

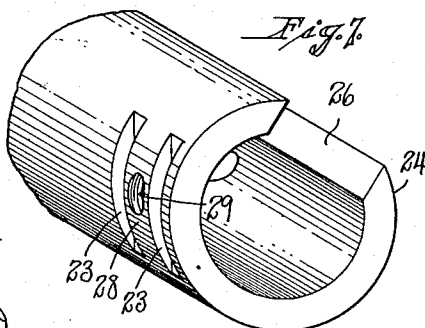
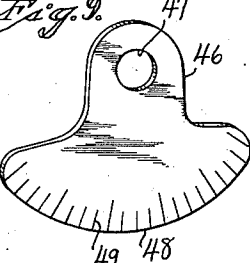
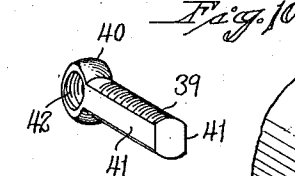
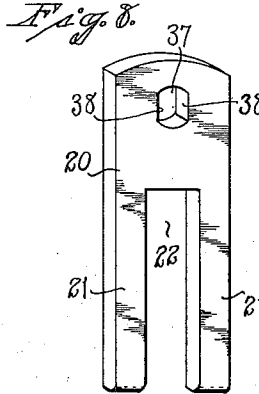
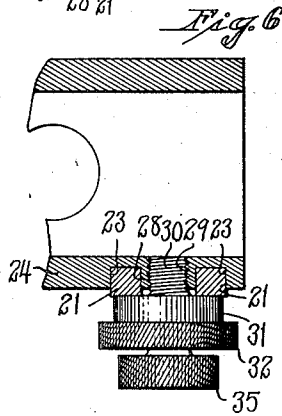
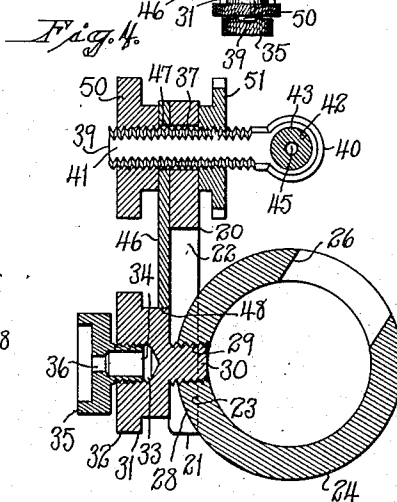
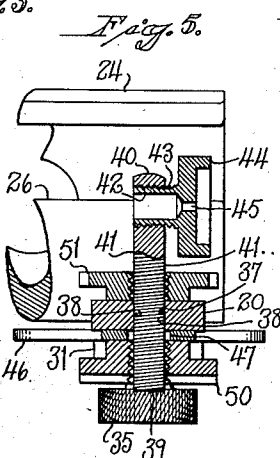
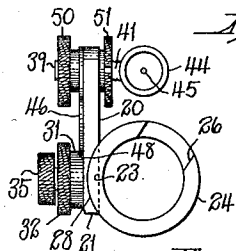
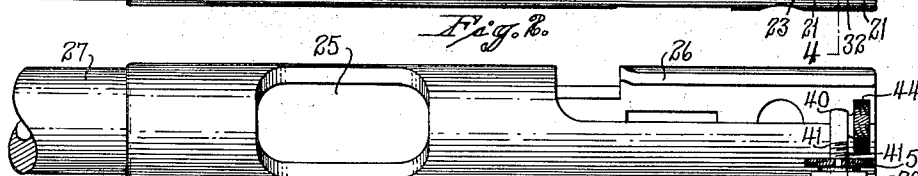
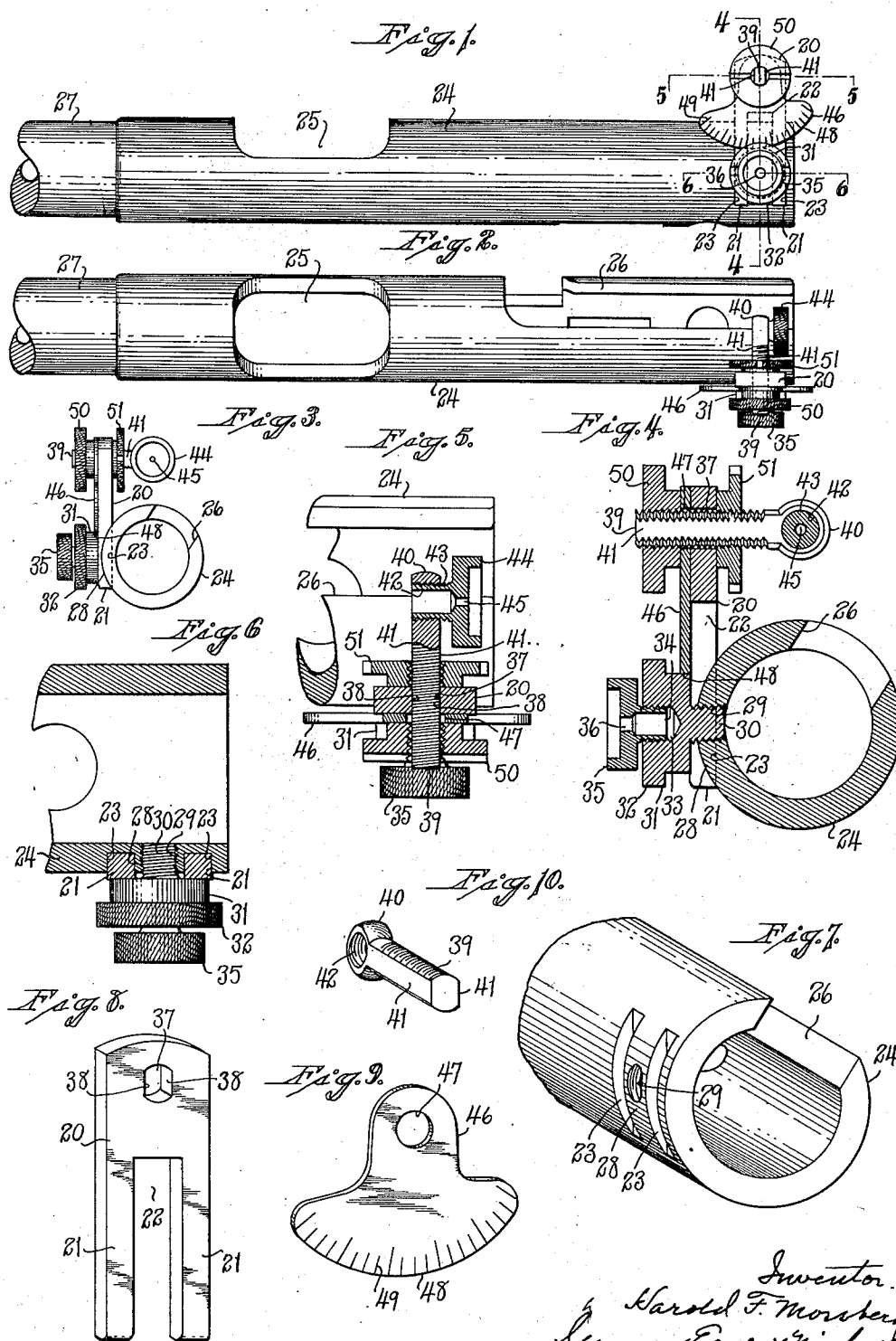
**June 25, 1935.**

