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Aug. 10, 1948. G. A. WILSON 2,446,970

ADJUSTABLE FRONT SIGHT FOR SMALL ARMS

Filed Jan. 11, 1945

Fig. 1.

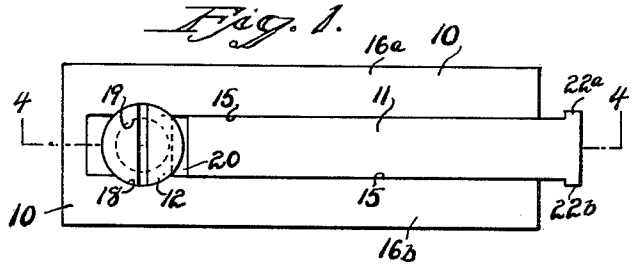


Fig. 2.

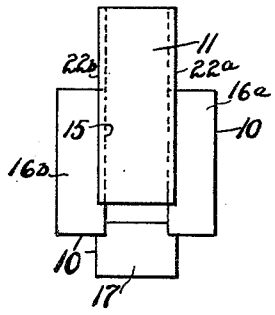


Fig. 3.

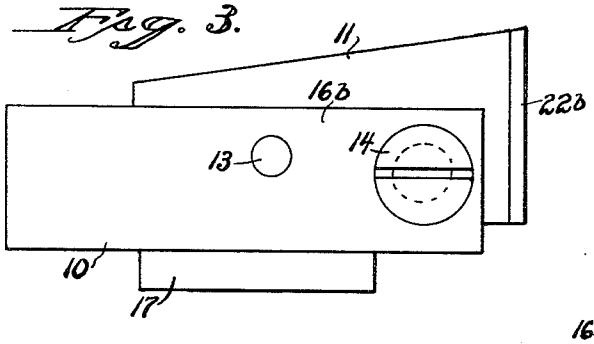


Fig. 6.

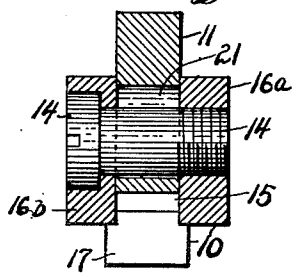


Fig. 4.

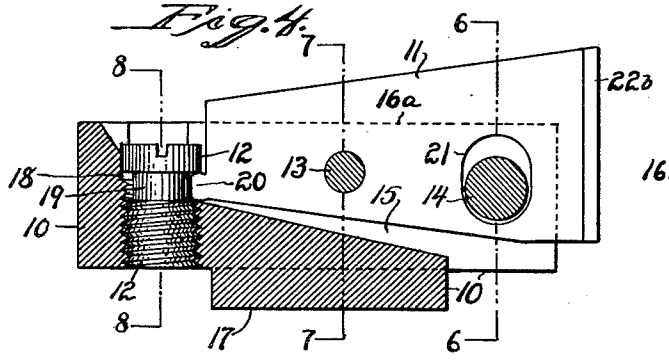


Fig. 7.

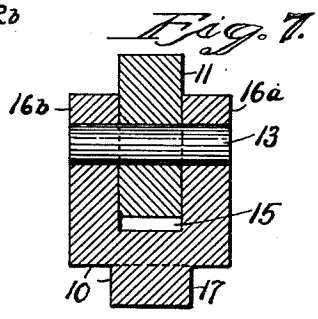


Fig. 5.

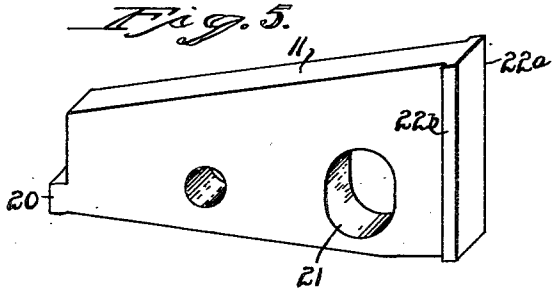
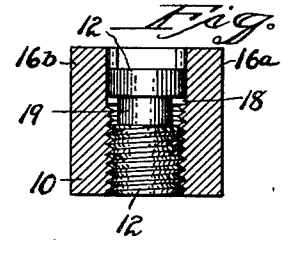


Fig. 8.



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Patented Aug. 10, 1948 2,446,970

UNITED STATES PATENT OFFICE

2,446,970

ADJUSTABLE FRONT SIGHT FOR SMALL ARMS

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Application January 11, 1945, Serial No. 572,321

4 Claims. (Cl. 33—58)

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The present invention relates to improvements in front-sights and relates more particularly to improvements in adjustable front-sights primarily designed for use on so-called automatic pistols and self-loading rifles, though available for use on other types of small-arms.

