March 10, 1970 W. M. SQUIER ET AL 3,499,224

GUNSIGHT

Filed Feb. 27, 1967

FIG. 1

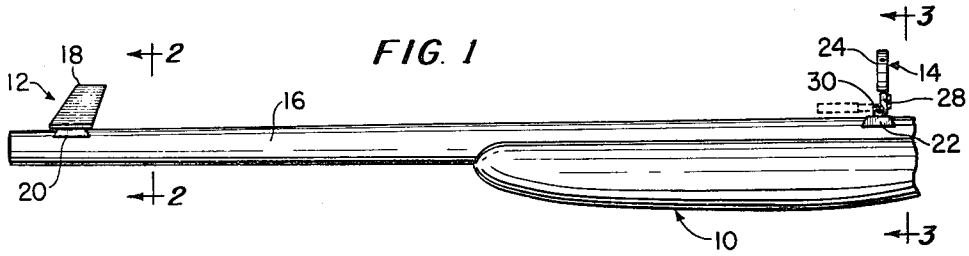


FIG. 2

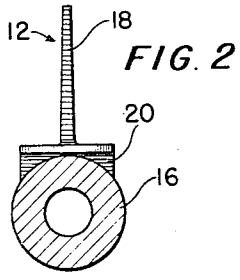


FIG. 3

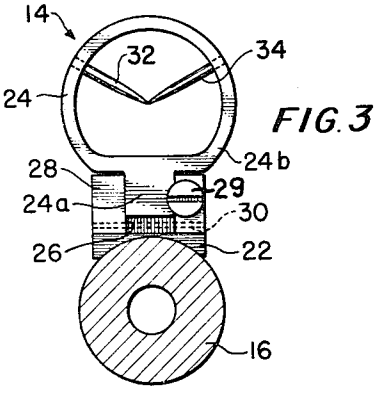


FIG. 4

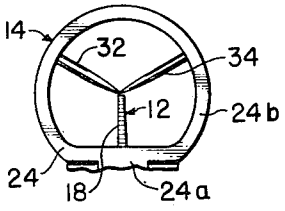


FIG. 6

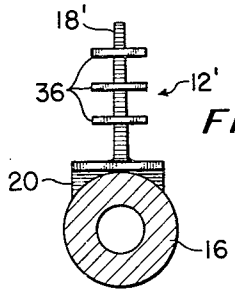


FIG. 5

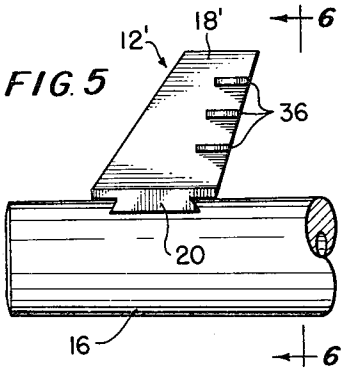
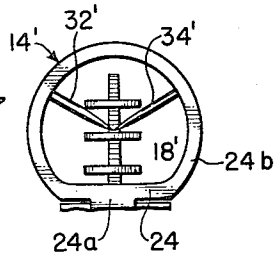


FIG. 7



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GUNSIGHT

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ABSTRACT OF THE DISCLOSURE

A gunsight includes a rear sight having two sighting elements arranged in a V shape, and a front sight including a single vertically extending sighting element. When the front and rear sights are properly aimed, the three sighting elements cooperate to form a Y shape.

The present invention relates to gunsights and more particularly to sighting apparatus of the type including front and rear sights cooperating with one another to form a sight picture when aimed at a target.

Many gunsights using front and rear sights are known. However, known sights are subject to one or more disadvantages including complexity, difficulty in use, susceptibility to human error, obstruction of the sighting picture by the elements of the sight, and lack of a precise point of aim resulting in impaired accuracy.

Accordingly, it is an object of the present invention to provide a gunsight of improved construction overcoming the disadvantages of known sights.

Another object is to provide a gunsight which does not obstruct the sight picture and which is extremely accurate.

A further object is to provide a gunsight capable of being aimed rapidly, even at a moving target.

