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GUN SIGHT

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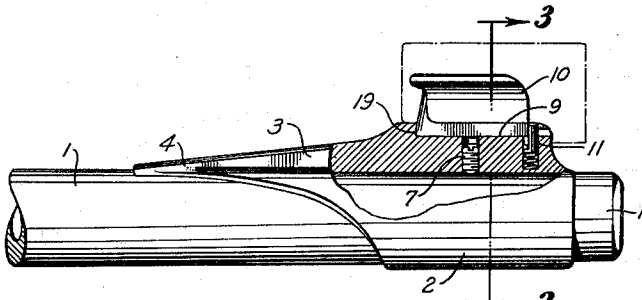


FIG. 1

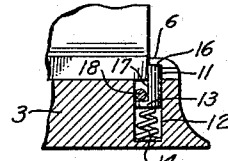


FIG. 7

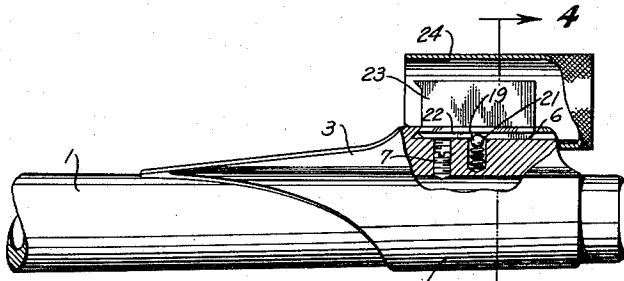


FIG. 2

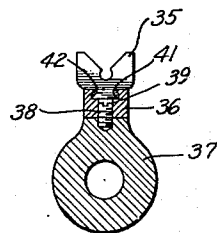
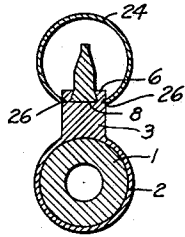
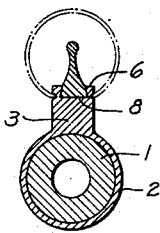


FIG. 3 FIG. 4 FIG. 5

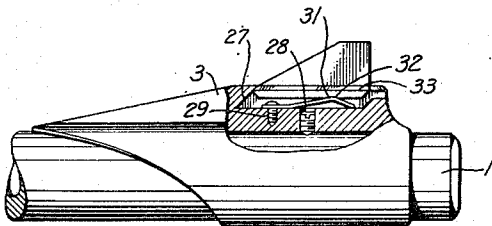


FIG. 6

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UNITED STATES PATENT OFFICE

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GUN SIGHT

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2 Claims. (Cl. 33-47)

1

This invention relates to sighting devices and particularly to those of the type with which rifles, pistols and in some cases, shot-guns are ordinarily equipped.

Rifle sights have had a long and continuous historical development dating practically from the earliest use of firearms since their necessity for facilitating alignment of the rifle with the target was immediately recognized. Due to the fact that the trajectory of rifle bullets is that of a path curving downwardly from the rifle muzzle, the need for a vertical adjustment on either the front or the rear sight was seen in order to compensate for the drop in the bullet when firing at distant targets. In this development the trend was toward the adjustment of the rear sight, the front sight remaining fixed. The wide variety of rifle rear sights known to the art today provides not only vertical adjustment but also lateral adjustment to correct for wind velocity and for variations in the performance of individual rifles due to barrel wear, etc.

Among sportsmen and devotees of target shooting the variations in the types of rear components of open or iron sights, so called, as distinguished from telescope sights, are not considered to be of great consequence since most of such components ordinarily provide a circular aperture or peep sight, a V-notch component or both, for selective use as desired. The front sight, on the other hand, is customarily fixed on the forward portion of the rifle barrel and usually requires the services of a gunsmith for removal or replacement. Since there are in use several forms of front sights such as square-topped, round-topped and peep sights and the user ordinarily has a preference for a particular form and, in fact, may desire to have readily available alternate forms depending on the conditions of use, the need for an easily detachable and replaceable front sight has arisen. Such need has been of particular concern to gun dealers who have in the past been required to carry in stock several rifles differing only in front sight components in order to have available a complete line to satisfy the apparent but important whims of purchasers. The same need has existed but to a lesser extent in the case of hand guns, such as pistols and the like.

