33-256. OR 1,408,276 SR Draftsman

T. H. EICKHOFF.

GUN SIGHT.

APPLICATION FILED DEC. 22, 1920.

1,408,276. Patented Feb. 28, 1922.

Fig. 8.

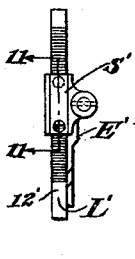


Fig. 9.

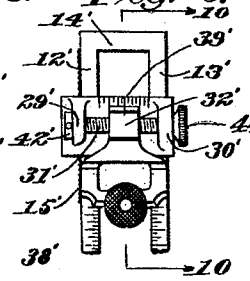
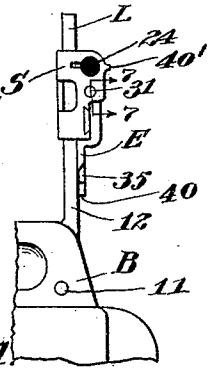


Fig. 1.



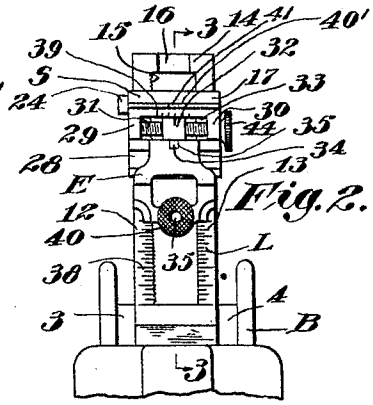


Fig. 2.

Fig. 10.

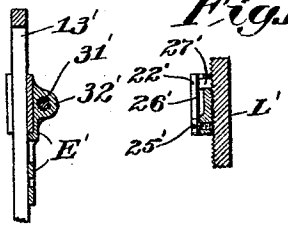


Fig. 11.

Fig. 3.

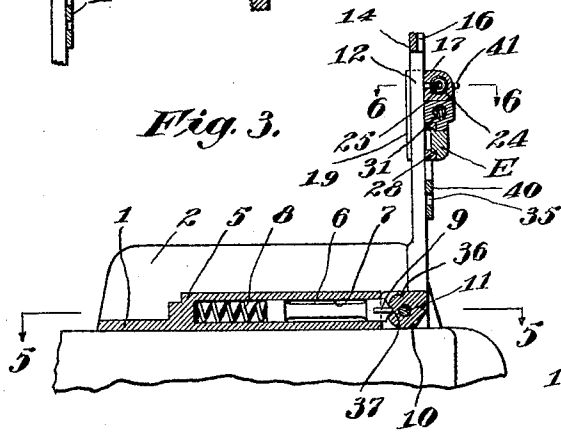


Fig. 4.

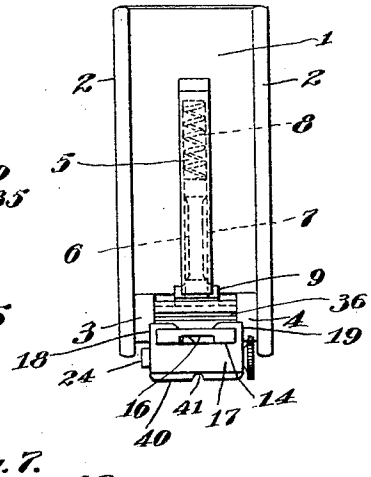


Fig. 5.

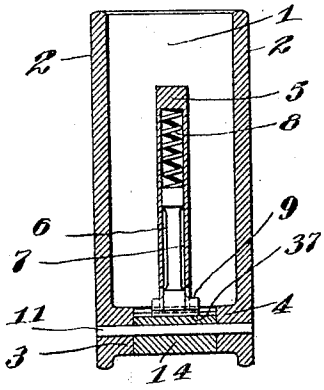


Fig. 7.

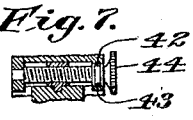
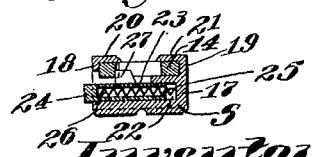


Fig. 6.



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UNITED STATES PATENT OFFICE.

THEODORE H. EICKHOFF, OF CLEVELAND, OHIO, ASSIGNOR TO AUTO-ORDNANCE CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

GUN SIGHT.

1,408,276. Specification of Letters Patent. Patented Feb. 28, 1922.

Application filed December 22, 1920. Serial No. 432,433.

To all whom it may concern:

Be it known that I, THEODORE H. EICKHOFF, citizen of the United States of America, and resident of Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Gun Sights, of which the following is a specification.

This invention relates to a rear sight for a gun; more particularly it relates to a leaf construction and mounting of the eye piece thereon.

