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SEARCH ROOM

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MOUNT FOR GUN SIGHTS

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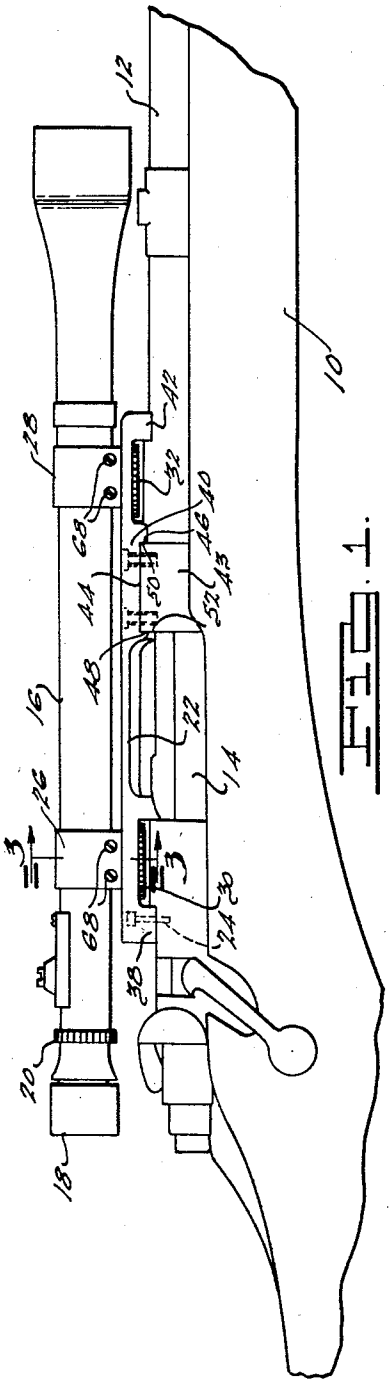


FIG. 1.

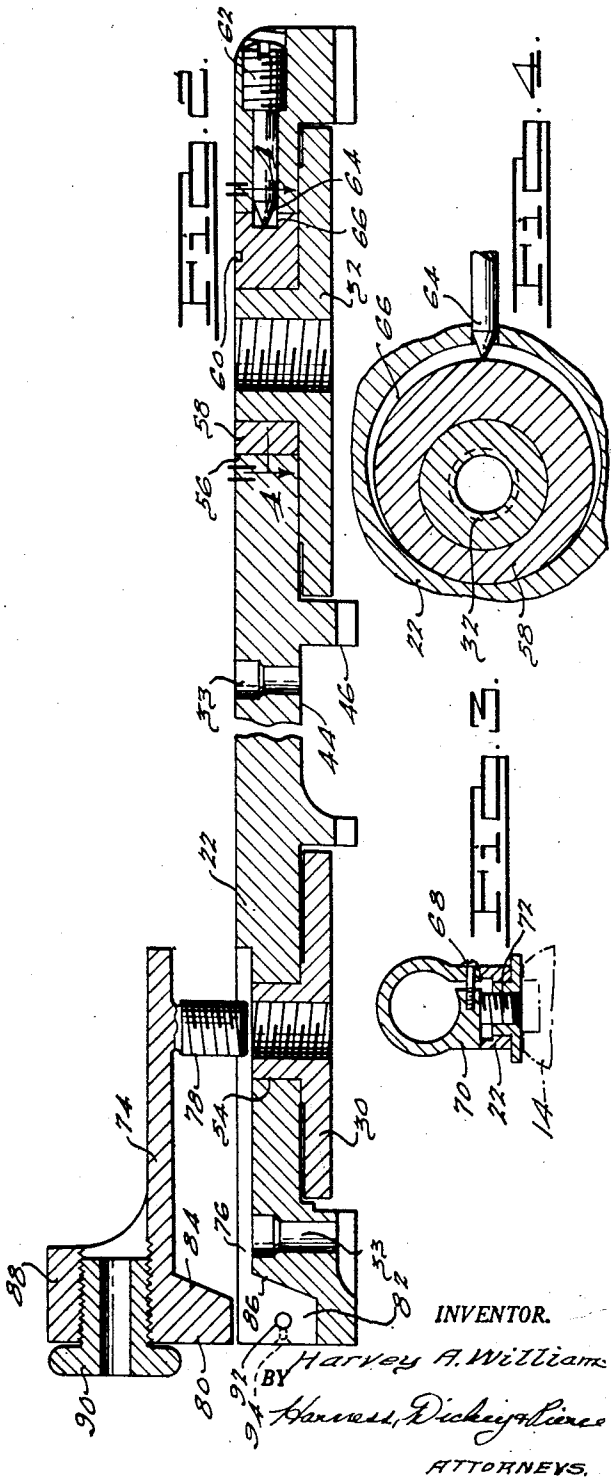


FIG. 2.

