July 28, 1953 E. T. LAKE ET AL 2,646,625

ADJUSTABLE PEEP SIGHT FOR FIREARMS

Filed Feb. 16, 1951

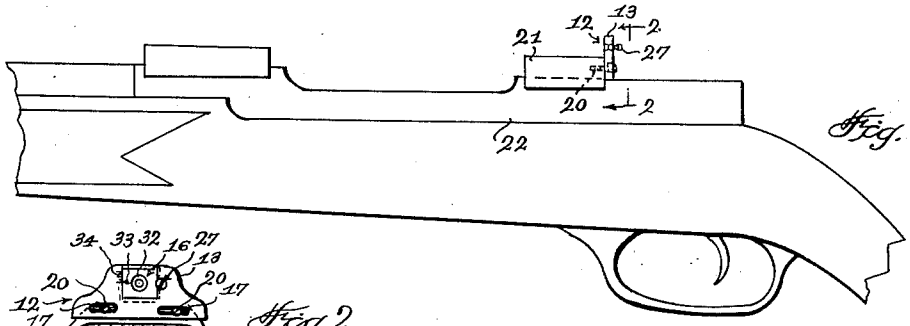

Fig. 1.

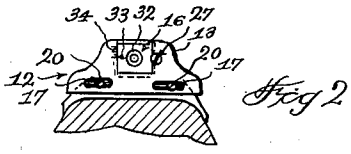

Fig 2

Fig. 3.

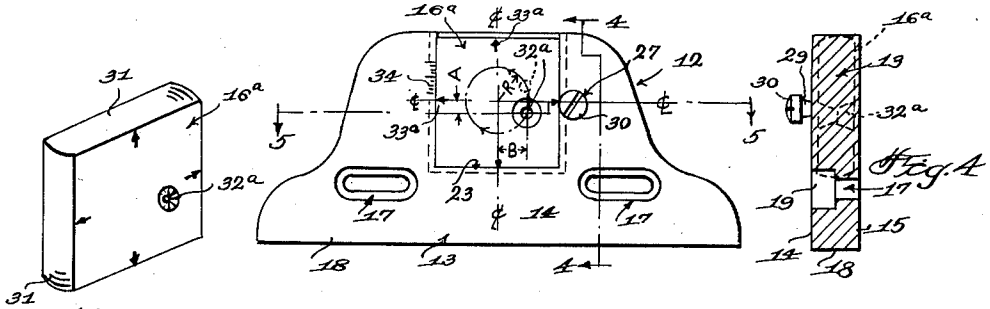

Fig. 4

Fig 10.

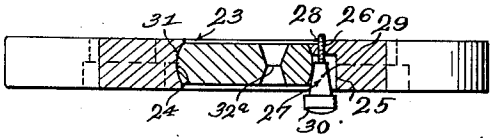

Fig 5.

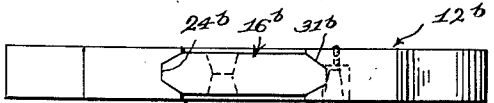

Fig. 6.

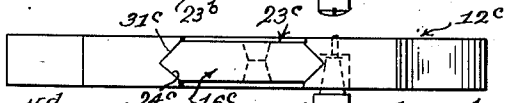

Fig. 7

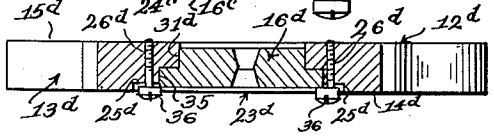

Fig. 8.

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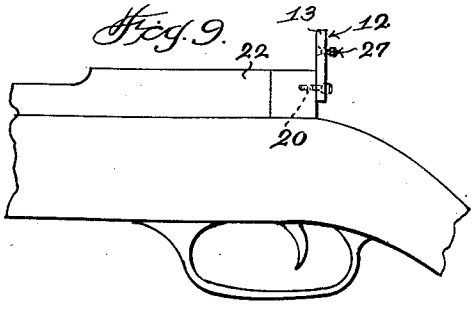

Fig. 9.