Another object of the invention is to provide a gunsight with which the possibility for human error is minimized, and which can be used successfully even by inexperienced persons.

Another object of the invention is to provide improved sighting apparatus of simple construction.

Further objects and advantages of the present invention will appear as the following description proceeds, and the features of novelty which characterize the invention will be pointed out with particularity in the claims annexed to and forming a part of this specification.

For a better understanding of the present invention, reference may be had to the accompanying drawing in which:

FIG. 1 is a side elevational view of the barrel portion of a rifle provided with sighting apparatus constructed in accordance with the present invention;

FIG. 2 is an enlarged sectional view along the line 2—2 of FIG. 1 illustrating the front sight;

FIG. 3 is an enlarged sectional view along the line 3—3 of FIG. 1 illustrating the rear sight;

FIG. 4 is a view illustrating the sight picture as it appears to a user of the sighting apparatus;

FIG. 5 is a fragmentary side elevational view of a front sight comprising an alternative embodiment of the invention;

FIG. 6 is a sectional view along the line 6—6 of FIG. 5; and

FIG. 7 is a view illustrating the sight picture formed by the front sight of FIGS. 5 and 6, and also illustrating an alternative rear sight construction.

Briefly, a gunsight constructed in accordance with the present invention includes a front sight and a rear sight. The rear sight includes two sighting elements extending radially inwardly toward a point and forming a V shape,

and the front sight includes a single vertically extending sighting element. When the sight is aimed at a target, the vertical element of the front sight is brought into alignment with the point of the V defined by the elements of the rear sight, thus forming an easily recognizable Y shape. Horizontal accuracy is achieved by bringing the vertical element of the front sight in line with the point of the V, and vertical accuracy is effected by lining up a particular point on the front sight element with the point of the V. For short range sighting, the upper tip of the vertical element is aligned with the point of the V, and for longer ranges graduated indicia may be spaced along the front sight element.

Referring now to the drawing and initially to FIG. 1, there is illustrated the barrel portion of a rifle, generally designated as **10**. The rifle **10** is equipped with sighting apparatus embodying the features of the present invention, including a front sight generally designated as **12** and a rear sight generally designated as **14**, these being mounted in spaced positions along a gun barrel **16**. Although the sighting apparatus is illustrated herein as used with a rifle, the apparatus has wide application and may also be used, for example, with shotguns or hand guns.

As shown in FIGS. 1 and 2, the front sight **12** includes a blade or vertical sighting element **18** supported by a mounting block **20** welded or otherwise secured to the barrel **16** near the front end thereof. The blade **18** lies in a vertical plane passing through the center of the rifle barrel **16**, and when viewed from the rear as in FIG. 2, the blade appears as a narrow vertical line.

Referring now to FIGS. 1 and 3, the rear sight **14** is supported adjacent the rear of the barrel **16** on a mounting and hinge block **22** welded or otherwise secured to the barrel. The sight **14** includes a body member **24** having a tongue **24***a* received in a slot **26** in a mounting member **28**, and the body **24** is held in a selected vertical position by a lock screw **29** engageable with the tongue **24***a*. The mounting member **28** and body **24** pivot with respect to the block **22** about a pin **30** so that the rear sight may be moved between its normal upstanding position and a folded position illustrated in broken lines in FIG. 1.

The upper portion of body **24** includes a band like support **24***b* surrounding a substantially unobstructed region which may be termed the field of view visible to a person using the sight. A pair of sighting elements **32** and **34** are supported by the band **24***b* and extend radially inward, converging toward and meeting at a point in the field of view. The sighting elements **32** and **34** are illustrated as comprising pins mounted in holes in the band **24***b*, but they could be formed integrally with the band, and they could comprise an integral single element, if desired. In the illustrated embodiment of the invention, the sighting elements **32** and **34** are each at an angle of approximately 60° from the vertical and thus include an angle of approximately 180°.

