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Jan. 20, 1948. H. F. MOSSBERG 2,434,712

REAR SIGHT FOR FIREARMS

Filed March 22, 1944

Fig.1.

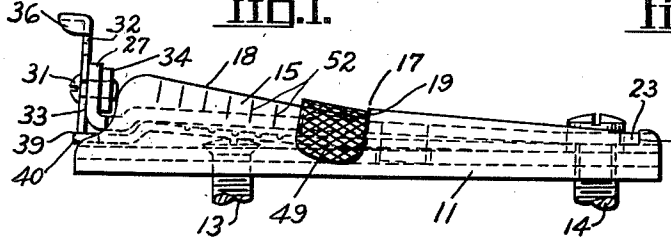


Fig.2.

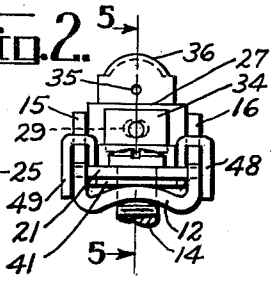


Fig.3.

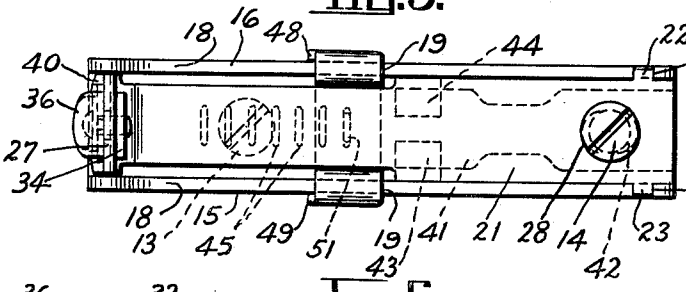


Fig.4.

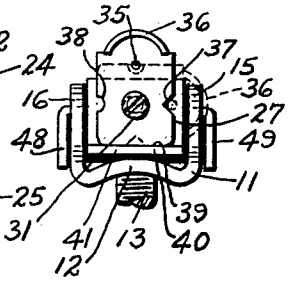


Fig.5.

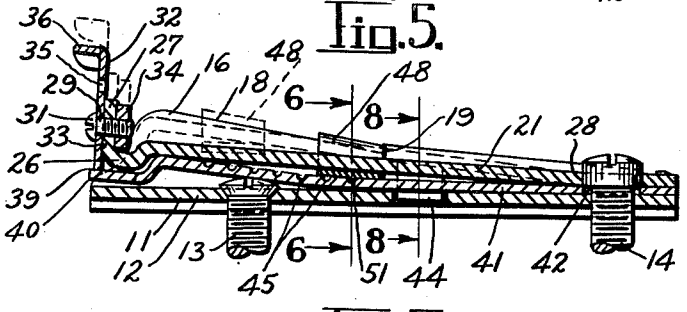


Fig.6.

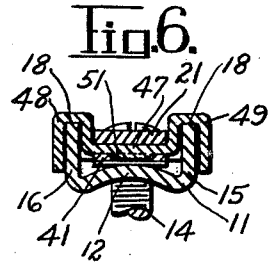


Fig.7.

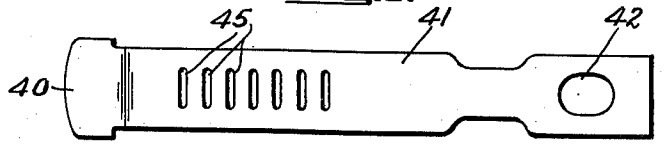


Fig.8.

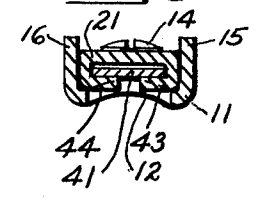
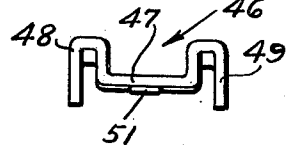


Fig.9.



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UNITED STATES PATENT OFFICE

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REAR SIGHT FOR FIREARMS

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Application March 22, 1944, Serial No. 527,577

19 Claims. (Cl. 33—58)

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This invention relates to improvements in rear sights for use with firearms and more particularly to a rear sight of improved structure including improved means for adjusting the elevation of the sight leaf thereof.

One object of this invention is to provide an improved rear sight for firearms having in its structure an improved form of elevation adjusting means.

Another object is to provide in a rear sight a sight leaf adapted to be elevated at one end and improved means to elevate and to indicate the amount of such elevation.