Among the objects of my invention is that of providing a concealed but reliable spring means for holding the leaf in either prone or upright position. Another object is a mounting of the eye piece which shall be instantaneously movable to any particular setting for distance, and yet be securely held when set. A further object is a mounting of the eye piece whereby it may be readily removed in entirety from the leaf. Another object is an easily assembled yet substantial windage adjustment for the eye piece. These and other objects will appear from the following.

For illustration of an embodiment of my invention reference is to be had to the detailed description and the accompanying drawings in which—

Figure 1 is a side elevation of the gun sight.

Figure 2 is a rear elevation thereof.

Figure 3 is a longitudinal section on the line 3—3 of Fig. 2.

Figure 4 is a top view.

Figure 5 is a horizontal section on the line 5—5 of Fig. 3.

Figure 6 is a section on the line 6—6 of Fig. 3.

Figure 7 is a detail section on line 7—7 of Fig. 1.

Figure 8 is a side elevation of a modification.

Figure 9 is a rear elevation of the form shown in Fig. 8.

Figure 10 is a section on line 10—10 of Fig. 9.

Figure 11 is a section on line 11—11 of Fig. 8.

The gun sight comprises a base B, a leaf L pivoted thereon, a slide S carried by the leaf, and an eye-piece E adjustable on the slide.

The base B is formed by a plate 1 with upstanding wings 2 on opposite sides of the base. At the rear end of the base plate are shoulders 3 and 4. Lying longitudinally along the middle of the base is a projecting portion 5 in which is a chamber 7. A plunger 6, slidable in the chamber 7, is projected rearwardly out of the chamber by a spring 8. The projecting end of the plunger has a detent 9 formed thereon.

On the base is pivoted the leaf L. The leaf consists of a sleeve 10 on a pin 11, extending between the shoulders 3 and 4 and forming the pivot joint, and legs 12 and 13 extending from the sleeve. A cross bar 14 connects the outer ends of the legs. Serrations 15 are formed on the inner side of the leg 12, and a clearance notch 16 is formed in the bar 14. In the sleeve are notches 36 and 37 for engagement with the detent 9. The spacing of the legs 12 and 13 is such that when in prone position, they lie on opposite sides of the portion 5.

The slide S comprises a body 17, side members 18 and 19, contacting with the outer sides of the legs 12 and 13, and flanges 20 and 21 which contact with the rear sides. The upper part of the slide (Fig. 6) has a horizontal chamber 22 formed therein and in the chamber wall, adjacent the legs, is provided a slot 23. A stud 24 fits in the chamber and has a cavity 25 therein in which lies a compression spring 26. This spring by its pressure against the end of the cavity urges the stud outwardly from the chamber. A tooth 27 projects from the stud 24 through the slot 23 for engagement with the serrations 15. The stud 24, tooth 27 and associated parts form a catch for securing the slide to the leaf. In the lower part of the slide S is formed a horizontal dove-tailed groove 28. Above this groove is a slot 33 having on the sides, two wings 29 and 30. Rotatably mounted within the slot between these wings and parallel to the groove is a windage screw 31, and it is held from removal by a pin 42 in the wing 30 for engagement with a groove 43 formed in the screw as shown in Fig. 7. It is rotated by a knurled head 44 on one end. A nut 32 is threaded on this screw and is in contact with the walls of the slot 33 so that rotation of the screw causes reciprocation of the nut. From the nut 32 extends a lug 34.

The eye-piece E is shaped for engagement

with the groove 28. At its upper end is provided a slot 35 in which fits the lug 34. The lower edge of the eye-piece cooperates with graduations 38 provided in the legs 12 and 13 of the leaf for determining distance. On the slide are graduations 39 for cooperation with a mark on the nut for windage setting. There is also on the slide S an auxiliary sight 40′ with the sight notch 41, which may be used when the leaf is depressed or in prone position.

For use, the leaf is raised from the prone position to an upright position. In so doing the detent 9 is forced from the notch 36 by the cam action of the notch against the pressure of the spring 8. As the vertical position is reached the notch 37 comes into position for engagement by the leaf detent urged rearward by the spring, and when so engaged, the leaf is in proper upright position, held securely by the detent.

The slide may be adjusted by depressing the catch through pressure on the stud 24, thereby releasing the tooth 27 from the serrations 15. The slide, being freely movable on the leaf, may be set for any distance by aligning the lower edge of the eye-piece E with the proper graduation 38. Releasing the catch secures the slide through the engagement of the tooth 27 and one of the serrations. If it be desired entirely to remove the slide from the leaf, the stud 24 is depressed by some pointed instrument, such as a nail, into the chamber 22 until the tooth 27 is in position to pass through the clearance notch 16 of the bar 14.