Accordingly, it is a principal object of this invention to provide a front sight which may be quickly and easily attached to or removed from a rifle, for example, or from small arms of the pistol type.

Another object of the invention is to provide in

2

connection with a detachable front sight for shoulder or hand guns, a mount which may be permanently attached to such guns and is so constructed and arranged as to readily receive in secure engagement any of a plurality of different front sight components.

Another object of the invention is to provide a detachable front sight for shoulder or hand guns which will remain securely locked in place despite long periods of service.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of the invention which is illustrated in the drawing accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by and the said drawing and description may be adopted within the scope of the invention as set forth in the claims.

Reference is now made to the drawing wherein:

Figure 1 is an elevation, partly in section, of one form of my invention.

Figure 2 is an elevation, partly in section, of another form of my invention.

Figure 3 is a sectional view taken on the line 3-3 of Figure 1.

Figure 4 is a sectional view taken on the line 4-4 of Figure 2.

Figure 5 is a vertical, sectional view taken similarly to Figures 3 and 4, but indicating the rear sight of the gun, and Figure 6 is an elevational view, partly in section, of another modified form of my invention.

Figure 7 is an enlarged sectional view of the locking element shown in Figure 1.

Referring now to the drawing and particularly to Figure 1 thereof, there is shown the front end portion 1 of a rifle barrel surrounded by a generally cylindrical sight support 2 which may be pressed, or shrunk thereon, for example. The latter includes an upper, web-like ramp 3 which extends radially from the center of the rifle bore in a vertical direction thereabove and is elongated rearwardly as at 4 to provide the maximum contact area with the upper surface of the barrel 1 for greater rigidity and enhanced appearance.

It will be observed that ramp 3 is provided with a horizontal portion 6 that extends from a vertical plane slightly set back from the forward end of the ramp, rearwardly for an appreciable distance and which as shown is preferably of slightly less overall length than the least longitudinal dimension of the cylindrical portion of the sight support 2. If desired, the sight sup-

3

port 2 may also be secured to the barrel 1 by means of a set screw 7 provided in a radially extending bore 8 in the support 2 and engageable with a surface of the barrel.

To serve as a seat for the various sighting elements with which the user may desire to equip rifle 1, there is provided in the horizontal portion 6, an aligned and elongated slot 8 which is preferably of dove-tailed cross section and is adapted to receive the similarly shaped dove-tailed tongue 9 of sighting element 10. Means are provided for retaining sighting element 10 in its fully inserted position in the slot 8, and as here shown, such means comprise a spring pressed locking pin 11 snugly fitted in a vertically extending cylindrical bore 12 of the ramp 3, the bore axis intersecting the longitudinal axis of said slot. The pin 11 is provided with a generally cylindrical base portion 13 engageable with a compression spring 14 seated in the bore 12, and an upwardly extending portion 16 having a flat surface 17 facing and engageable by the leading edge of sighting element 10. In order to permit the pin to be fully seated in the bore 12 so as to permit ready insertion or removal of the element 10, but to prevent accidental dislodgement of the pin 11, a fixed transverse pin 18 secured in ramp 3 is provided between the surface 17 and the bore 12. It will thus be seen that by pressing down on the pin 11 and compressing spring 14, the sighting element 10 may be inserted into slot 8, and moved rearwardly to its fully inserted position where it engages a complementary aligned wall 19 at the inner end of slot 8 serving as an accurate stop for limiting the insertion of tongue 9. The pin 11 is then allowed to return to its fully extended position where it will serve to prevent forward movement of the element 10 in the slot 8.