FIG. 4.

FIG. 3.

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MOUNT FOR GUN SIGHTS

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11 Claims. (Cl. 33—50)

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The invention relates broadly to gun sights and more particularly to a novel mounting for telescopic gun sights.

In general, guns are not equipped with permanent or irremovable telescopic sights since the latter are relatively delicate instruments and are easily damaged or knocked out of adjustment. Furthermore, when telescopic sights are used, it is desirable to employ a mounting which will not interfere with use of the conventional open sights when the telescope is removed. Therefore, in accordance with the present invention, the gun is equipped with a permanent mounting to which the telescopic or a conventional open or peep sight can be removably attached.

The practicability of a mounting of this character is contingent upon several prerequisites; for example, the mounting must be rigid so that it cannot be knocked out of adjustment by the recoil thrust or during normal handling of the gun; otherwise the telescopic sight will not be held in adjustment when attached thereto.

The sight must be firmly held and identically positioned each time it is attached to the mounting to assure accurate shooting. The connection between the mounting and the telescopic sight should be such that the latter can be attached to or detached from the mounting without entirely removing any parts from either the sight or the mounting, since removable parts are easily lost or misplaced. It should be possible to attach or remove the telescopic sight quickly and without the use of tools, and the mounting should be low and provided with a flat top surface so as not to interfere with the use of open sights when the telescopic sight is removed.

It is an important object of this invention to provide a mounting for telescopic gun sights that satisfies all of the qualifications pointed out above, and which also may be employed as a mounting for a conventional rear sight when the telescopic sight is removed.

Considered in its broader aspects, the mounting comprises an elongated relatively thin plate, the under surface of which is shaped to seat solidly on the gun, and a pair of mounting elements which clasp the tube of a conventional telescopic sight. Rotatable thumb nuts in the nature of flange-bushing-nuts carried by the mounting plate receive threaded studs provided on the mounting elements and the heads or flange portions of the thumb nuts project beyond the sides of the mounting plate so that they can be easily grasped between the thumb and finger of one hand and manually actuated to attach or

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disengage the mounting elements. These flange-bushing-nuts engage the studs and draw the mounting elements solidly against the plate. Also, they hold the mountings in exact alignment by reason of the fact that the bushing portions thereof fit snugly in reamed holes through the mounting plate. When the telescopic sight is removed from the gun, the thumb nuts remain associated with the mounting plate and the mounting elements remain attached to the sight so that none of the parts can be lost or misplaced. Neither the thumb nuts nor the mounting elements change position when disconnected so that identical positioning of the telescopic sight is assured each time it is attached to the mounting plate. Moreover, one of the thumb nuts is adapted to fasten a conventional rear sight in position when the telescope is removed.

In the drawing, forming a part of this specification and wherein like numerals are employed to designate like parts throughout the same:

Figure 1 is a fragmentary side elevation of a rifle to which a telescopic sight is attached by means of a mounting embodying the present invention,

Fig. 2 is an enlarged longitudinal sectional view of the mounting plate and showing the manner in which an open peep sight can be attached to the plate when the telescopic sight is removed,

Fig. 3 is a vertical sectional view taken on the line 3—3 of Fig. 1, and

Fig. 4 is a fragmentary, transverse sectional view taken on the line 4—4 of Fig. 2.

In the drawing there is shown a fragmentary portion of a gun having a stock 10, a barrel 12 and a receiver 14. Attached to the gun receiver 14 by means of a mounting embodying the instant invention is a conventional telescopic sight which includes a tubular body 16, eyepiece 18, and windage adjustment screw 20.

The mounting comprises an elongated relatively thin plate 22 which is secured to the gun receiver 14 by means of screws 24 and a pair of mounting elements 26 and 28 which are attached to the telescope tube 16 and removably secured to the mounting plate by thumb nuts 30 and 32.

