity on the bullet when shooting at long range. The whole apparatus is preferably painted black inside and out so as not to be noticeable at a distance.

The device may be secured to the gun in any desired manner permitting free working of the parts of the gun, and is preferably provided with a downwardly projecting bracket and base 15 adapted to be secured directly to the stock of the rifle. The base may have a square hole running at right angles to the length of the tube with its lower side parallel with the base of the tube whereby the periscope will be in the same plane as the gunsight when a similarly shaped member on the tube is slipped therein.

It is believed that the method of operation and use of a device of this character are clear from the above description. It may be stated, however, that by means of

this small device a soldier is enabled to properly aim and fire the gun from behind suitable covering. The operator faces in the same direction as that in which he is firing and instead of shooting over an elevation which necessitates a suitable support or contrivance for artificially holding the rifle, the rifle can be fired directly from the forearm in practically the usual manner. The field mirror lying directly in the line of sight reflects the vision at right angles to the observation mirror at the opposite end of the periscope which is opposite the eye of the soldier, the field mirror being graduated by cross hair lines, as shown in Fig. 4, running both vertically and horizontally enables the party firing to aim off the same amount due to wind or elevation as may be necessary or advisable.

It is thus seen that the present invention provides a simple and practical device which will be cheap to manufacture and install and adapted to accomplish among others all of the objects and advantages above set forth.

Without further analysis, the foregoing will so fully reveal the gist of this invention that others can by applying current knowledge readily adapt it for various applica-

tions without omitting certain features that, from the standpoint of the prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention, and therefore such adaptations should and are intended to be comprehended within the meaning and range of equivalency of the following claim.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

In an attachment for fire arms, in combination, a tubular member having diagonally opposite openings, parallel mirrors within said tubular member adjacent said openings adapted to transmit a vision entering through one of said openings out through the other opening, one of said mirrors being graduated both vertically and horizontally, and means for supporting said tubular member provided with fastening means for securing said member to the stock of a gun.

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

HAROLD EVANS HARTNEY.

Witnesses:

MOWBRAY M. PERDUE,

ROYSTON THOMAS ROBINSON.

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