As will appear from the following, the adjustable front-sight of the present invention is designed to withstand the shocks and vibration incident to the firing of the firearm upon which it may be mounted. Such shocks and vibration impose severe strains upon the locking and adjusting means of an adjustable-sight, often resulting in the loosening and misalignment of the sight. This tendency of adjustable-sights to "shoot loose" is particularly present in automatic pistols, owing to the relatively-slight mass of the pistol and the relative violence of their slide- or bolt-actions.

One of the objects of the present invention is to provide a superior adjustable front-sight for small-arms in which adjustments may be quickly and accurately made, combined with stability of a given adjustment after the same has been made.

Another object of the present invention is to provide an adjustable front-sight with superior locking-means for the adjustable sight-element, and constructed and arranged so as to hold such element securely positioned, despite shocks and vibration incident to the firing of the weapon over protracted periods of time.

A further object of the present invention is to provide a superior adjustable front-sight for small-arms which will combine sensitivity of adjustment and positiveness in its retention in an adjusted position, combined with simplicity, ruggedness of construction, ease of manufacture, and low cost.

With the above and other objects in view, as will appear to those skilled in the art from the present disclosure, this invention includes all features in the said disclosure which are novel over the prior art and which are not claimed in any separate application.

In the accompanying drawings, in which certain modes of carrying out the present invention are shown for illustrative purposes:

Fig. 1 is a top or plan view of one form of adjustable front-sight embodying the present invention;

Fig. 2 is a view thereof looking toward the front end of the sight;

Fig. 3 is a side view thereof;

Fig. 4 is a view in central-longitudinal section taken on the line 4—4 of Fig. 1 but with

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the sight-blade and adjusting-screw in side elevation;

Fig. 5 is a perspective view of the sight-blade, detached;

Fig. 6 is a transverse sectional view taken on the line 6—6 of Fig. 3;

Fig. 7 is a similar view taken on the line 7—7 of Fig. 3; and

Fig. 8 is a transverse sectional view taken on the line 8—8 of Fig. 3.

The particular adjustable front-sight herein chosen for purposes of illustrating one form which the present invention may assume, includes a sight-body 10, a sight-blade 11, an adjusting-screw 12, a sight-blade pivot-pin 13, and a clamping-screw 14.

The sight-body 10 above referred to is of oblong rectangular form when viewed from above, and is formed with an upwardly-opening central-longitudinal blade-receiving groove or recess 15 which intersects the rear-end of the sight-body 10 and which has its bottom-wall curved upwardly at its front-end into intersecting relationship with the top-wall of the said sight-body adjacent the forward end thereof. The formation of the groove 15 just referred to, virtually divides the upper portion of the sight-body 10 throughout its length and results in the formation of two complemental side-walls 16a and 16b.

The sight-body 10 in the form of the present invention herein shown, is formed with an integral depending mounting-lug 17 which is adapted to enter into keying-relationship with a suitable groove formed in the upper forward portion of the barrel of a firearm with which it is desired to employ the adjustable front-sight of the present invention. The said mounting-lug 17 may be permanently secured to the barrel of a firearm by means of solder, brazing or the like, in a manner well known in the art. The mode of attachment of the sight-body to a firearm-barrel may vary widely and, in itself, forms no novel feature of the present invention.

The forward portion of the sight-body 10 is formed midway of its width with a vertical bore 18 which receives the adjusting-screw 12 before referred to. The lower portion of the vertical bore 18 is threaded to be threadedly engaged by the threaded lower portion of the said adjusting-screw 12, while the upper portion of the said bore is unthreaded and dimensioned to freely receive the head of the adjusting-screw 12, as is especially well shown in Figs. 4 and 8.

Intermediate the under-face of its head and its lower threaded portion, the adjusting-screw 12

above referred to is formed with an annular groove 19 which receives with a snug sliding fit, an adjusting-finger 20 projecting forwardly from the lower forward corner of the sight-blade 11. The sight-blade 11 has a width such as to snugly fit in the blade-receiving groove 15 between the side-walls 16*a* and 16*b* of the sight-body 10.

The sight-blade 11 is pivotally connected to the sight-body 10 by means of the transverse pivot-pin 13 which extends transversely through the said sight-blade at a point slightly forwardly of midway of its length, and also through the respective side-walls 16*a* and 16*b* of the sight-body 10.

The clamping-screw 14 before referred to, extends transversely through the side-walls 16*a* and 16*b* of the sight-body 10 adjacent the rear end thereof, and has its head countersunk into the outer face of the side-wall 16*b* and has its shank threaded into the complemental side-wall 16*a*. The shank of the said clamping-screw 14 passes through a vertically-elongated clearance-slot 21 formed in the sight-blade 11 adjacent the rear end thereof, as is especially well shown in Figs. 4, 5 and 6.

At its rear end, the sight-blade 11 is formed on its respective opposite sides with one of two integral vertical ribs 22*a* and 22*b* which serve to slightly broaden the rear face of the sight-blade 11.

Normally, the clamping-screw 14 is tightened so as to draw the respective opposite side-walls 16*a* and 16*b* toward each other to the slight degree necessary to firmly clamp the sight-blade 11 between them.