**H. F. MOSSBERG**

**2,005,952**

## ADJUSTABLE SIGHT FOR FIREARMS.

Filed June 9, 1933



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## UNITED STATES PATENT OFFICE

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## ADJUSTABLE SIGHT FOR FIREARMS

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7 Claims. (Cl. 33—56)

This invention relates to an improvement in adjustable sights for firearms, and particularly to rear sights for such arms, though not so limited.

One of the objects of the present invention is to provide a convenient and reliable adjustable sight which may be produced at a low cost for manufacture.

Another object of the present invention is to provide a sight of simple construction, which may be adjusted to compensate for changes in both range and windage.

A further object is to provide an adjustable sight which may be securely attached to a thin wall-portion of a gun structure without unduly weakening such structure.

Other objects and advantages will appear to those skilled in the art from the following, taken in conjunction with the appended claims and accompanying drawing.

In the accompanying drawing:

Fig. 1 is a broken view in side elevation of a fire-arm-receiver and a portion of a gun-barrel, showing an adjustable sight embodying the present invention as mounted upon the said receiver;

Fig. 2 is a top or plan view thereof;

Fig. 3 is a view thereof in rear-end elevation;

Fig. 4 is a vertical transverse sectional view, taken on the line 4—4 of Fig. 1, but on a larger scale;

Fig. 5 is a horizontal sectional view, taken on the line 5—5 of Fig. 1, but on a larger scale;

Fig. 6 is a similar view, taken on the line 6—6 of Fig. 1;

Fig. 7 is a broken perspective view of the rear end of the receiver;

Fig. 8 is a perspective view of the sight-elevator, detached;

Fig. 9 is a similar view of the gauge-member; and

Fig. 10 is a similar view of the sight-supporting screw.

