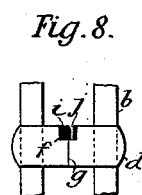
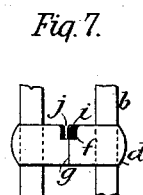
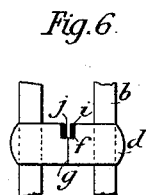
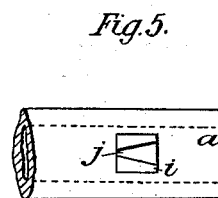
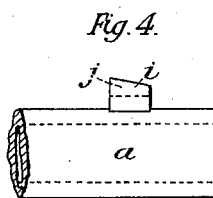
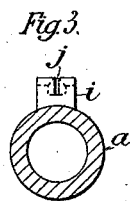
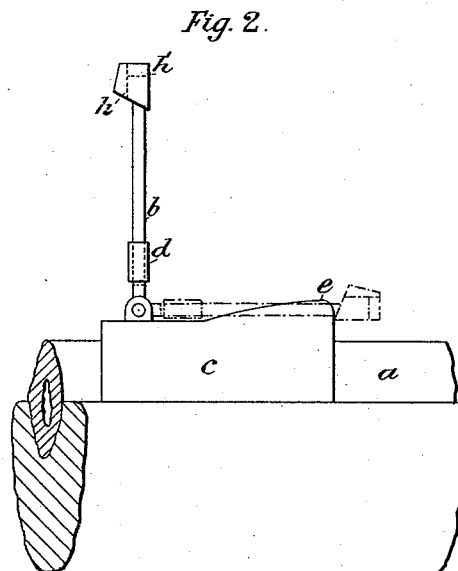
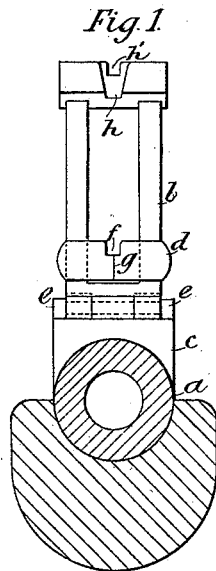


(No Model.)

G. A. LEWES.
SIGHT FOR MILITARY OR OTHER FIRE ARMS.

No. 421,943.

Patented Feb. 25, 1890.



Witnesses:

Wm. S. Norton
J. B. Moore

Inventor:

George A. Lewes
by John J. Halsted for
his Atty.

UNITED STATES PATENT OFFICE.

GEORGE ALBAN LEWES, OF FARNBOROUGH, ENGLAND.

SIGHT FOR MILITARY AND OTHER FIRE-ARMS.

SPECIFICATION forming part of Letters Patent No. 421,943, dated February 25, 1890.

Application filed April 22, 1889. Serial No. 308,142. (No model.) Patented in Belgium January 27, 1888, No. 80,414, and in England October 1, 1888, No. 14,093.

To all whom it may concern:

Be it known that I, GEORGE ALBAN LEWES, a subject of the Queen of Great Britain, residing at Farnborough, England, have invented new and useful Improvements in Sights for Military and other Fire-Arms, and for Ordnance, (patented in Great Britain, No. 14,093, dated October 1, 1888, and in Belgium, No. 80,414, dated January 27, 1888,) of which the following is a specification.

My invention relates to sights for military and other rifles, machine-guns, and ordnance, and has for its chief object to provide means whereby a rifle may be much more readily and accurately sighted than heretofore and the sight adjusted; and to this end it comprises the improvements hereinafter described.

In the accompanying drawings, Figures 1 and 2 are a rear elevation and side elevation, respectively, of a sliding back sight constructed according to my invention and adapted for application to a rifle; and Figs. 3 and 4 are views similar to Figs. 1 and 2, respectively, of the fore sight. Fig. 5 is a plan of the fore sight. Figs. 6, 7, and 8 are views illustrating the operation of the sights.

a indicates the barrel of a rifle; *b*, the sight-flap, which is hinged or jointed to the block *c* on the barrel; *d*, the bar sliding on the flap and having its upper edge beveled; and *e e*, flanges upon the block, which serve as a protection and support for the flap.

f is a square or approximately square notch, which is formed in the central portion of the upper edge of the sliding bar, and from the center of the bottom of which extends a fine white or platinum line *g*.

h is a notch of similar size and shape to the notch *f*, formed in the head portion of the flap and adapted to be used as hereinafter described, and *h'* is another notch in the said head and corresponding to the greatest range for which the rifle is sighted.