A further object is to provide in a rear sight of the above nature means to elevate a sight leaf and means cooperating with the leaf elevating means to releasably lock the elevating means in its adjusted position and to indicate the accomplishment of the adjustment.

A still further object of this invention is to provide an improved rear sight for firearms which will be relatively inexpensive to manufacture, simple in construction, compact, ornamental in appearance, and very efficient and durable in use.

With the above and other objects in view, which will appear as the description proceeds, there has been illustrated in the accompanying drawings, a form of rear sight in which the features and principles of this invention may be conveniently embodied in practice.

In the drawings:

Figure 1 is a side elevational view of a rear sight embodying the features of this invention;

Figure 2 is a rear end view of the same;

Figure 3 is a top plan view of the same;

Figure 4 is a front end view of the same;

Figure 5 is a longitudinal sectional view of the sight taken on the line 5—5 of Figure 2;

Figure 6 is a cross-sectional view taken on the line 6—6 of Figure 5;

Figure 7 is a top plan view of the leaf spring of the sight illustrated;

Figure 8 is a cross-sectional view taken on the line 8—8 of Figure 5; and

Figure 9 is an end view of a slide member used in the sight illustrated, to effect elevational adjustment of the sight leaf.

Referring now to the drawings wherein like reference numerals indicate like parts throughout the several views, the numeral 11 denotes a sight base, generally U-shaped in cross-section, the bottom 12 of which is arcuately shaped in cross-section to fit the curvature of a firearm part such as a receiver, or barrel, to which the base 11 is to be secured as by screws 13 and 14 which pass

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through suitable openings in the base bottom 12 and screw thread into the firearm part (not shown). Side flanges 15 and 16 extend upwardly from respective sides of the base bottom 12. The forward portions of the side flanges 15 and 16 are inclined downwardly and rearwardly from their front ends to an intermediate point 17 between the base ends to form an inclined surface 18 on each flange. The side flanges 15 and 16 at the intermediate point 17 are stepped upwardly to form forwardly facing shoulders 19 and, from these shoulders 19, are then inclined rearwardly and downwardly to the rear ends thereof.

A sight leaf 21 of springable material is disposed between the side flanges 15 and 16. If desired the leaf 21 may be tensioned to spring downwardly. Lugs 22 and 23 extend from respective sides of the leaf 21 adjacent its rear end and fit into notches 24 and 25 respectively formed in the side flanges 15 and 16. The front and free end of the leaf 21, in this instance, is depressed slightly, as at 26, and is turned upwardly to form a transversely extending flange 27. The head of the screw 14 passes through an opening 28 provided in the leaf 21 and clamps downwardly upon a leaf spring 41. The flange 27 is provided with a transversely elongated hole 29 to receive a screw 31 which is provided to secure a sight plate 32 to the front surface 33 of the flange 27. The screw 31 passes through the plate 32 and screw threads into a nut 34 disposed against the rear face of the flange 27 to clamp the sight plate 32 to the flange 27. Adjustment for windage may be made by loosening the screw 31 and sliding the plate 32 and the nut 34 laterally on the flange 27.

The sight plate 32 is provided, adjacent its upper end with a peep hole 35 over which a forwardly directed hood 36 extends, the hood 36 being arcuate in cross-section. One side of the sight plate 32 is provided with a V-notch 37 and the other side of the plate 32 is provided with a U-notch 38. By loosening the clamp screw 31 the plate 32 may be rotated to present either the V-notch 37 or the U-notch 38 to the user for sighting purpose (see dotted lines in Figure 4).

A flat elongated spring 41 is disposed under the leaf 21 between it and the base bottom 12 and is tensioned to spring downwardly. An elongated hole 42 is provided in the rear end portion of the spring 41 through which the body of the screw 14 passes and whereby the spring 41 may be adjusted lengthwise in respect to the sight plate 32. The spring 41 is loosely secured to the

leaf 21 at an intermediate point of each by ears 43 and 44 bent downwardly from the leaf 21 and extending in under the spring 41. The spring 41 being tensioned to press downwardly acts on the leaf 21 through the ears 43 and 44 to urge it downwardly in contact with a slide member 46. At its forward end the spring 41 is, in this instance, bent to pass in under the depressed portion 26 of the leaf and extends forwardly beyond the end flange 27 thereof, as at 40, to engage the bottom edge 39 of the sight plate 32, or, when the plate 32 is rotated, to engage a side edge thereof, to hold the plate securely in its adjusted position. The flat side and bottom edges of the sight plate 32 are arranged tangential to its axis of rotation. The spring 41 is provided with a plurality of transversely extended grooves 45 formed in its upper surface which are spaced apart lengthwise of the spring.