Mounting plate 22 is permanently attached to the gun and is not removed with the telescopic sight. Screws 24 extend through countersunk openings 33 in the plate and their heads are disposed well below its top surface so as not to interfere with the use of open sights when the telescopic sight is removed. The mounting plate is held in slight spaced relation above the gun by integral mounting pads 38, 40 and 42 which seat

solidly on the receiver 14 adjacent its ends and on the gun barrel 12 adjacent its rearward end. The upper surfaces of gun barrel 12 and receiver 14 are generally cylindrical in shape and the under surfaces of mounting pads 38, 40 and 42 are transversely curved to fit snugly thereon. Adjacent its forward end the receiver 14 is provided with a transverse ridge 43 which projects into a groove 44 in the bottom surface of the intermediate mounting pad 40. The sides of groove 44 define shoulders 46 and 48 which abut against the front and rear edges 50 and 52 of ridge 43 and prevents the mounting plate from shifting longitudinally on the gun. Rear shoulder 48 takes the recoil thrust and relieves screws 24 of shear stresses which otherwise would be imposed thereon when the gun is fired.

It will be readily appreciated that since the under surfaces of the pads 38, 40 and 42 complement the top surface of the gun, their shape may vary somewhat depending upon the particular gun model on which the plate is mounted. However, in other respects, the plate is identical for all models.

The head or flange portions of thumb nuts 30 and 32 are disposed below plate 22 and the bushing or shank portions extend upwardly therethrough. Both of the shanks are tubular and internally threaded to engage studs on attaching elements 26 and 28 as will hereinafter be brought out in detail. The shank of thumb nut 30 fits snugly in a hole 54 provided in the plate adjacent mounting pad 38 and the shank of thumb nut 32 carries an eccentric disk 58 which is snugly received in an opening 56 provided in the plate adjacent mounting pad 42. By reason of the eccentric mounting of thumb nut 32 in disk 58, rotative movements of the latter effects lateral adjustment of the nut and provides a means of properly aligning the telescopic sight. Disk 58 can be rotated in any suitable manner as by inserting the end of a rod or tool (not shown) in one of the identations 60 provided in its top surface. It is only necessary to adjust the disk when the telescopic sight is first mounted on the gun. After this initial adjustment to properly align the sight, disk 58 is locked against further movement by setscrew 62. The setscrew is preferably provided with a pointed end 64 which projects through a tapered groove 66 in the periphery of the disk and engages the latter with sufficient force to hold it stationary.

The mounting elements 26 and 28 comprise split collars which are drawn tightly around the tube 16 by screws 68. Each of the collars is formed with a heavy base portion 70 which seats solidly on the flat top surface of mounting plate 22. Threaded studs 72 formed on the base portions 70 are adapted to engage the internally threaded shanks of thumb nuts 30 and 32.

To initially attach the mounting to the gun the thumb nuts 30 and 32 are assembled on the plate 22 and the latter secured to the receiver 14 by screws 24. Attaching elements 26 and 28 are positioned loosely on the tube 16 and moved into alignment with respective thumb nuts 30 and 32. Screws 68 are then tightened to hold the elements fixedly positioned on the tube.

To mount the telescopic sight on the gun, the studs 72 are engaged by the threaded shanks of thumb nuts 30 and 32, and the latter rotated to thread the studs into the shanks. The heavy base portions 70 are pulled tightly against the flat top surface of the mounting plate 22 to assure a rigid support for the telescopic sight. To

disengage the telescopic sight from the gun, it is merely necessary to reverse the above operation. Thumb nuts 30 and 32 are rotated to disengage the studs 72, and as soon as the latter are released the telescopic sight can be removed from the gun. An open rear sight can be attached to the mounting plate 22 when the telescopic sight is removed. Any type of non-telescopic rear sight may be used but, for the purpose of illustration, a conventional peepsight is here shown. As shown in Fig. 2, the peep sight is attached to thumb nut 30 and comprises a flat essentially rectangular bar 74 which fits snugly in a correspondingly shaped recess 76 provided in the top surface of plate 22. Adjacent its forward end, bar 74 is provided with a downwardly extending threaded stud 78 which engages the threaded shank of thumb nut 30. When the stud is fully threaded into the thumb nut, bar 74 is positioned flush with the top surface of mounting plate 22. At its rearward end, bar 74 is provided with a downward extension 80 which projects into and snugly fits a socket 82 provided at the rearward end of groove 76. It will be observed that the extension 80 is formed with a downwardly and rearwardly tapered front surface 84 which engages a correspondingly inclined wall 86 of the socket 82. The tapered surfaces 84 and 86 are pulled firmly together by stud 78 to hold bar 74 rigid. Threaded into an upwardly extending cylindrical portion 88 on the rearward end of bar 74 is an eyepiece 90. The latter is removable so that eyepieces having sight openings of different diameters can be used. A pair of windage adjusting screws 92 are threaded from either side through the mounting plate and project into the socket 82. The sides of the downward extension 80 fit snugly between the ends of the windage adjusting screws 92 which form positive abutments controlling the lateral location of the sight 90. In order to facilitate insertion and removal of the open sight, the sides of extension 80 are provided with a slight downward taper. After screws 92 have been adjusted to properly align the sight, they are locked against further movement by screws 94 and threaded into the mounting plate at right angles to screws 92. This adjustment is not altered during removal or remounting of the sights.