The fore sight consists of a block *i*, which has a straight top and a central slot *j*, as shown in Fig. 3, and which is beveled downward toward the muzzle, as shown in Fig. 4, the said block being of such height that the accuracy of aim is not affected by fixing the bayonet. This slot itself also widens toward

the muzzle, as shown in Fig. 5 and in dotted lines in Fig. 3. This slot is not intended to be looked through, but merely to form a center line on the fore sight in place of an ordinary line of platinum or enamel, it having been found that such a line is very liable to be damaged in fixing and unfixing bayonets, whereas the line formed by a slot is capable of a great amount of rough wear. The fore sight *i* is of such size that it completely covers the notch *f* in the slide *d*, or the notches *h* or *h'*, when sighting the fire-arm, the aim being correct when the tops of the sliding bar *d* or of the head portion of the flap and of the fore sight *i* appear to form a continuous horizontal line and when the line formed by the slot *j* coincides with the line *g*, as shown in Fig. 6, or the block is fairly in the middle of the notch.

For short ranges—say ranges under five hundred yards—the sights are so adjusted that when the sliding bar is down and the flap lying flat, as shown in dotted lines in Fig. 2, the rifle would cover a man at any distance under three hundred yards. In this case the slot *h* is used in conjunction with the sight *i*. The height of the flanges *e e* should be such that when the bar *d* is pushed up the flap as far as it will go and the flap is thrown down, so that the bar *d* bears against the said flanges, the elevation will be correct for four hundred yards. For five hundred yards the sliding bar will be run down as far as it will go and the flap raised. For distances above five hundred yards the bar *d* is raised according to the graduations on the flap, as in a Martini-Henry rifle, which graduations will obviously run according to the arm to which the sight is applied. The slot *h'* serves for sighting the rifle at the extreme range for which it is intended to be sighted.

The advantage of a sight constructed so as to allow of this kind of adjustment is that a man using the rifle is enabled to adjust the sights for short ranges by a touch in the dark or without looking at them. The sliding bar *d* may be provided with an adjustable wind-gage, if desired; but this is not necessary, as, owing to the use of the slot *f* in the bar *d*, wind can be allowed for, as indicated in Figs. 7 and 8, without losing sight

of the line *j* of the fore sight, the line *j* on the block *i* being then more or less away from the center of the slot *j*, as indicated in Figs. 7 and 8. I sometimes dispense with the line *g* in the back sight, in which case in sighting the arm a fine line of light must be seen at each side of the fore sight.

In the application of my invention to ordnance the notch for the back sight is cut in the head of the present tangent sight and the square fore sight substituted for that now generally used.

The chief advantages of my invention are that the liability of taking in more of the fore sight than is actually intended, and so firing too high, is obviated; that it affords the firer every facility for observing objects moving across the front, as they can be seen moving above and along the line of the top of the sight; that in volley-firing it enables the whole volley to be delivered at the same elevation; that the elevation is not affected by changes of light, and that the tendency to blur is reduced to a minimum.

It is obvious that my improvements in back sights may be applied to back sights composed of a series of hinged plates.

I claim—

1. The combination, with a back sight of a fire-arm having a slot therein, of a fore sight constituted of a block having a straight top and a central slot, and which is beveled downward toward the muzzle, said block being of

such a height that the accuracy of aim is not affected by fixing the bayonet, all as and for the purposes set forth.

2. The combination, with a fore sight of a fire-arm constituted of a block having a straight top and a central slot widening toward the muzzle, and which is beveled downward toward the muzzle and having the height, as described, of a back sight composed of a hinged flap on which a notched bar slides, and which flap also has a head provided with notches, as described, all as and for the purpose set forth.

3. The described devices for adapting a sight to be adjusted for short ranges by touch and without inspection, consisting of the combination, with a fore sight constituted of a block having a straight top and a central slot, and which is beveled downward toward the muzzle, of a hind sight constituted of the block *c* on the barrel and provided with curved or inclined flanges *e*, the hinged flap *b*, connected to the block, and the slide-bar *d* on the flap, the curve or incline *e* being, as set forth, such that when the slide-bar is pushed up the flap and lies upon the top of the incline or curve the adjustment will be correct for the next range, all substantially as described.

GEORGE ALBAN LEWES.

Witnesses:

THOMAS M. WALLER,
A. G. MASSARD.