The slide member 46, Figure 9, is generally U-shaped in cross-section and has a bottom portion 47 and inverted U-shaped side flanges 48 and 49. The bottom portion 47 of the slide member 46 is disposed between the leaf 21 and the spring 41 and is provided with a transversely extending and depending ridge 51 adapted to be received in each of the grooves 45 formed in the spring 41. The inverted U-shaped side flanges 48 and 49 of the member 46 rest on and embrace the side flanges 15 and 16 whereby the member 46 may be slid along the inclined surfaces 18 to raise or lower the leaf 21. When in its most rearward position the member 46 engages the stop shoulder 19 and is thus prevented against further rearward movement.

To facilitate the sliding of the member 46 on the inclined flanges 15 and 16 the outer surfaces of the side flanges 48 and 49 are knurled to prevent the user's fingers slipping therefrom. To indicate the amount the leaf 21 is elevated the outer surfaces of one of the flanges 15 and 16 is provided with scratch lines 52 which correspond with the front edge of the member 46. The amount of elevation given the leaf 21 may also be ascertained, during adjustment, by noting the snapping of the ridge 51 into a groove 45. Variation in the position of the grooves 45, in the spring 41, in respect to the sight plate 32, to vary the elevation of the leaf 21 to correct the range of the sight, may be made by loosening the screw 14 and shifting the spring 41 lengthwise, the elongated hole 42 being provided for this purpose. In the arrangement illustrated, the screw 14 forms common means to clamp the spring 41 and the base 11 to the gun part (not shown). The spring 41 is also common means to hold the sight plate 32 in adjusted position, and to resiliently engage the member 46 to releasably lock it in its leaf elevating position. By the provision of the above described new and useful structure, an improved firearm rear sight is provided having a sight leaf which is readily and efficiently adjusted to compensate for the distance the target is from the user.

It will be understood that the novel features and principles of this invention may be embodied in other specific forms without departing from the spirit and essential attributes thereof, and it is therefore desired that the present embodiment be considered in all respects as illustrative and not restrictive, reference being had to the claims rather than to the foregoing description to indicate the scope of the invention.

Having thus fully disclosed the invention, what

is claimed as new and for which it is desired to secure Letters Patent is:

1. In a sight for firearms, a base including a member having a downwardly and rearwardly unbroken inclined surface, a sight leaf extending lengthwise of and attached to said base and lying alongside of the member having the inclined surface, a flat leaf spring in engagement with said leaf to normally urge it downwardly, a slide resting on the inclined surface, extending under said leaf, and being slidable along the inclined surface to elevate the sight leaf, and cooperating means between said leaf spring and said slide to act at intervals of the sliding movement of said slide along said inclined surface to releasably lock it in position.

2. In a rear sight for firearms, a base having a side flange the upper surface of which is unbroken and inclined downwardly and rearwardly, a sight leaf normally urged downwardly, said leaf being secured at one end and free at its other end, a slide extending in under said leaf and having a portion slidably resting on said inclined surface to elevate said leaf as it is slid along the said surface toward the free end of said leaf and a member extending lengthwise along said leaf in engagement with said slide to releasably retain it in its adjusted position upon the inclined surface.

3. In a rear sight for firearms, a base having a side flange the upper surface of which is unbroken and inclined downwardly and rearwardly, a sight leaf normally urged downwardly, said leaf being secured at one end and free at its other end, a slide extending in under said leaf and having a portion slidably resting on said inclined surface to elevate said leaf as it is slid along the said surface toward the free end of said leaf, and a member in connection with said leaf and extending lengthwise therealong and being in cooperating engagement with said slide to releasably lock said slide at intervals of its sliding movements along said inclined surface.

4. In a rear sight for firearms, a base generally U-shaped in cross-section, the sides of said U-shaped base having downwardly and rearwardly unbroken inclined top surfaces, a sight leaf disposed between the sides of said base and being secured at one end and free at the other end, a flat leaf spring in engagement with said leaf to urge it downwardly, and a slide extending in under said leaf and slidably resting on the inclined top surfaces of the base sides to elevate the free end of said leaf as it is slid along the said inclined surfaces, said leaf spring engaging said slide to releasably retain it in its adjusted position on the inclined top surfaces.