When it is desired to vertically adjust the sight-blade 11 with respect to the sight-body 10, so as to change the elevation of the upper rear-corner of the said sight-blade, the clamping-screw 14 may be loosened, whereupon the adjusting-screw 12 may be turned. The turning of the adjusting-screw 12 will, through the intermediary of its annular groove 19 and the adjusting-finger 20 of the sight-blade 11, rock the said sight-blade about the pivot-pin 13 as an axis, to thus effect the desired change in the position of the upper rear-corner of the said sight-blade. The adjusting-finger 20 of the sight-blade 11 has a vertical dimension such as to snugly fit the annular groove 19 in the adjusting-screw 12, though permitting the free rotation of the said adjusting-screw.

After the desired adjustment of the sight-blade 11 has been effected in the manner above described, the said sight-blade may be tightly clamped in its newly-adjusted position by tightening-up the clamping-screw 14 and thereby causing the same to draw the respective opposite side-walls 16*a* and 16*b* into tight clamping-engagement with the respective opposite sides of the sight-blade 11.

From the foregoing, it will be noted that the respective axes of the adjusting-screw 12 and the clamping-screw 14 are arranged transversely with respect to the direction of the chief shocks to which the structure will be subjected when mounted upon a firearm. Furthermore, it will be noted that the adjusting-screw 12 may be conveniently utilized to rock the sight-blade 11 about the pivot-pin 13 to bring it into the precise position desired, preparatory to clamping or locking the said sight-blade in the position chosen for it. The provision of the clamping-screw 14 in conjunction with the adjusting-screw 12, provides a sight which may be readily and accurately adjusted and still be firmly locked in position.

The invention may be carried out in other specific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are, 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. An adjustable front-sight for small-arms, including in combination: a sight-body having a longitudinal recess therein; a sight-blade movably mounted in the recess in the said sight-body; pivot-means carried by the said sight-body and constructed and arranged to provide for the swinging movement of the said sight-blade intermediate its front and rear ends about a substantially-horizontal axis transverse to the sight-blade; a substantially-vertical adjusting-screw carried by the said sight-body and operatively connected to the said sight-blade adjacent one end thereof to turn the same about the said pivot-means; and releasable clamping-means including a clamping-screw extending in substantial parallelism with the said pivot-means but located adjacent the opposite end of the sight-body from the said substantially-vertical adjusting-screw and constructed and arranged to clamp the said sight-blade to the said sight-body.

2. An adjustable front-sight for small-arms, including in combination: a sight-body having a longitudinal recess flanked on each of its respective opposite side by one of two vertical wall-portions, at least one of the said wall-portions being yieldable toward the other; a sight-blade movably mounted in the recess in the said sight-body; pivot-means carried by the said sight-body and constructed and arranged to provide for the swinging movement of the said sight-blade intermediate its front and rear ends about a substantially-horizontal axis transverse to the sight-blade; a substantially-vertical adjusting-screw carried by the said sight-body and operatively-connected to the said sight-blade adjacent one end thereof to turn the same about the said pivot-means; and clamping-means extending between the respective opposite wall-portions of the sight-body and constructed and arranged to draw one thereof toward the other to clamp the said sight-blade between the two said wall-portions.

3. An adjustable front-sight for small-arms, including in combination: a sight-body having an upwardly-opening longitudinal groove therein flanked on each of its respective opposite sides by one of two vertical wall-portions, at least one of the said wall-portions being yieldable toward the other; a sight-blade movably mounted in the longitudinal groove in the said sight-body and provided adjacent one end with a longitudinally-projecting adjusting-finger; a substantially-vertical adjusting-screw threaded into the said sight-body and formed with an annular groove receiving the adjusting-finger of the said sight-blade; and clamping-means extending between the respective opposite wall-portions of the said sight-body and constructed and arranged to draw one thereof toward the other to clamp the said sight-blade between the two said wall-portions.

4. An adjustable front-sight for small-arms, including in combination: a sight-body having an

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upwardly-opening longitudinal groove therein flanked on each of its respective opposite sides by one of two vertical wall-portions, at least one of the said wall-portions being yieldable toward the other; a sight-blade movably mounted in the longitudinal groove in the said sight-body and provided adjacent one end with a longitudinally-projecting adjusting-finger, the said sight-blade being formed adjacent its end opposite the said adjusting-finger with a transverse clearance-opening; a substantially-vertical adjusting-screw threaded into the said sight-body and

formed with an annular groove receiving the adjusting-finger of the said sight-blade; and a substantially-horizontal clamping-screw extending through the clearance-opening in the said sight-blade and extending between the two said vertical wall-portions of the sight-body and threaded into one thereof to contract the lateral dimension of the longitudinal groove in the said sight-body to thereby clamp the said sight-blade in place between the two said wall-portions.

GEO. A. WILSON.