As will be readily apparent from the form of the invention depicted in Figure 1 of the drawing, the gun sight element 10 is readily inserted into accurately positioned and locked relationship with the slot 8 and hence with rifle 1. It is obvious that sighting elements of square-topped, circular aperture or other configuration may be readily substituted for the round-topped sighting element 10 shown in this figure.

The modified form of my invention shown in Figure 2 of the drawing differs from that of Figure 1 in several important aspects. Instead of placing the locking means at the forward end of the ramp 3 where it may be exposed to the entry of dirt or other foreign matter or possible damage which might impair its functioning, it may be preferable to dispose such means at a point between the ends of the slot 8 and the tongue 9. Also as an alternative to the spring-retained pin 11 of Figure 1, I have shown the use of a ball 19 which is spring-pressed into a cooperative recess 21 formed in the dove-tailed tongue 22 of a sighting element 23 as shown, for example, as a flat-topped element surmounted by a hood 24. The latter includes a slitted lower wall adapted to detachably engage a pair of oppositely disposed grooves 26 of the ramp 3 and which extend longitudinally therein. The slit in the wall preferably extends for only the major portion of the length of the hood so that as shown in Figure 2, the leading edge of the ramp acts as a stop member to prevent the hood from being inserted for too great a distance over the element 23. Also, it is desirable to knurl the forward portion of the hood so the operator may

4

more readily place the hood on or remove it from the rifle.

In the modification of my invention depicted in Figure 6, locking of the sighting element is accomplished by use of a flat spring suitably formed to provide an upstanding detent or projection which cooperates with a similarly shaped recess in the element. Also such spring serves to press the sighting element into its fully elevated functional position. Accordingly, it will be noted that slot 27 corresponding to slot 8 of Figure 1 is somewhat deeper throughout its length to accommodate the flat spring 28 retained therein by a screw 29 for example, threaded into the ramp portion 3. Spring 28 is bent upwardly at a point intermediate its length to provide a detent portion 31 which is adapted to seat in locking engagement in a recess 32 provided in the lower face of dove-tailed tongue 33 of the sighting element. Tongue 33 is thus pressed upwardly by spring 28 and against the inclined sidewalls of the dove-tailed slot 27 but may readily be removed by the user when desired.

Figure 5 discloses that the rear sight 35 may be installed in a manner similar to that previously mentioned for the front sight installation, wherein a ramp 36 is secured to the gun barrel 37 by means of a countersunk screw 38 or the like, engageable with the ramp 36 and the gun barrel 37. The ramp as here shown is provided with a dove-tail slot 41 engageable by a complementary section 42 of the rear sight. Any suitable locking means may be provided to secure the sight against sliding in the slot.

While I have shown certain preferred embodiments of my invention, it will be apparent that numerous modifications may be made. Accordingly, I do not desire the present invention to be limited except as may be properly within the scope of the following claims.

I claim:

1. A detachable sight for the barrel of firearms comprising a sight support adapted to be rigidly secured to and substantially encircle a portion of said barrel and including a longitudinally extending slotted portion of dove-tail cross-section and a vertical bore, a sighting element including a longitudinally extending tongue of dove-tail cross-section for cooperating with said slotted portion, a spring-pressed pin disposed in said bore and adapted to engage an end portion of said tongue for detachably retaining said sighting element and support in assembled relation, and means on said support adapted to engage the other end portion of said tongue for limiting the longitudinal movement thereof relative to said support.

2. A detachable sight for the barrel of firearms comprising a fixed sight support adapted to be rigidly secured to said barrel and including a longitudinally extending slotted portion of dove-tail cross-section and a vertical bore, a sighting element including a longitudinally extending tongue of dove-tail cross-section cooperating with said slotted portion, means limiting longitudinal movement of said tongue in said support, a spring-pressed pin disposed in said bore and adapted to engage and end portion of said tongue for detachably retaining said sighting element and support in assembled relation, and means traversing said bore limiting upward movement of said pin in said bore.

KURT O. HAASE.

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3

6

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