5. In a rear sight for firearms, a base generally U-shaped in cross-section, the sides of said U-shaped base having downwardly and rearwardly inclined top surfaces, a sight leaf disposed between the sides of said base and being secured at one end and free at the other end, a slide extending in under said leaf and slidably resting on the inclined top surfaces of the base sides to elevate the free end of said leaf as it is slid along the said inclined surfaces, a flat spring disposed in under said leaf and engaging said slide, and cooperating means between said spring and said slide to releasably lock said slide at intervals of its sliding movements.

6. In a rear sight for firearms, a base generally U-shaped in cross-section, the sides of said U-shaped base having downwardly and rearwardly inclined top surfaces, a sight leaf disposed be-

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tween the sides of said base and being secured at one end and free at the other end, a slide extending in under said leaf and slidably resting on the inclined top surfaces of the base sides to elevate the free end of said leaf as it is slid along the said inclined surfaces, and a flat spring disposed in under said leaf and engaging said slide, said spring having a series of spaced apart depressions in its upper surface, and said slide having a depending ridge to cooperate with the said depressions in said spring to releasably lock said slide at intervals of its sliding movement.

7. In a rear sight for firearms, a base generally U-shaped in cross-section, the sides of said U-shaped base having downwardly and rearwardly inclined top surfaces, a sight leaf disposed between the sides of said base and being secured at one end and free at the other end, a sight plate rotatably secured to the free end of said leaf, said plate having flat side and bottom edges, a slide extending in under said leaf and slidably resting on the inclined top surfaces of the base sides to elevate the free end of said leaf as it is slid along the said inclined surfaces, and a flat spring disposed in under said leaf and adapted to engage the flat side and bottom edges of said sight plate to retain it in place.

8. In a rear sight for firearms, a base generally U-shaped in cross-section, the sides of said U-shaped base having downwardly and rearwardly inclined top surfaces, a sight leaf disposed between the sides of said base and being secured at one end and free at the other end, a sight plate rotatably secured to the free end of said leaf, said plate having flat side and bottom edges displaced relative to the axis of rotation of said plate, a slide extending in under said leaf and slidably resting on the inclined top surfaces of the base sides to elevate the free end of said leaf as it is slid along the said inclined surfaces, and a flat spring disposed in under said leaf and adapted to engage the flat side and bottom edges of said sight plate to retain it in place against rotation, said spring having a series of spaced apart depressions in its upper surface, and said slide having a depending ridge to cooperate with said depressions in said spring to releasably lock said slide at intervals of its sliding movement.

9. In a rear sight for firearms, a base generally U-shaped in cross-section, the sides of said U-shaped base having downwardly and rearwardly inclined top surfaces, a sight leaf disposed between the sides of said base and being secured at one end and free at the other end, a sight plate rotatably secured to the free end of said leaf, said plate having flat side and bottom edges displaced relative to the axis of rotation of said plate, a slide extending in under said leaf and slidably resting on the inclined top surfaces of the base sides to elevate the free end of said leaf as it is slid along the said inclined surfaces, a flat spring disposed in under said leaf and adapted to engage the flat side and bottom edges of said sight plate to retain it in place against rotation, and cooperating means between said spring and said slide to releasably lock said slide at intervals of its sliding movements.

10. In a rear sight for firearms, a base having a side flange the upper surface of which is inclined downwardly and rearwardly, a sight leaf normally urged downwardly, said leaf being secured at one end and free at its other end, a sight plate rotatably secured to the free end of said leaf, said plate having flat side and bottom edges displaced relative to the axis of rotation

of said plate, a slide extending in under said leaf and having a portion slidably resting on said inclined surface to elevate said leaf as it is slid along the said surface toward the free end of said leaf, and common means cooperating with said slide to releasably lock the slide at intervals along said inclined surface and to engage the flat side and bottom edges of said sight plate to retain it against rotation in respect to the leaf.

11. In a rear sight for firearms, a base having a side flange the upper surface of which is inclined downwardly and rearwardly, a sight leaf, said leaf being secured at one end and free at its other end, a sight plate rotatably secured to the free end of said leaf, said plate having flat side and bottom edges displaced relative to the axis of rotation of said plate, a slide extending in under said leaf and having a portion slidably resting on said inclined surface to elevate said leaf as it is slid along the said surface toward the free end of said leaf, a flat spring disposed in under said leaf and said slide, said spring engaging said leaf to urge it downwardly, and cooperating means between said spring and said slide to releasably lock said slide at intervals of its sliding movements, said spring engaging said flat side and bottom edges of said sight plate to retain it against rotation in respect to the leaf.

