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Patented Mar. 6, 1900.

G. DURRENBERGER.
SIGHT FOR FIREARMS.

(Application filed Aug. 17, 1899.)

(No Model.)

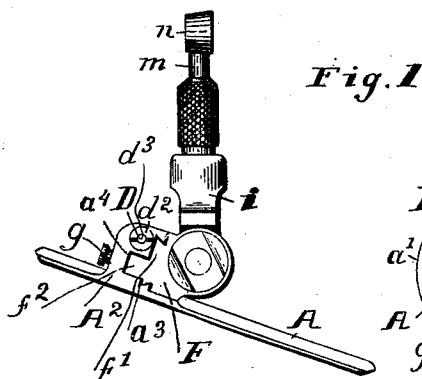


Fig. 1

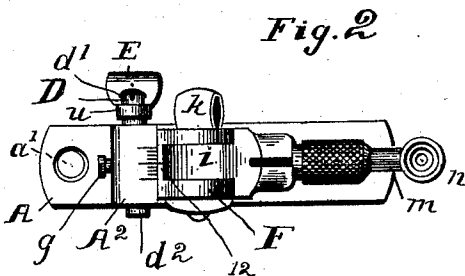


Fig. 2

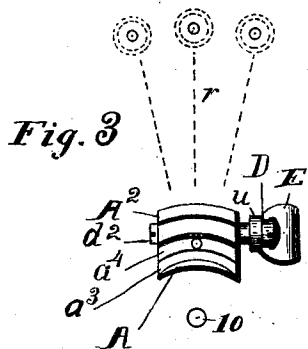


Fig. 3

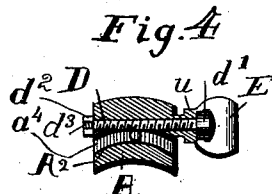


Fig. 4

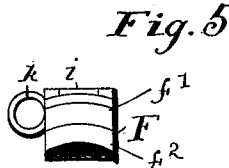


Fig. 5

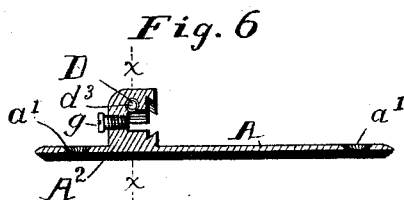


Fig. 6

Fig. 7

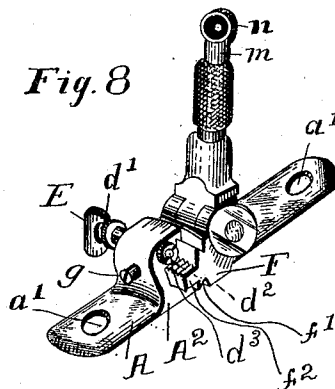
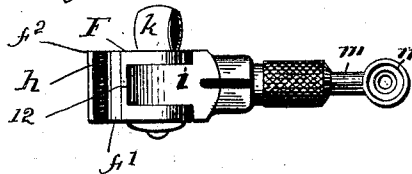


Fig. 8

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SIGHT FOR FIREARMS.

SPECIFICATION forming part of Letters Patent No. 644,584, dated March 6, 1900.

Application filed August 17, 1899. Serial No. 727,507. (No model.)

To all whom it may concern:

Be it known that I, GEORGE DURRENBERGER, a citizen of the United States, residing at Middlefield, in the county of Middlesex and State of Connecticut, have invented certain new and useful Improvements in Sights for Firearms, of which the following is a specification.

My invention relates to an improvement in sights for firearms, and has for its object to provide a wind-gage sight of simple, strong, and compact construction, easily adjusted by a simple mechanical movement, and adapted to carry the sight rapidly to position and hold it securely in place.

The invention consists in the novel construction, arrangement, and combination of the base having the curved transverse guide bearing or way, the sight-carrier fitted therein, and the adjusting mechanism and parts, as hereinafter more fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of my improved sight, and Fig. 2 is a plan view of the same with the sight part depressed. Fig. 3 is an end view of the base viewed from the rear or right-hand side of Fig. 6. Fig. 4 is a cross-section on line $x x$ of Fig. 6. Fig. 5 is an end view of the sight-carrier removed from the base. Fig. 6 is a longitudinal vertical section through the base. Fig. 7 is a plan view of the sight-carrier in the depressed position of Fig. 2. Fig. 8 is a perspective view of the sight, showing its mode of operation.

Referring to the drawings, A designates the base of the sight, which is adapted to be secured to the tang or stock of the firearm in the usual manner by screws passing through the perforations a' . Near the forward end of the base is a raised part A^2 , formed with a transverse dovetailed groove a^3 in its rear face and having the groove a^4 of rectangular cross-section at the front of the said dovetailed groove, as shown in Figs. 1, 3, and 8. Said grooves comprise arcs of a circle struck from the center 10 below the base, which center may conform to any circle required of longer or shorter radius.

Journalled in the part A^2 is a horizontal ad-

justing-screw D, located just above and cutting into the highest or central part of the groove a^4 . Said screw is retained in place by a head d' on one end and a nut d^2 on the other end screwed upon the reduced part d^3 thereof. A folding operating head or handle E is attached to the head d' for turning it; but this feature is old and hence requires no further description.

