C. R. KEERAN.

FRONT SIGHT FOR GUNS.

APPLICATION FILED NOV. 16, 1917.

1,380,150. Patented May 31, 1921.

Fig. 1.

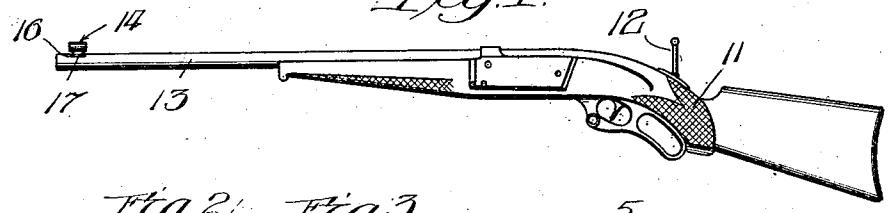


Fig. 2.

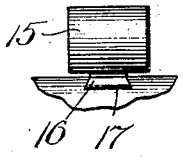
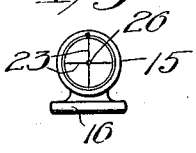


Fig. 3



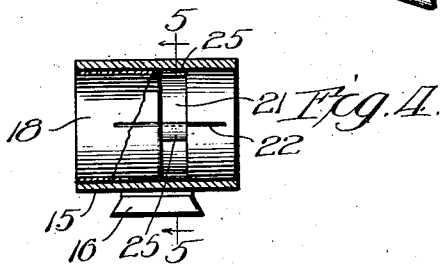


Fig. 4.

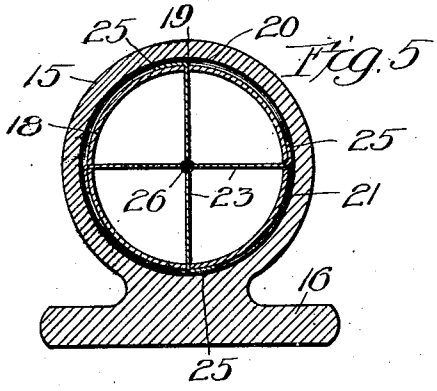


Fig. 5

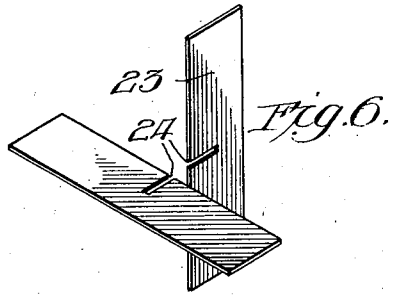


Fig. 6.

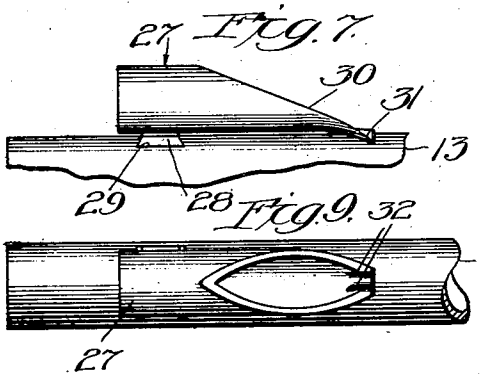


Fig. 7.

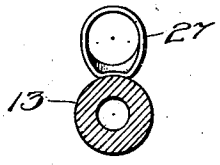


Fig. 8.

Fig. 9.

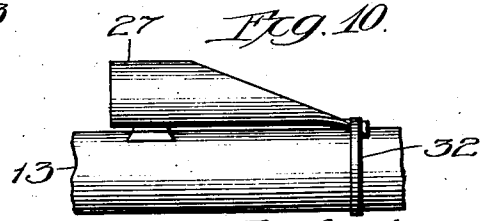


Fig. 10.

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by Blaming & Blaming Attys

UNITED STATES PATENT OFFICE.

CHARLES R. KEERAN, OF CHICAGO, ILLINOIS.

FRONT SIGHT FOR GUNS.

1,380,150. Specification of Letters Patent. Patented May 31, 1921.

