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Oct. 31, 1939. C. C. LOOMIS 2,178,262

GUN SIGHT

Filed April 9, 1937

Fig. 1

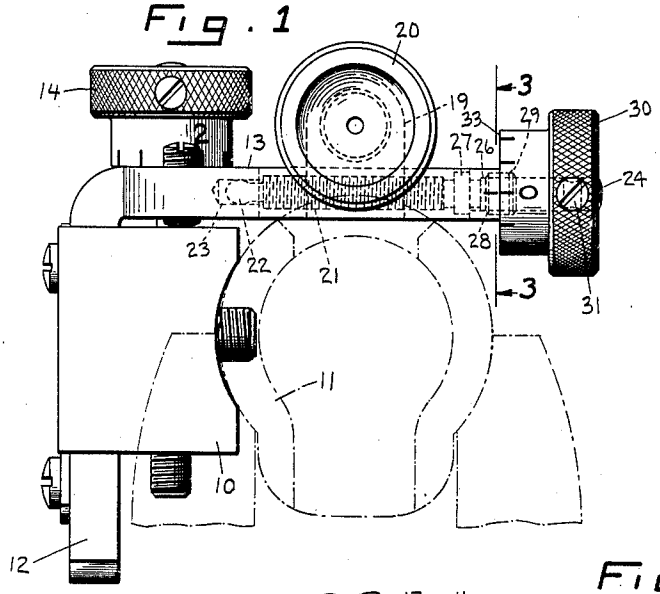


Fig. 2

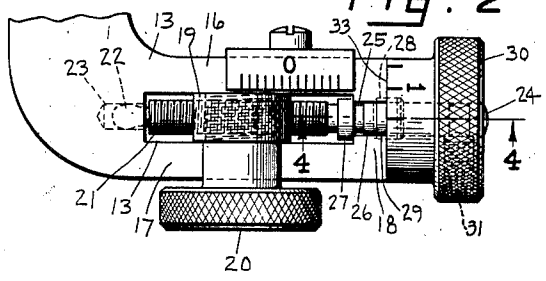


Fig. 4

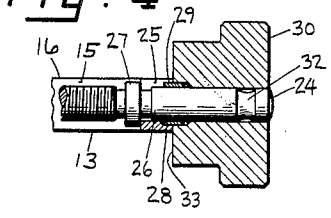
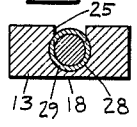


Fig. 3



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33. GEOMETRICAL INSTRUMENTS.

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Patented Oct. 31, 1939

2,178,262

UNITED STATES PATENT OFFICE

2,178,262

GUN SIGHT

Crawford C. Loomis, Ilion, N. Y., assignor to Remington Arms Company, Inc., a corporation of Delaware

Application April 9, 1937, Serial No. 135,871

5 Claims. (Cl. 33—56)

This invention relates to adjustable sights for firearms, and contemplates a new and improved method of mounting a sight supporting member in a base, the mounting being so designed as to simplify and facilitate accurate assembly.

In the drawing:

Fig. 1 is a rear view of a sight mounting embodying one form of the present invention and showing one method of attaching the sight to a firearm.

Fig. 2 is a fragmentary top plan view of a sight mounting embodying one form of the present invention.

Fig. 3 is a transverse sectional view substantially on the line 3—3 of Fig. 1.

Fig. 4 is a sectional view substantially on the line 4—4 of Fig. 2.

The invention has been illustrated as applied to a sight of the "micrometer" type including accurate and fine adjustments both for elevation and windage, but it is to be understood that the novel mounting of a sight supporting member to be described is of general application and not limited to association with other features of the particular sight which has been selected for purpose of illustration.

A mounting block 10, suitably secured to the receiver or barrel of a firearm 11, adjustably receives a vertically extending portion 12 of a sight base 13, vertical adjustment of the sight base being effected by suitable means such as a screw provided with a manipulative head 14. The mounting of the base or the vertically extending portion thereof in the block 10 may take a variety of forms, and for a typical mounting reference is made to the patent to Lowe, No. 2,005,866. The base 13 extends transversely of the firearm, and comprises a longitudinal slot 15 which, in the illustrative embodiment, extends vertically through the base, dividing it for the greater part of its length into two arms 16 and 17 which are joined at their extremities by an end-piece 18 preferably but not necessarily integral with the arms. The slot 15 forms a guideway for a block 19 which, in the particular sight illustrated, extends upwardly from the base 13 and has suitably secured thereon a sight member 20. For lateral adjustment of the sight member 20, the portion of the block 19 extending between and guided by the arms 16 and 17 is bored and threaded to receive the threaded portion 21 of a supporting member or arbor rotatably held in the base 13. The inner end of said member comprises an extending boss 22 rotably received in a bearing aperture 23 at the inner end of the slot 15. Near its opposite end said member is rotatably held in the end-piece 18.