It may thus be seen that the present invention provides a gun mounting that can be quickly and easily adapted for either telescopic or open sights. The sights are firmly held on the mounting plate 22 and identical positioning is assured each time the sights are mounted on the gun. When the sights are removed from the gun, there are no loose nuts, bolts or other parts to become lost or misplaced. A two-element connection is provided and when disengaged one element remains attached to the telescopic sight and the other to the mounting plate. Since neither of these elements is removed or laid aside when the sight is removed, all of the necessary parts are present and properly positioned when it is again desired to attach the sight to the gun. The construction is simple and no tools or special equipment of any kind are required to either attach or remove the sights.

It is to be understood that the form of the invention herewith shown and described is to be taken as a preferred example of the same and that various changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the appended claims.

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What is claimed is:

1. A mounting for a telescopic gun sight comprising a mounting plate adapted for attachment to the gun, said plate being formed with a relatively flat top surface, a pair of spaced vertical apertures, and mounting pads adapted to seat solidly on the gun and hold portions of the plate spaced therefrom; a thumb nut disposed with its head portion below the plate and its shank portion mounted for rotation in one of said apertures; a disk rotatably mounted in the other of said apertures and provided with an eccentric opening; a second thumb nut disposed with its head below the plate and its shank rotatably mounted in said eccentric opening; means for holding the disk in a selected adjusted position; a pair of mounting elements adapted to be fastened to the telescope and having heavy base portions formed with flat bottom surfaces; and studs carried by said base portions and adapted to threadedly engage the shank portions of respective thumb nuts and to pull the bottom surfaces of the base portions flatly against the top of the plate, the arrangement being such that the said telescopic sight can be fixedly attached to the mounting plate by manually rotating the thumb nuts in one direction or disengaged from the plate by rotating the thumb nuts in the opposite direction.

2. A mounting for a telescopic gunsight comprising a mounting plate adapted for attachment to the gun and formed with a pair of spaced vertical apertures; a thumb nut disposed with its head below the plate and its shank portion mounted for rotation in one of said apertures; a disk rotatably mounted in the other of said apertures and provided with an eccentric opening; a second thumb nut disposed with its head below the plate and its shank rotatably mounted in said eccentric opening; means for holding the disk in a selected adjusted position; a pair of mounting elements adapted to be fastened to the telescope and having studs threadedly engaging the shanks of respective thumb nut whereby said telescopic sight can be fixedly attached to the supporting plate by manually rotating the thumb nuts in one direction or disengaged from the plate by rotating the thumb nuts in the opposite direction.

3. A mounting for a telescopic gun sight comprising a mounting plate adapted for attachment to the gun and formed with a vertical aperture; a disk rotatably mounted in the aperture and provided with an eccentric opening; a thumb nut disposed with its head below the plate and its shank rotatably mounted in said eccentric opening; means for holding the disk in a selected adjusted position; a mounting element carried by the telescope tube adjacent one end thereof and having a stud threadedly engaging the shank portion of said thumb nut; and means for detachably securing the other end of the telescope tube to said plate.

4. A mounting for a telescopic gun sight comprising a mounting plate adapted for attachment to the gun, said plate formed with a vertical aperture, a rotatable thumb nut mounted below the plate with its shank portion extending upwardly into the aperture, said shank of substantially lesser diameter than the aperture; adjustable means for positioning said shank in the aperture; a mounting element carried by the telescope tube adjacent one end thereof; a stud on said mounting element threadedly engaging said shank; and means for detachably securing the other end of the telescope tube to said plate.