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Patented July 28, 1953

2,646,625

UNITED STATES PATENT OFFICE

2,646,625

ADJUSTABLE PEEP SIGHT FOR FIREARMS

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Application February 16, 1951, Serial No. 211,282

3 Claims. (Cl. 33—56)

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This invention relates to an adjustable and demountable peep sight for firearms such as rifles and more particularly is intended to provide a readily demountable peep sight for use with a conventional front sight of a rifle which is conventionally aimed by a telescope sight, where for any reason it is desired not to use the telescope sight. In view of the extensive use now being made of telescope sights for aiming rifles the conventional rear sight is frequently removed or omitted; however, it is sometimes desirable to aim and fire the rifle without the telescope sight and it is accordingly a primary object of the present invention to provide a demountable peep sight capable of being quickly applied to or removed from a rifle for use with a conventional front sight and which may be demountably attached to a telescope sight supporting element or directly to the rifle receiver.

A further object of the present invention is to provide a peep sight of extremely simple construction capable of being readily adjusted accurately for both elevation and windage.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, illustrating presently preferred embodiments thereof, and wherein:

Figure 1 is a side elevational view of a portion of a rifle showing the invention applied thereto;

Figure 2 is a vertical sectional view taken substantially along a plane as indicated by the line 2—2 of Figure 1;

Figure 3 is an enlarged elevational view showing the peep sight detached;

Figure 4 is a vertical sectional view thereof taken substantially along a plane as indicated by the line 4—4 of Figure 3;

Figure 5 is a horizontal sectional view of the adjustable peep sight taken substantially along a plane as indicated by the line 5—5 of Figure 3;

Figures 6 and 7 are top plan views of two slightly modified forms of the invention;

Figure 8 is a view similar to Figure 5 of another modification;

Figure 9 is a view similar to Figure 1 showing the peep sight mounted directly on the rifle receiver, and

Figure 10 is an enlarged perspective view of the adjustable peep sight block.

Referring more specifically to the drawing, the adjustable peep sight in its preferred form as illustrated in Figures 1 to 5, 9 and 10 is designated generally 12 and includes a relatively thick base plate, designated generally 13 having substantially flat opposite sides 14 and 15, and a peep sight block, designated generally 16 or 16a.

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The base plate 13 is provided with two longitudinally spaced longitudinally elongated aligned slots 17 which are disposed adjacent and preferably parallel to its bottom edge 18. The width of each slot 17 is greater adjacent the face 14 than the face 15, as best seen in Figure 4, so that the widest portion 19 of the slots 17 can accommodate the heads of screws 20.

In Figure 1 the screws 20 are shown extending through the slots 17 and being threaded into the rear end of an adaptor block 21 which is suitably secured to the top of a rifle receiver 22. The adaptor block 21 may be normally employed as a part of a telescope sight mount, as illustrated in U. S. Patent #2,526,816 and said block 21 is modified only in that its rear end is tapped for threadedly receiving the screws 20 to demountably support the base plate 13 with its side 15 against the rear end of the block 21 and with the upper portion of said base plate rising above the upper surface of the block 21. Similarly, the base plate 13 may be mounted against the rear end of the receiver 22 as illustrated in Figure 9 by the screws 20 engaging in tapped rearwardly opening recesses of said receiver.

The upper portion of the base plate 13 which is preferably restricted in length is provided with a relatively large upwardly opening notch 23 the sides and bottom edges of which are provided with grooves 24 of arcuate cross section, as seen in Figure 5. The face 14 of the plate 13 is provided with a recess 25 which extends part way through the thickness of the plate and which opens into one side of the notch 23 intermediate of its top and bottom. The plate 13 is provided with a threaded bore 26, one end of which opens into the recess 25 and the opposite end of which opens through the side 15. A screw, designated generally 27, has a restricted threaded shank 28 threadedly engaging the threaded bore 26 and is provided with a frusto-conical wedge portion 29 disposed between the threaded end 28 and its kerfed head 30. As seen in Figure 5, the kerfed head 30 projects from the side 14 and the wedge portion 29, which tapers away from the head 30, extends into the recess 25.

