E. MÜLLER.

SIGHT FOR RIFLES AND MACHINE GUNS.

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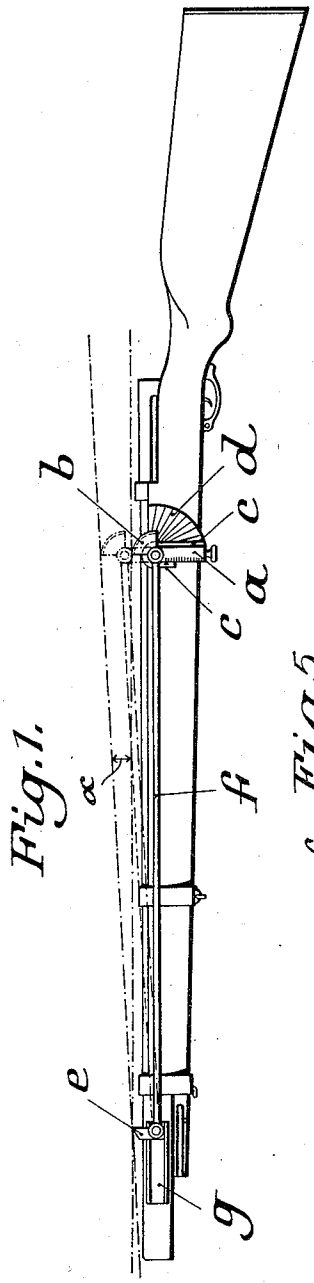

Fig. 1.

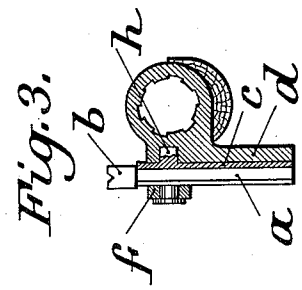

Fig. 3.

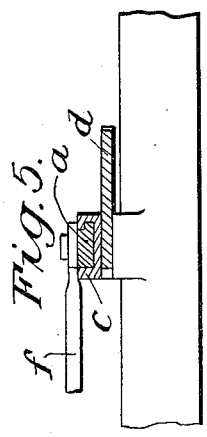

Fig. 5.

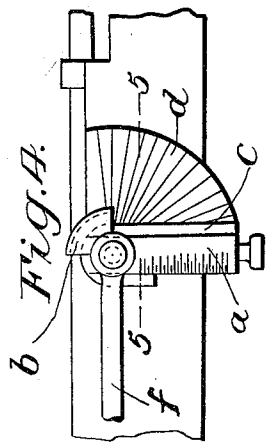

Fig. 4.

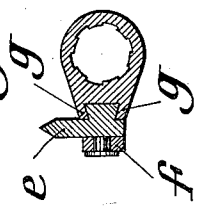

Fig. 2.

WITNESSES

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SIGHT FOR RIFLES AND MACHINE-GUNS.

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To all whom it may concern:

Be it known that I, EMIL MÜLLER, engineer, a subject of the German Emperor, residing at 83 Collenbachstrasse, Dusseldorf, Germany, have invented certain new and useful Improvements in Sights for Rifles and Machine-Guns; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in sights for rifles and machine guns. When shooting at high objects, such for example as air ships, the elevation or the angle of the axis of the gun and the line of sight is smaller than when shooting at an object which is at the same distance from but at the same level with the shooter, and the said elevation is so much the smaller the greater the angle between the line of sight and the horizontal. When the aim is vertically above the shooter, for all the distances of the aim the line of sight is parallel to the axis of the gun, and the elevation is equal to zero. In view of these facts sights for ordnance have heretofore been constructed in such a way, that for each elevation of the line of sight over the axis of the gun and for each distance the necessary correction of the elevation is automatically made. However, such sights can not conveniently be applied to handfire arms.

The object of my improvements is to provide a sight for hand fire arms in which when shooting at high objects the elevation of the line of sight over the axis of the rifle is corrected with a great degree of accuracy.

With this object in view my invention consists in the matters to be described hereinafter and particularly pointed out in the appended claims.