The front sight **12** and the rear sight **14** cooperate with one another when the gun is sighted at a target to produce a sight picture as illustrated in FIG. 4, which figure best illustrates the novel features of the present invention. The pair of sighting elements **32** and **34** appear in the sight picture as a V, while the sighting element **18** of the front sight **12** appears as a vertical line. When properly aimed at a target point, the elements **18**, **32** and **34** appear in the sight picture as a Y.

More particularly, when the gun is properly aimed in a horizontal plane, the sighting element **18** is lined up with the point of convergence of the rear sighting elements **32** and **34**. When the apparatus is properly aimed in a vertical plane, the upper tip of the front sight ele-

ment **18** lies at the point of convergence of the rear sight elements **32** and **34**. Thus, when the front and rear sights are properly aimed, the user sees a Y figure formed by the three sighting elements **18**, **32** and **34**, and the central convergence point of the Y can easily be aligned with the target. Since the Y is an easily recognizable and a familiar shape, the possibility for human error is minimized, and sighting apparatus constructed in accordance with the invention has been successfully used by people with little experience.

The three sighting elements **18**, **32**, and **34** are sufficient for extremely accurate, "pin point" sighting, but do not substantially obstruct the field of view as is the case with many known sights. It has been found that with the sighting apparatus of the present invention, sighting may be accomplished rapidly, accurately, and effectively, even with a small or a moving target.

Referring now to FIGS. 5 and 6, there is illustrated a front sight generally designated as **12''** differing from the front sight **12** of FIGS. 1, 2, and 4 in that it is provided with a series of graduated vertically spaced indicia **36** for sighting the gun at various ranges. The indicia **36**, for example, may comprise horizontally disposed bars mounted upon the rear edge of the blade **18** of the front sight. The bars **36** are arranged so that at different ranges a different element **36** is lined up with the point of convergence of the rear sighting elements. For example, at a fifty yard range, the upper tip of the blade **18** may be used, while the elements **36** can be used in descending order as the range is increased by increments of approximately fifty yards.

In FIG. 7 there is shown a rear sight **14'**, illustrated only in part, including a pair of converging sighting elements **32'** and **34'** which converge toward a central point but which terminate just short of the point. This arrangement of the rear sight functions in the same manner as the arragnement described above, and may be preferred in some constructions.

FIG. 7 illustrates the sight picture obtained with the front sight **12'** of FIGS. 4 and 5 used with the rear sight **14'**. When the sights are properly aligned the three sighting elements **18'**, **32'** and **34'** form a Y shape which does not substantially obstruct the sight picture. The sighting apparatus is illustrated as it appears when the sights are aimed for a range of 150 yards.

While there have been illustrated and described particular embodiments of the present invention, it will be apparent to those skilled in the art that various changes and modifications may be made without departing from the invention in its broader aspects, and it is therefore contemplated in the appended claims to cover all such changes and modifications that fall within the true spirit and scope of the invention.

What is claimed as new and desired to be secured by Letters Patent of the United States is:

1. Gunsight apparatus for sighting at a target comprising a plurality of nontransparent sighting elements, including front and rear sights supporting said sighting elements having means defining a field of view obstructed only by said sighting elements when the gunsight apparatus is aimed at a target, said plurality of sighting elements consisting only of first and second sighting elements supported by said rear sight and having a thickness in a direction normal to the direction of sighting such that they substantially define lines in the field of view, and a third sighting element supported by said front sight and having a thickness in a direction normal to the direction of sighting such that it defines substantially a line in the field of view, said third sighting element being vertically disposed, said first and second rear sighting elements being arranged at an angle with respect to one another and at equal angles with respect to a plane defined by said third sighting element, said first and second rear sighting elements terminating substantially at a point, said third sighting element adapted to intersect said point when the sighting elements are sighted at the target, said third sighting element terminating at said point when there is no range correction.

2. The gunsight apparatus of claim **1** wherein said first and second sighting elements extend upwardly and outwardly from said point.

3. The gunsight apparatus of claim **1** wherein said front and rear sights are properly aligned on a target when said sighting elements define a Y.

4. The gunsight apparatus of claim **1** wherein said third isghting element includes a plurality of vertically spaced indicia selectively alignable with said point for sighting a target at different ranges.

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U.S. Cl. X.R.

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