The block 16 is sized to fit snugly in the notch 23 and the edges thereof are outwardly rounded in cross section, as seen at 31 for snug fitting engagement in the grooves 24. The block 16 is provided with a centrally disposed peep opening 32 which is flared toward each side of said block so that the central portion of the opening is of

smaller diameter than the ends to prevent direct light rays shining upon the restricted central portion of the peep sight opening **32** and which constitutes the portion of the opening employed for sighting the rifle. The rearwardly facing side of the block **16** in horizontal alignment with the axis of the opening **32** is provided with an arrowhead or pointer **33** for use with elevation graduations **34**, as seen in Figure 2, which are provided on the rear face **14** of the plate **13** along the left-hand edge of the notch **23**.

Accordingly, it will be readily apparent that the block **16** may be adjusted vertically in the notch **23** to position the peep sight opening **32** at any desired level or elevation relatively to the base **13**. After the desired adjustment for elevation has thus been made the fastening **27** is turned in a direction to move the wedge portion **29** inwardly of the recess **25** and into wedging engagement with a portion of one edge of the block **16** for clamping the block in the desired adjusted position in the notch **23**. By loosening the screws **20** the base plate **13**, with the block **16** fixed thereto, may be adjusted transversely of the axis of the barrel and receiver and thereafter be clamped in a selected adjusted position by tightening the screws **20** to accomplish any desired windage adjustment.

The block **16***a* as illustrated in Figures 3, 5 and 10 differs from the block **16** in that the peep sight opening **32***a*, which is of the same construction as the peep sight opening **32**, is offset from the center of the block a distance radially as indicated by the arrow designated R and is likewise offset a distance from the horizontal center of the block as indicated by the space between the arrowheads designated A. The peep sight opening **32***a* is also offset a distance from the vertical center line of the block **16***a* as indicated by the arrow tipped ends of the line B. As the description proceeds it will be readily apparent that this offsetting of the peep sight opening **32***a* as indicated by R, A and B may be varied. Further, each side of the block **16***a* is provided with four pointers **33***a* at each end of the horizontal and vertical lines thereof, each corresponding to the pointer **33**, each of which is intended to be used with the graduations **34**, as will hereinafter become apparent. By removing the block **16***a* from the notch **23** and turning it clockwise or counterclockwise through an arc of 90° and then replacing the block in the notch **23**, the peep sight opening **32***a* will be thereby moved either 90° clockwise or counterclockwise, respectively, from its position of Figure 3, so that by removing and replacing the block **16***a* the peep sight opening **32***a* may be positioned in four different locations relatively to the notch **23** and when the bottom of the block **16***a* is engaging the bottom of said notch **23**. Likewise, by removing the block **16***a* and turning it over so that its opposite sides will be facing in the opposite direction and then replacing the block in the notch **23**, the opening **32***a* will be displaced upwardly to its dotted line position of Figure 3 if no rotation of the block **16***a* occurs and said block may then be rotated, as previously described, to position the opening **32***a* in four different positions, one of which will be 180° from its dotted line position of Figure 3 and the other two of which will each be 90° from said dotted line position. Thus, both windage and elevation adjustments may be made by moving the block **16***a* relatively to the base plate **13** without adjustment of the base plate. It will be readily apparent that the peep sight **12** may be provided with any number of blocks including a block **16**, a block **16***a* and other peep sight blocks having the peep sight opening spaced other radial distances with respect to the center of the block and the horizontal and vertical center lines thereof.