12. A rear sight for firearms comprising a base having a side flange the upper surface of which is inclined downwardly, a sight leaf secured at one end and free at the other end, a slide member extending in under said leaf and having a portion slidably resting on the inclined surface of said flange to elevate the leaf as it is slid along the surface toward the free end of the leaf, a flat spring member disposed in under said leaf and said slide member and in engagement with the leaf to urge it downwardly, and cooperating means between said spring member and said slide member to releasably lock said slide member at intervals of its sliding movements.

13. A rear sight for firearms comprising a base having a side flange the upper surface of which is inclined downwardly, a sight leaf secured at one end and free at the other end, a slide member extending in under said leaf and having a portion slidably resting on the inclined surface of said flange to elevate the leaf as it is slid along the surface toward the free end of the leaf, a flat spring member disposed in under said leaf and said slide member and in engagement with the leaf to urge it downwardly, a ridge on one of the members and a depression on the other of said members adapted to nest to releasably lock said slide member in an adjusted position on the inclined surface.

14. A rear sight for firearms comprising a base having a side flange the upper surface of which is inclined downwardly, a sight leaf secured at one end and free at the other end, a slide member extending in under said leaf and having a portion slidably resting on the inclined surface of said flange to elevate the leaf as it is slid along the surface toward the free end of the leaf, a flat spring member disposed in under said leaf and said slide member, portions of said leaf extending about said spring to fasten it to said leaf to effect a downward urge of said leaf by said spring, and cooperating means between said spring and said slide to releasably lock said slide at intervals of its sliding movements.

15. A rear sight for firearms comprising a base having a side flange the upper surface of which is inclined downwardly, a sight leaf secured at one

end and free at the other end, a slide member extending in under said leaf and having a portion slidably resting on the inclined surface of said flange to elevate the leaf as it is slid along the surface toward the free end of the leaf, a flat spring member disposed in under said leaf and said slide member and in engagement with the leaf to urge it downwardly, and common means to clamp an end of said spring to said base and said base to a firearm part.

16. A rear sight for firearms comprising a base having a side flange the upper surface of which is inclined downwardly, a sight leaf secured at one end and free at the other end, a slide member extending in under said leaf and having a position slidably resting on the inclined surface of said flange to elevate the leaf as it is slid along the surface toward the free end of the leaf, a flat spring member disposed in under said leaf and said slide member and in engagement with the leaf to urge it downwardly, and cooperating means between said spring member and said slide member to releasably lock said slide member at intervals of its sliding movements, a fastener arranged to clamp an end of said spring to said base and said base to a firearm part, said spring having a lengthwise elongated hole in its clamped end through which said fastener passes and whereby said spring may be adjusted lengthwise to vary the position of said cooperating means and thus vary the elevation of the leaf to correct the range of the sight.

17. In a rear sight for firearms, a base having side flanges, the upper surfaces of said side flanges being inclined downwardly, a flat sight leaf disposed between said flanges, a slide extending in under said leaf and riding on said flanges to elevate the leaf as the slide is moved along the flanges in one direction, and a flat leaf spring secured at one end to the base and being in engagement with the sight leaf to urge it downwardly.

18. In a rear sight for firearms, a base having side flanges, the upper surfaces of said side flanges being inclined downwardly, a flat sight leaf disposed between said flanges, a sight plate rotatably

mounted upon an end of the sight leaf and having side and bottom edges displaced relative to the axis of rotation of said plate, a slide extending in under said leaf and riding on said flanges to elevate the leaf as the slide is moved along the flanges in one direction, and a flat leaf spring secured at one end to the base and being in engagement with the sight leaf to urge it downwardly and being adapted to engage the side and bottom edges of the sight plate to retain it against rotation.

19. A rear sight for firearms comprising a base having a side flange the upper surface of which is inclined downwardly, a sight leaf secured at one end and free at the other end, a slide member extending in under said leaf and having a portion slidably resting on the inclined surface of said flange to elevate the leaf as it is slid along the surface toward the free end of the leaf, a flat spring member disposed in under said leaf and said slide member and in engagement with the leaf to urge it downwardly, and cooperating means between said spring member and said slide member to releasably lock said slide member at intervals of its sliding movements, means to fasten an end of said flat spring to a firearm part, said flat spring being adjustable lengthwise to vary the position of said cooperating means lengthwise in respect to the sight leaf.

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