The present invention contemplates novel means for permitting ready assembly of the supporting member and its manipulative device in the end-piece 18, while accurately securing said supporting member against endwise movement. The supporting member may be considered as comprising an arbor 24, the threaded portion 21 which receives the block 19 being a slight enlargement of such arbor. The end-piece 18 comprises a vertical slot 25 terminating at the bottom in an arcuate surface adapted to form a bearing for a collar 26 secured to or integral with the arbor 24. A collar 27 secured to or integral with the arbor 24 is positioned to abut the inner face of the end-piece 18 and thereby limit the outward movement of the supporting member or arbor relative to the base 13. In the outer face of the end-piece 18 concentric with the arcuate bottom of the slot 25 is a cylindrical recess or counterbore 28 adapted to receive the inner half of a collar 29 loosely held on the arbor 24. A finger piece or screw head 30 is apertured to receive the arbor 24 and is secured thereto by suitable means such as a set screw 31 preferably comprising a rounded point received in a peripheral recess 32 in the arbor. The inner end or boss of the finger piece 30 which, as shown, may be provided with a graduated scale and any suitable form of "click" adjustment, is recessed to receive the outer half of the collar 29. It will be obvious that when the collar 29 is in place upward movement of the supporting member assembly out of the slot 25 is prevented by the engagement of the upper portion of said collar with the upper part of the periphery of recess 28. It is further apparent that when the finger piece 30 is in place on the arbor 24 inward movement of the supporting member assembly is prevented by the engagement of the inner face 33 of said member with the outer face of end-piece 18. The collar 27 and finger piece locating recess 32 are so spaced as to provide a suitably close fit of the surface 33 and the collar 27 on opposite sides of the end-piece 18. The assembly is thus readily and accurately secured in place, but the sight supporting member and parts assembled thereon can at any time be removed from the base by first retracting the set screw 31, withdrawing the finger piece 30 from the arbor 24, and withdrawing the collar 29 from the recess 28. When this has been done, the outer end of arbor 24 can be elevated an amount sufficient to enable collar 27 to clear the top of end-piece 18. The supporting

member can then be moved endwise to withdraw the boss 22 from recess 23.

The embodiment of the invention which has been illustrated and described is to be understood as typical and representative only, the invention being susceptible to embodiment in many other forms, all falling within the scope of the appended claims, which claims are to be broadly construed.

What is claimed is:

1. A gun sight having a base comprising parallel spaced arms; a sight supporting arbor; and means for rotatably mounting said arbor in said base comprising an end piece joining the extremities of said arms, there being in said end piece a slot intersecting one margin of said end piece and terminating in an arcuate surface adapted to support said arbor, and there being also in said end piece a cylindrical recess concentric with said arcuate surface; said arbor mounting means likewise comprising a collar fixed to said arbor and adapted to engage the face of said end piece opposite said recess, and a collar on said arbor adapted to enter said recess by an axial movement ony and by its engagement with the periphery of said recess to retain said arbor against transverse displacement.

2. A gun sight having a base comprising parallel spaced arms; a sight supporting arbor; and means for rotatably mounting said arbor in said base comprising an end piece joining the extremities of said arms, there being in said end piece a slot intersecting one margin of said end piece and terminating in an arcuate surface adapted to support said arbor, and there being also in said end piece a cylindrical recess concentric with said arcuate surface; said arbor mounting means likewise comprising a collar fixed to said arbor and adapted to engage the face of said end piece opposite said recess, a collar loose on said arbor adapted to enter said recess by an axial movement only and by its peripheral engagement with said recess retain said arbor against outward movement, and a finger piece secured to said arbor and engaging said loose collar to retain said loose collar in said recess, whereby said arbor is retained against longitudinal movement in one direction by said fixed collar and retained against longitudinal movement in the opposite direction by said loose collar and said finger piece.

3. A gun sight having a base comprising parallel spaced arms; a sight supporting arbor; and means for rotatably mounting said arbor in said base comprising an end piece joining the extremities of said arms, there being in said end piece a slot intersecting one margin of said end piece and terminating in an arcuate surface adapted to support said arbor, and there being also in said end piece a cylindrical recess concentric with said arcuate surface; said arbor mounting means likewise comprising a collar fixed to said arbor and adapted to engage the face of said end piece opposite said recess, a collar loose on said arbor adapted to partially enter said recess by an axial movement only and by its peripheral engagement with said recess retain said arbor against transverse movement, and a finger piece secured to said arbor, said finger piece being recessed to receive a portion of said loose collar and abutting said loose collar to retain said loose collar against axial movement on said arbor.

4. In a gun sight, a base comprising a solid end portion provided with a bearing aperture and parallel spaced arms projecting from said end portion adapted to guide a sight supporting member for rectilinear movement, an end piece joining the extremities of said arms and provided with an open slot having an arcuate margin and a cylindrical recess concentric with said arcuate margin, a sight supporting arbor provided with an extending boss adapted to be received in said bearing aperture, a collar fixed to said arbor adapted to engage one side of said end piece, a collar loose on said arbor adapted to partially enter said cylindrical recess by an axial movement only and by its peripheral engagement with said recess prevent transverse movement of said arbor, a finger piece on said arbor comprising a recess adapted to receive a portion of said loose collar and by its endwise engagement to hold said loose collar in spaced relation to said fixed collar, and means for securing said finger piece to said arbor.

5. A gun sight comprising a base; a sight supporting arbor provided with a finger piece; and means for rotatably mounting and positioning said arbor in said base, comprising substantially cylindrical coaxial recesses in the base and finger piece, the base recess having an opening through one side thereof, allowing transverse passage of the arbor therethrough, said base recess being enlarged to receive a member loosely mounted on said arbor whereby the arbor is prevented from movement through the opening when the member is slid axially into said enlargement.

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