Application filed November 16, 1917. Serial No. 202,277.

To all whom it may concern:

Be it known that I, CHARLES R. KEERAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Front Sights for Guns, of which the following is a specification.

My invention is concerned with a front sight for guns, rifles, and like shooting implements.

In the art to which this invention relates, it has long been common to use a bead front sight. This form of sight is recognized as superior to the ordinary knife edge type, but nevertheless has certain disadvantages which are eliminated in my improved front sight. In aiming a rifle, it is generally regarded as best practice to hold the bead just below the bottom edge of the target, allowing a slight space to appear between the top edge of the bead and the bottom edge of the target. This does not, however, insure exact aiming, as there is always a question of how close to hold. Particularly is this a difficult matter if the light is poor. Theoretically the best sight is one with which it is possible to hold the bead directly on the target. The nearest approach to such a sight is what is known as the telescope sight in which use is made of cross-hairs.

It is the primary purpose of this invention to provide a front sight possessing many of the advantages of the telescope sight without the drawbacks inherent in that type of sight, such as high cost, delicate parts, and unwieldiness. A bead is held by cross-hairs in the present form of sight, and instead of interfering with the vision of the shooter, as is the case when the ordinary bead sight is used, my improved device assists the shooter to quickly put the bead directly on the target. Besides enabling the shooter to aim better and quicker, my invention possesses other advantages, such as: (1) it is so constructed as to be easily removed or replaced whenever desired; (2) it is so mounted on the gun barrel as to receive protection at all times; (3) it is so arranged as to guide the eye in accurately aiming whether the target be moving or stationary; and (4) its component parts are so formed as to facilitate accurate assembly. These and other objects are attained in the present front sight, one embodiment of which is illustrated in the several figures of the drawing, wherein:

Figure 1 shows a rifle of conventional design equipped with my improved front sight;

Fig. 2 is a side elevation, enlarged, of the hood within which the sight is mounted;

Fig. 3 is a rear elevation thereof;

Fig. 4 is an enlarged longitudinal section through the hood exhibiting therein partly in section and partly in elevation the shell containing the sight;

Fig. 5 is an enlarged transverse section therethrough, taken on line 5—5 of Fig. 4;

Fig. 6 is a detail in perspective of the "cross-hairs" before assembly;

Fig. 7 represents a modified design of hood construction;

Fig. 8 is a cross section therethrough and through the gun barrel on which it is mounted;

Fig. 9 is a plan view thereof; and

Fig. 10 is a side elevation of a still further modified hood construction.

The rifle illustrated in Fig. 1 has on its tang 11, a rear sight 12, and on the forward end of its barrel 13, the front sight 14, which forms the subject of the present invention. The rear sight may be of any approved kind, preferably equipped with an aperture through which the eye may look to line up the front sight with the target.

As appears best in Figs. 4 and 5, my front sight consists of two principal elements, (1) a hood 15 having a base 16 fitted within a dove-tailed slot 17 formed transversely of the gun barrel, and (2) a cylindrical shell 18 arranged to fit within the hood. The engaging surfaces of the hood and shell may be slightly tapered, if desired, so that the latter element will fit snugly within the hood. I prefer that these elements should be constructed to permit removal of the shell, whenever desired, leaving only the hood fixedly secured to the barrel. The proper replacement of the shell is assured by a rib 19 mounted on the inner side of the hood, the rib allowing insertion of the shell only when the latter is correctly rotated to present a groove 20 formed in the shell's surface in position to register with the rib 19.

The exterior surface of the shell is formed with a peripheral groove or channel 21.

Also through the shell, extending in parallel relation to its axis, are several slits 22, four in number in the construction shown, and situated 90 degrees apart. Interiorly of the shell extending diametrically across between the slits are "cross-hairs" consisting of two thin metallic strips 23 (see Figs. 5 and 6) of similar formation, each provided with a slit 24 at its middle point extending transversely for about half its width. In assembling these strips 23 into the shell they are inserted through diametrically opposite slits 22 and in planes one in advance of the other. They are then moved into lapping relation, this being possible by reason of the slits 24, and into the same plane with the channel 21 on the outer side of the shell. These two strips 23 are each of such length as to project end portions 25 through the shell, these ends being clenched or otherwise secured to lie within the channel 21 and flush with the outer surface of the shell. The assembling of the parts in this manner may, if desired, be completed by soldering the ends 25 of the strips permanently in place. The juncture of the strips within the shell marks the center of the front sight, and at this point a bead or pin-head 26 may be placed.