In order that my invention may more clearly be understood an example embodying the same has been shown in the accompanying drawing in which the same letters of reference have been used in all the views to indicate corresponding parts.

In said drawing Figure 1 is a side view of a rifle equipped with the sight, Fig. 2 is a vertical cross-section of the barrel of the gun taken on a plane through the front sight, Fig. 3, is a similar cross-section taken on a plane near the rear sight of the gun. Fig. 4 is a side elevation, on an enlarged scale of the rear sight and its accompanying parts. Fig. 5 is a horizontal section on the line 5—5, Fig. 4, looking upward.

For shooting in a horizontal plane the rear sight is set in the ordinary way according to the distance of the aim by displacing the sight bar a and its edge b within the sleeve c into the position shown in Fig. 1 in dotted lines, in which an arrow and scale indicates the range. Now the axis of the gun and the line of sight are at a certain angle, the elevation. When shooting at higher objects the line of sight is brought out of the horizontal, so as to be at an angle thereto. In such cases the said angle is set on a measuring device, and thereby the elevation is automatically changed, while the sleeve c still indicates the distance of the aim. The sleeve c has a rocking support on the measuring device d by means of a pivot h, and in order to set the angle of the line of sight to the horizontal the bar a and sleeve c are turned rearward at an angle which is equal to the said angle of the line of sight. This angle can be read by means of the right hand edge of the sleeve. By turning the sleeve rearward at an angle of 90° the elevation of the line of sight is made equal to zero.

The front sight e is connected with the upper end of the bar a by a link f, so that it is displaced within a longitudinal guideway g provided therefor at the front end of the barrel. Instead of the sight shown in the drawing, or apart from the same, a telescope may be provided on the bar a.

The notch at the upper end of the rear sight is constructed in such a way, that for any angle of the bar a relatively to the measuring device d it is presented to the eye in the same way. For this purpose the notch is formed circumferentially in a sector, the center of which coincides with the pivot connecting the link and the bar a, and the radius of which is equal to the perpendicular distance of the point of the front sight from the forward pivot of the link. Thereby the line of sight is in any position of the rear sight parallel to the longitudinal axis of the link.

The arrangement may be made in such a way, that the angle of the line of sight to the horizontal is automatically set. For this purpose a weight may be provided at the lower end of the bar a, so that the sleeve c rocks about the pivot h in the manner of a pendulum when the rifle is inclined rear-

ward and downward. Therefore the gun can be used when shooting at an object which constantly varies its angular position relatively to the horizontal, without constantly resetting the sleeve *c* by hand.

While in describing the invention reference has been made to a rifle I wish it to be understood that my invention is not limited to such use, but that the same may be used in other small fire arms, such for example as machine guns.

I claim herein as my invention.

1. In a sight for rifles, machine guns, and the like, the combination with a barrel, of a rear sight, a carrier therefor having a rocking support on the barrel, a vertically adjustable sight-bar mounted on said sight carrier, a front sight longitudinally slidable on said barrel, and a link pivotally connecting said front sight and the sight-bar and adapted to shift the front sight longitudinally of the gun upon an angular displacement of the rear sight.

2. In a sight for rifles, machine guns, and the like, the combination with a barrel, a rear sight carrier having a longitudinally rocking support on the said barrel, a vertically adjustable sight bar mounted on said sight carrier, a front sight longitudinally slidable on said barrel, and a link connecting said front sight and the sight-bar and adapted to shift the front sight longitudinally of the gun upon an angular displacement of the rear sight, the edge of said rear sight being formed on the periphery of a sector the center of which coincides with the rear pivot of the said link and the radius of which is equal to the perpendicular distance of the point of the front sight from the longitudinal axis of the said link.

3. In a sight for rifles, machine guns, and the like, the combination with a barrel, of a rear sight carrier having a longitudinally rocking support on said barrel, a front sight movable longitudinally of the barrel, and a link forming a pivot connection between the two sights.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

EMIL MÜLLER. [L. S.]

Witnesses:
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