F designates the sight-carrier, which is provided with a dovetailed part f' , fitting the groove a^3 , and a part f^2 , projecting therefrom and fitting the groove a^4 in the base. Said parts are fitted to slide freely in the way or grooves in the base, and a set-screw g is provided in the front of the part A^2 for tightening the carrier in its bearing by thrusting it rearwardly against the dovetailed sides of the slot by pressure on the front side of the part f^2 . The parts of the carrier fitting the grooves of the base comprise arcs struck from the same radius as the grooves in the base, and consequently fit perfectly therein.

The upper or exterior surface of the part f^2 is formed with a rack or series of teeth adapted to intermesh with the threads of the screw D, thus comprising worm-gear adjusting mechanism. In operation the rotation of the screw D, by means of the handle E, by impact of its threads upon the rack h , causes the carrier to slide in its bearings to the right or left of a central position for purposes of wind-gage. The upper surface of the part A^2 is graduated, as shown in Fig. 1, to designate the amount of wind-gage or position of the zero-mark 12 on the carrier relatively to the said scale. The hub u on the base may also be graduated to mark fractional revolutions of the adjusting-screw, as determined by a zero-mark on the head of the screw.

To the sight-carrier F is hinged the sight-part i by means of a pivot, preferably formed with a loop k at one end, terminating in a tongue comprising one side of the pivot, and adapted by spring tension to keep the joint of the hinge tight and by its friction hold the sight part at any position; but such feature is old, here requiring no further description, it being understood that any suitable form of pivot-joint may be employed, and also, if

desired, the sight part may be rigidly mounted on the carrier and not adapted to fold, the invention relating to the combination of the carrier and base and mode of operating them relatively to each other. The sight-post, here shown as of the type having a vertically-adjustable stem *m* carrying the sight *n*, will also be understood as forming no part of this invention and here requiring no further description. Fig. 3, by means of dotted lines *r*, shows the positions of the sight and axis of the sight-post as the carrier is moved in its guiding-way in the base. It will be seen that by means of the construction aforesaid the axis of the sight-post is always held radial to the center 10, and the sight *n* is carried in a path the length of which is multiplied with reference to the travel of the adjusting-screw *D* proportionately to the distance of the sight *n* from the center 10 over that of the distance of the screw from the center, whereby a slight movement of the screw will carry the sight through a great space, and the adjustment of the sight may be effected very rapidly and easily. Fig. 8 shows the sight adjusted to its extreme position at the right of the center.

It will be understood that the invention is not restricted to the form of sight shown, but may be applied to any class or design of sights adapted for use as rear wind-gage sights. In assembling the parts it is only necessary to insert the carrier *F* in the guiding-groove in the base and secure the adjusting-screw in place. The parts are strong and are not subject to excessive wear or of becoming loose or out of order. The form of the groove or guiding-way in the base need not be confined to the dovetailed section, as any other shape of retaining capacity—that is, wider at the bottom than at the surface—will attain the result of holding the carrier in place.

I claim as my invention and desire to secure by Letters Patent—

1. In a sight for firearms the combination of a base, a sight-carrier guided thereon to swing in an arc having its axis below the base and longitudinal of the barrel, and adjusting means for operating the carrier in its guiding-bearings to either side of the vertical central plane of the barrel for wind-gage, substantially as and for the purpose specified.

2. In a wind-gage sight for firearms, the

combination of a base provided with a transverse curved groove or guiding-way, a sight-carrier fitting and adapted to travel in said groove or way, and adjusting means for moving the carrier along the guiding-way to adjust the sight for wind-gage, substantially as and for the purpose specified.

3. In a wind-gage sight for firearms, the combination of a base adapted to be secured to the firearm and provided with a guiding-groove curved in the arc of a circle transverse to the axis of the barrel and of retaining form in cross-section, a sight-carrier fitting and received in said guiding-groove and provided with a rack or series of teeth and an adjusting-screw journaled in the base and intermeshing with the said rack or teeth to operate the sight-carrier in its bearings substantially as and for the purpose specified.

4. In a wind-gage sight for firearms, the combination of the base adapted to be secured to the firearm and provided with a raised part having a transverse groove curved in the arc of a circle and of retaining form in cross-section; a carrier fitting said groove and provided with a rack or section of a worm-gear, a sight mounted on said carrier, and an adjusting-screw journaled in said raised part of the base and intermeshing with the worm-gear teeth of the carrier for adjusting the sight for wind-gage, substantially as and for the purpose specified.

5. In a wind-gage sight for firearms, the combination of a base provided with the raised part *A*² having the transverse curved groove *a*³ in its rear face, and the groove *a*⁴ forward thereof, an adjusting-screw journaled in the base over and impinging upon the highest part of said groove *a*⁴, a sight-carrier provided with the curved projecting part *f*¹ fitting the groove *a*³ of the base, and a part *f*² joined therewith and fitting the groove *a*⁴ of the base, and provided with a rack or teeth upon its exterior surface intermeshed with said adjusting-screw, a sight mounted upon said carrier, and means for tightening the carrier in its guiding grooves or ways, substantially in the manner and for the purpose specified.

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Witnesses:

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ALFRED H. AUGUR.