It will be noted that the strips 23 occupy vertical and horizontal positions within the shell at all times, owing to the rib and groove means provided for alining the shell properly within the hood. It is, furthermore, to be observed that the strips which are preferably formed of very thin metal present the effect of "cross-hairs," with a bead or pin-point at the center of the sight, enabling the shooter to accurately aim the gun, and place the center of the sight directly upon the target. If necessary to aim ahead or above the target the presence of the horizontal and vertical cross-hairs will aid the shooter in estimating the proper lead or elevation required to hit the target.

In the form shown in Figs. 7 to 9 inclusive, the hood proper, designated as 27, is formed with the usual base 28 arranged to be locked within a suitable slot 29 in the gun barrel. The rear end 30 of the hood is extended, however, and is tapered clear to its extremity 31. At this point it may be slotted, if desired, as at 32, to facilitate reverse bending in conformity with the curve of the proximate surface of the barrel. If preferred, the hood may be slightly sprung to bring it to its final position, as shown in Fig. 7, so that it will always lie tightly upon the barrel. In the construction of Fig. 10, substantially the same form of hood is used, except that a band or ring 32 is employed to retain the rear extremity of the hood tightly upon the barrel.

By providing a protecting hood for the shell containing the cross-hairs, I eliminate danger of these delicate parts being accidentally struck or harmed. It frequently happens, in carrying a gun, that the forward end of the barrel hits against some obstruction, such as might injure a sight of the kind under description. Any injury from such a cause is prevented by means of the present hood, the form shown in Figs. 7 to 10 inclusive being particularly effective for this purpose, owing to the rearward taper of its walls, which tends to deflect any blow which the hood might otherwise receive. The shell containing these cross-hairs, on account of its detachable mounting within the hood, may be easily removed whenever desired, or replaced if necessary.

The present gun sight, which has been described in detail, is seen to be extremely simple. On account of the very thin character of the metallic strips used to form the cross-hairs, practically no obstruction is offered to the vision when taking aim. These cross-hairs serve in a very effective manner to guide the eye in aiming, and at the same time afford a support at their intersection for a bead or pin-head, which can be placed directly upon the target.

I claim:

1. A front sight for guns, consisting of a hood secured to the gun barrel, a shell removably positioned within the hood, the engaging surfaces of the shell and hood being tapered, permitting a tight fit therebetween if desired, and coöperating means on the hood and shell permitting the entrance of the latter only when it is in a predetermined rotative position relative to the hood, and cross hairs mounted within the shell, substantially as described.

2. A front sight for guns, comprising a hood secured to the gun barrel, a shell removably positioned within the hood, cooperating means on the hood and shell, permitting the entrance of the latter only when it is in predetermined rotative relation relative to the hood, and cross hairs mounted within the shell, substantially as described.

3. A front sight for guns, including a cylindrical shell adapted for mounting on the gun barrel, the shell being formed exteriorly with an annular channel, and cross hairs mounted within the shell consisting of two thin strips arranged in right angular relation to each other and in the plane of the channel, there being slits longitudinally of the shell through which the ends of the strips are extended to lie in clenched position upon the exterior of the shell within the channel, substantially as described.

4. A front sight for guns, including a cylindrical shell adapted for mounting on the gun barrel, the shell being formed exteriorly with an annular channel and with four slits

longitudinally of its body, the length of each slit being at least twice the width of the channel, and cross hairs mounted within the shell consisting of thin strips arranged in right angular relation to each other and in the plane of the channel, the combined width of the strips being slightly less than the length of the slits, and the ends of the strips being entered through the slits and clenched exteriorly of the shell within the channel, substantially as described.

CHARLES R. KEERAN.

Witness:
EPHRAIM BANNING.