In the embodiment of the present invention herein chosen for illustration, I employ a plate-like elevator 20 having a pair of depending guide-legs 21—21 separated by a vertical clearance-notch 22 and adapted to ride in a similarly-spaced pair of guide-grooves 23—23 formed in the side wall of a tubular receiver 24.

The receiver 24 may be of any approved construction and, as herein shown, is of tubular form and is provided in the upper face of its forward end with a loading and ejection opening 25, and at its rear end with the usual bolt-handle guide-slot 26. Projecting from the forward end of the said receiver 24 is a gun-barrel 27 secured in place

by any approved means not requiring discussion herein.

The guide-grooves 23—23 in the side wall of the receiver 24 serve to produce, in effect, a lug 28 having an internally-threaded bore 29 extending radially therethrough in a horizontal direction and receiving the externally-threaded stem 30 of a clamping-screw 31 having a peripherally-knurled head 32 and formed in its outer face with an axial internally-threaded socket 33. The socket 33 is adapted to receive the externally-threaded tubular shank 34 of a reserve peep-sight ring 35 having the usual axial aperture 36 therethrough.

Inasmuch as it is preferable to have the wall of the receiver 20 relatively thin, such, for instance, as somewhere in the order of one-eighth of an inch, it will be obvious that if the threaded bore 29 before referred to were to be formed in the portion of the said wall which remains at the bottom of one of the grooves 23, rather than being formed in the integral lug 28, the said bore would be relatively ineffective and in all likelihood its threads would soon give way as a result of repeated loosening and clamping of the clamping-screw 31. The wall thickness above referred to, of course, will vary with the caliber of the cartridges which the gun is designed to fire. For instance, the walls of the receiver of a .22 caliber rifle could obviously be much thinner than the walls of the receiver of a 10 or 12 gauge shotgun.

At its upper end, the elevator 20 is provided with a transverse passage 37 having flattened complementary side-walls 38—38 and shaped to slidably receive the stem 39 of a sight-supporting screw 40. The stem 39, just referred to, has complementary flattened sides 41—41 adapted to engage with the similarly-flattened side-walls 38—38 of the elevator 20 to prevent relative rotation between the two said parts whilst permitting the said screw to be shifted axially in the manner as will more fully hereinafter appear.

The inner end of the sight-supporting screw 40 projects inwardly from the elevator 20 and overhangs the rear portion of the receiver 24 and is provided with a threaded passage 42 receiving the externally-threaded tubular stem 43 of a peep-sight ring 44 having an axial aperture 45, in the usual manner of peep sights. The sight-ring 44 just described and the sight-ring 35 previously described correspond to each other save with respect to their respective apertures 45 and 36 and may be interchanged one with the other, or, if desired, both of said rings may

be omitted and the passage 42 employed as a peep sight.

Secured against the outer face of the elevator 20 is a sheet-metal gauge-member 46 having a perforation 47 at its upper end, for fitting over the stem 39 of the sight-supporting screw 40, and having its lower edge shaped to form an eccentric cam-surface 48 for engagement with the periphery of the body-portion of the clamping-screw 31, before referred to, or other abutment. Adjacent the cam-surface 48, the said gauge-member is provided on its outer face with a series of graduations 49 designed to assist the user in setting and resetting the sight, as desired.

Threaded onto the outer end of the stem 39 of the screw 40 is a knurled clamping-nut 50, bearing against the outer face of the gauge-member 46 and serving to clamp the said gauge-member in place, as will hereinafter appear. Threaded onto the inner portion of the stem 39 of the screw 40, in position to engage the inner face of the elevator 20, is a clamping-screw 51, as clearly shown in Figs. 4 and 5.

From the foregoing, it will be clear that when it is desired to change the elevation of the sight-ring 44, this result may be accomplished by loosening the clamping-screw 31 and the clamping-nut 50 to respectively release the elevator 20 for vertical movement and the gauge-member 46 for swinging movement about the stem 39. Preferably, the now-released elevator 20 is first lifted slightly and the gauge-member 46 is then swung into the desired position and held in such position by binding down upon the clamping-nut 50. The unit comprising the elevator 20 and parts carried thereby is now depressed until the stop-edge 48 of the gauge-member 46 is brought into engagement with the periphery of the body-portion of the clamping-screw 31. By now binding down upon the said clamping-screw 31, the elevator 20 and its associated parts may be rigidly relocked in place.