Figure 6 illustrates a slightly modified form of the adjustable peep sight, designated generally **12***b* and which differs from the peep sight **12** in that the notch **23***b* is provided with a groove **24***b* of truncated shaped cross section and the block **16***b*, which may correspond either with the block **16** or **16***a* has edges **31***b* of the same cross sectional shape to snugly engage the grooves **24***b*.

Another modification of the peep sight, designated generally **12***c* is shown in Figure 7 and which differs from the peep sight **12***b* in that the grooves **24***c* of the notch **23***c* are V-shaped in cross section and the edges **31***c* of the block **16***c* are beveled to snugly engage said grooves.

Another modification of the peep sight, designated generally **12***d* is illustrated in Figure 8 and wherein the notch **23***d* is provided with side edges and a bottom edge having an outwardly offset or stepped portion **35** adjacent the face **14***d* of the base plate **13***d*. In lieu of the deep recess **25**, the plate **13***d* is provided with two shallow depressions **25***d* in its face **14***d* which open into the upright stepped groove portions **35**. The plate **13***d* is provided with two threaded bores **26***d* which extend substantially therethrough and which have complementary ends opening outwardly of the face **15***d* and opposite ends opening into the depressions **25***d*. A conventional headed screw **36** has a threaded shank engaging each bore **26***d* and the heads of the screws **36** are sized to be partially accommodated in the depressions **25***d*. The peep sight block **16***d* differs from the peep sight blocks **16**, **16***a*, **16***b* and **16***c* in that each edge thereof is stepped or offset, as seen at **31***d* to fit the stepped edges **35** of the notch **23***d*. By tightening the screws **36** the heads thereof are advanced to contact portions of the block **16***d* for clamping it in the notch **23***d*. The block **16***d* may be rotated, when removed from the notch **23***d* so that it may be disposed in said notch in four different positions of the peep sight opening, if said opening is offset relatively to the center of the block, but unlike the blocks **16***a*, **16***b* and **16***c*, the block **16***d* may not be turned to reverse the positions of the opposite sides or faces thereof.

Various other modifications and changes are likewise contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claims.

We claim as our invention:

1. An adjustable peep sight for firearms comprising a plate-like supporting member adapted to be mounted in an upright position above and transversely of a firearm, said plate-like supporting member having an upper portion provided with an upwardly opening notch defined by parallel inwardly facing side edges and a bottom edge disposed at a right angle to each of said side edges, a square peep sight block sized to fit snugly into said notch and provided with a peep sight opening extending through the blocking from side to side thereof, the opening of said peep sight block being offset from the center of the block toward two edges thereof whereby different edges of the block may be disposed in engagement with the side edges and bottom edge of the notch for varying the posi-

tion of the peep sight opening relatively to the center of the notch.

2. An adjustable peep sight for firearms comprising a plate-like supporting member adapted to be mounted in an upright position above and transversely of a firearm, said plate-like supporting member having an upper portion provided with an upwardly opening notch defined by parallel inwardly facing side edges and a bottom edge disposed at a right angle to each of said side edges, a square peep sight block sized to fit snugly into said notch and provided with a peep sight opening extending through the block from side to side thereof, the opening of said peep sight block being offset from the center of the block toward two edges thereof and being spaced different distances from said two edges whereby different edges of the block may be disposed in engagement with the side edges and bottom edge of the notch for varying the position of the peep sight opening relatively to the center of the notch, said block being reversible for reversing the position of the opposite faces thereof relatively to the opposite sides of the plate-like supporting member whereby the peep sight opening is additionally displaced to other positions with respect to the center of the notch.

3. An adjustable peep sight as in claim 1, the side and bottom edges defining said notch each being grooved in cross section, and the edges

of said peep sight block each being of a cross sectional shape to fit snugly in the grooved edges of the notch to retain the block against displacement toward either side of the plate-like supporting member whereby different edges of the block may be disposed in engagement with the side edges and bottom edge of the notch for varying the position of the peep sight opening relatively to the center of the notch.

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