To adjust for windage, the screw 31 is turned which moves the nut 32 and this in turn through the lug and slot connection 33, 34 slides the eye-piece in the groove 28. Accurate adjustment is secured by alignment with one of the graduations 39.

In the modified form shown in Figs. 8 to 11 a leaf L, mounted in the same manner as the first form, has serrations 15′ on the outer side of the leg 12′. A slide S′ which engages the leaf as in the first form carries a pawl 27′ on one end of a leaf spring 26′ (Fig. 11). The other end of the leaf spring is secured to the slide by a screw 25′. The spring is inset in a depression 22′ formed in the side of the slide and the pawl projects through an opening into contact with the leaf serrations. The pawl is thus yieldingly held in contact with the serrations to prevent movement of the slide in the leaf. Pressure on the slide causes the pawl to slip over the serrations against the action of the spring and the slide is in this way adjusted to any desired position on the leaf as indicated by the graduations 38′.

The slide carries an eye-piece E′ by means of two wings 29′ and 30′ extending from the face of the slide in which wings rotates a screw 31′. This screw is held from longitudinal movement by a knurled head 44′ on one end and a collar 42′ secured to the other end, which contact with the wings. The eye-piece lies in contact with the face of the slide and has an enlargement 32′ threaded on the screw, as shown in Fig. 10. The contact with the slide prevents any rotation of the eye-piece about the screw; consequently any rotation of the screw causes a travel of the eye-piece across the slide and any desired setting for windage is secured by adjustment to agree with the graduation 39′ proper for that setting.

I claim:

1. A gun sight consisting of a base, a leaf pivoted to the base, said leaf having notches therein, a yielding detent slidably mounted on the base for engaging the notches, a slide mounted for adjustment on the leaf, yielding means for securing the slide in adjustment, an eye-piece adjustably carried by the slide, and a positive operating means for adjusting the eye-piece.

2. A gun sight including a base, a detent yieldingly slidable on said base and a leaf pivoted to the base, said leaf having a notch for engagement by said detent.

3. A gun sight including a base, said base having a chamber therein, a plunger slidable in said chamber, a spring within said chamber for projecting the plunger, and a leaf pivoted on said base, said leaf having a notch for engagement by said plunger.

4. A gun sight including a base, a detent yieldingly slidable on the base, a leaf pivoted to the base, said leaf having a notch for engagement by said detent, a member adjustable on the leaf, and yielding means for securing the member in adjustment on the leaf.

5. A gun sight including a leaf having two legs with serrations on the inner side of one of the legs, a slide mounted for reciprocation on the leaf, said slide having a chamber therein and a slot in the chamber wall, a spring-pressed stud slidable in the chamber, and a tooth projecting from the stud through the slot into the space between the legs for engagement with the serrations.

6. A gun sight including a leaf having a stop thereon, a slide adjustable on the leaf, means for securing the slide in adjustment on the leaf, and means on the slide for contact with the stop to prevent removal of the slide, said means being shiftable to avoid contact and permit removal of the slide.

7. A gun sight including a leaf having a stop thereon, a slide adjustable on the leaf, and means for securing the slide in adjustment on the leaf, said means coacting with the stop to prevent removal of the slide.

8. A gun sight including a leaf having a stop thereon, a slide adjustable on the leaf and a yielding means for securing the slide in adjustment on the leaf, said means coacting with the stop to prevent removal of the

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slide and to permit removal of the slide when shifted.

9. A gun sight including a leaf having a stop thereon, a slide on the leaf, and means on the slide for contact with the stop to prevent removal of the slide, said means being shiftable to avoid contact and permit removal of the slide.

10. A gun sight including a leaf, a bar on the leaf having a notch therein, a slide mounted on the leaf, a tooth movably mounted in the slide and projecting from the slide for engagement with the bar to prevent removal of the slide, and means for moving said tooth into alignment with the notch for permitting removal of the slide.

11. A gun sight including a leaf having serrations, a bar on the leaf having a notch therein, a slide mounted on the leaf, and a yielding catch on the slide for engaging the serrations and securing the slide, said catch coacting with the bar to prevent removal of the slide and being shiftable for alignment with the notch to permit removal of the slide.

12. A gun sight including a leaf, a bar on the leaf having a notch therein, a slide mounted on the leaf, said slide having a chamber therein with a slot in the wall of the chamber, a spring-pressed stud slidable in the chamber, and a tooth projecting from the stud through the slot for engagement with the bar, and for disengagement when depressed into alignment with the notch.

13. A gun sight including a member having a groove therein, a screw rotatably mounted in said member in parallelism with the groove, a nut slidably mounted in the member and threaded on said screw, a lug depending from the nut, and an eye-piece slidable in said groove and having a slot for engagement by the lug.

Signed by me at Boston, Massachusetts, this 10th day of December, 1920.

THEODORE H. EICKHOFF.