If it is desired to laterally shift the sight-ring 44 or other sight-element carried by the sight-supporting screw 40 with respect to the center line of the receiver 24 and barrel 27, this may be accomplished by loosening one or both of the clamping-screws 50 or 51, suitably shifting the said sight-supporting screw and finally binding the latter in position by tightening the said clamping-screws 50 and 51. If the shifting of the screw 40 is to be from left to right, as viewed in Fig. 4, this may be accomplished readily by loosening the clamping-nut 50 and subsequently turning the clamping-nut 51 to draw the said screw from left to right to the desired degree. If, on the other hand, the desired adjustment is from right to left, the clamping-screw 51 may be first backed off and the clamping-screw 50 employed to accurately draw the sight-supporting screw 40 and the sight-ring carried thereby from right to left, after which the nut 51 may be screwed firmly into engagement with the inner face of the elevator 20 to rigidly lock the screw 40 in its chosen position.

As before pointed out, the sight-ring 44 may be readily removed from the sight-supporting screw 40 and replaced by the sight-ring 35 or by any other type of sight desired. The provision of the socket 33 in the clamping-screw 31 serves to provide a convenient place for the attachment to the gun of an extra sight-ring.

By employing an elevator straddling the respective opposite sides of a lug such as 28, it has been found feasible to rigidly apply the sight to

the receiver or other fixed feature having extremely-thin walls.

The invention may be carried out in other specific ways than that herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiment is therefore to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

I claim:

1. In an adjustable sight, the combination with a thin-walled tubular member of a firearm having a cylindrical outer surface with an integral lug thereon flanked by cutaway portions; of a sight-elevator having two spaced-apart bars straddling the said lug and extending into the cutaway portions flanking the same; releasable clamping-means in line with the space between the bars of the said sight-elevator and engaged with the lug on the cylindrical surface of the said tubular member for securing the said elevator thereto; and a sight carried by the said elevator.

2. In an adjustable sight, the combination with a thin-walled tubular member of a firearm having a cylindrical outer surface with a pair of spaced-apart vertical guide-grooves therein defining a lug intermediate the said guide-grooves; of a sight-elevator having a pair of spaced-apart guide-legs slidably mounted in the complementary grooves in the cylindrical surface of the said tubular member and straddling the said lug thereof; releasable clamping-means in line with the space between the complementary guide-legs of the said sight-elevator and engaged with the lug of the said tubular member; and a sight carried by the said elevator.

3. In an adjustable sight, the combination with a fixed member of a firearm; of a vertically-movable sight-elevator; clamping-means for adjustably holding the said sight-elevator to the said fixed member; and a gauge-member pivoted to the said sight-elevator and having an eccentric stop-surface engageable with the said clamping-member for gauging the adjustment of the said sight-elevator.

4. In an adjustable sight, the combination with a fixed member of a firearm; of a vertically-movable sight-elevator; clamping-means for adjustably holding the said sight-elevator to the said fixed member; a gauge-member pivoted to the said sight-elevator and having an eccentric stop-surface engageable with the said clamping-member for gauging the adjustment of the said sight-elevator; and a clamping-member for releasably holding said gauge-member to the said sight-elevator.

5. In an adjustable sight, the combination with a fixed member of a firearm; of a vertically-movable sight-elevator adjustably secured to the said fixed member; an adjustable sight-supporting member carried by and extending laterally from the said sight-elevator with respect to which it is adjustable crosswise of the firearm; means for gauging the adjustment of the said sight-elevator, including a gauge-member pivotally mounted upon the said sight-supporting member and having an eccentric stop-surface, and a normally-stationary abutment engageable by the said eccentric stop-surface.

6. In an adjustable sight, the combination with a fixed member of a firearm; of a vertically-movable sight-elevator adjustably secured to the said fixed member; an adjustable sight-support-

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ing member carried by and extending laterally from the said sight-elevator with respect to which it is adjustable crosswise of the firearm; a gauge-member pivotally mounted upon the  
5 said sight-supporting member and having an eccentric stop-surface; and a clamping-member mounted upon the said sight-supporting member and engageable with the said gauge-member for holding the same in its adjusted positions.  
10 7. In an adjustable sight, the combination with a fixed member of a firearm having a lug thereon and a threaded bore in said lug; of a sight-elevator having a bifurcated portion straddling the said lug; a clamping-screw extending  
15 through the bifurcated portion of the said sight-elevator and into the threaded bore in the lug of the said fixed member for securing the said elevator thereto; a sight-supporting screw extending through the said sight-elevator with capacity for axial movement crosswise of the  
5 arm; a gauge-member pivotally mounted upon the said sight-supporting screw and having an eccentric stop-surface engageable with the said clamping-screw; and means threaded upon the  
10 said sight-supporting screw for concurrently holding the said gauge-member and the said sight-supporting screw in various positions of adjustment.

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