5. A mounting for a telescopic gun sight comprising a mounting plate adapted for attachment to the gun, said plate formed with a pair of spaced vertical apertures and mounting pads which seat solidly on the gun and hold the plate spaced therefrom; a rotatable thumb nut for each of said apertures; the head portion of said thumb nuts disposed below the plate and the shank portions thereof rotatably mounted in said apertures; a pair of mounting elements carried by the telescope tube and having studs extending into the apertures and threadedly engaging said shanks whereby said telescopic sight can be attached to the mounting plate by manually rotating the thumb nuts in one direction or disengaged from the plate by rotating the thumb nuts in the opposite direction.

6. A mounting for a telescopic gun sight comprising a mounting plate adapted for attachment to the gun, said plate formed with mounting pads which seat solidly on the gun and hold the plate spaced therefrom, a vertical aperture, and a relatively flat top surface; a thumb nut having an enlarged head disposed below the plate and a tubular shank mounted for rotation in the aperture, the head portion of said thumb nut projecting beyond the sides of the plate whereby to be readily accessible for manual operation; a mounting element carried by the telescope tube and provided with a heavy base portion having a flat bottom surface; and a stud carried by said base portion and adapted for threaded engagement with said shank whereby to pull the bottom surface of the base portion flatly against the top of the plate, the arrangement being such that said telescopic sight can be fixedly attached to the mounting plate by manually rotating the thumbscrew in one direction or disengaged from the plate by rotating the thumb nut in the opposite direction.

7. A mounting for a telescopic gun sight comprising a mounting plate adapted for attachment to the gun, said plate having an unobstructed top surface, a vertical aperture, and mounting pads which seat solidly on the gun and hold the plate spaced therefrom; a thumb nut having an enlarged head portion mounted below said plate, and an upwardly extending tubular shank rotatably disposed in the aperture, said head portion projecting beyond the side of the plate whereby to be readily accessible for manual operation; and a mounting element carried by the telescope tube and having an externally threaded stud engaging the internal threads of said shank whereby the telescopic sight can be fixedly attached to the mounting plate by manually rotating the thumb nut in one direction and disengaged from the plate by rotating the thumb nut in the opposite direction.

8. A mounting for a gun sight comprising a mounting plate adapted for attachment to the gun, said plate provided with a longitudinal slot in its top surface and the slot having a socket formed with a tapered wall, said plate further provided with a vertical aperture which opens into the slot at a point remote from the socket; a thumb nut provided with a tubular shank mounted for rotation in said aperture and an open gun sight including a body adapted to fit in said slot, a stud adapted to be threaded into the shank portion of said thumb nut and a

downward extension adapted to project into the socket and provided with a tapered surface which presses against the tapered wall of the socket when the stud is threaded into said shank whereby to automatically position and adjust the sight on the plate.

9. In a mounting for a gun sight, a mounting plate adapted for attachment to the gun, said plate provided with a vertical aperture; a mounting element carried by the gun sight; means for fastening said mounting element to the plate including a stud on said mounting element extending into said aperture, and a thumb nut mounted on said stud and disposed below said plate; and means including an eccentric disc fitting snugly in said aperture for adjusting the gun sight laterally on the mounting plate, said eccentric disc carrying the fastening means and rotatably adjustable in said aperture.

10. In a mounting for a gun sight, a mounting plate adapted for attachment to the gun, said plate formed with a vertical aperture; a mounting element carried by the gun sight; means for fastening said mounting element to the plate including a stud on said mounting element extending into said aperture, and a thumb nut mounted on said stud and disposed below said

plate; and means for adjusting said fastening means laterally in the aperture.

11. In a mounting for a gun sight, a mounting plate adapted for attachment to the gun, said plate formed with a vertical aperture and mounting pads which seat solidly on the gun and hold the plate spaced therefrom; a mounting element carried by the gun sight having a stud extending into the aperture; and a rotatable thumb nut disposed below the plate and mounted on said stud, whereby said thumb nut can be tightened on the stud and against the mounting plate to hold the mounting element solidly against said plate or loosened on the stud to disengage or release said mounting element from the plate.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
983,272	Erdman	Feb. 7, 1911
1,856,549	Griffin et al.	May 3, 1932
2,036,290	McCann	Apr. 7, 1936