

W. J. C. DOWNEY.

SIGHT FOR FIREARMS.

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939,813.

Patented Nov. 9, 1909.

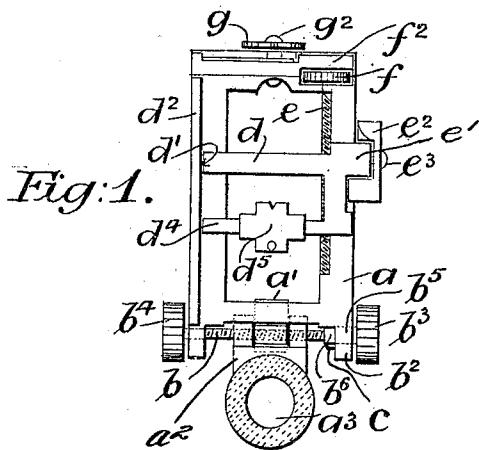


Fig: 1.

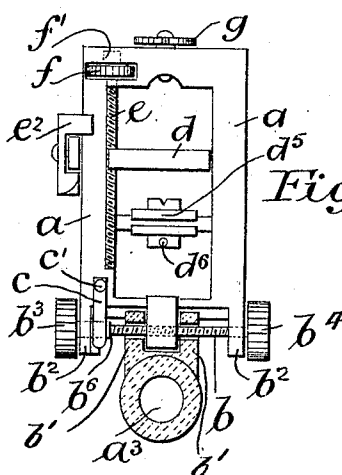


Fig: 2.

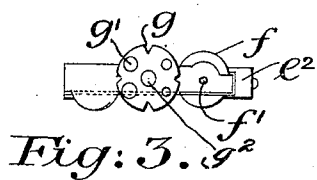


Fig: 3.

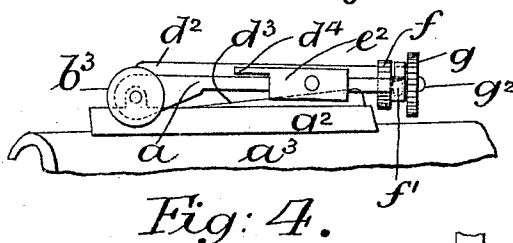


Fig: 4.

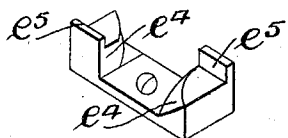


Fig: 5.

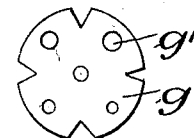


Fig: 6.

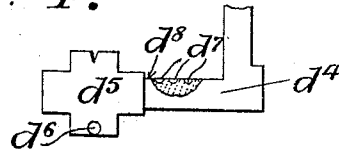


Fig: 7.

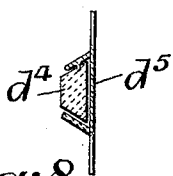


Fig: 8.

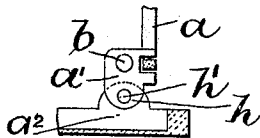


Fig: 9.

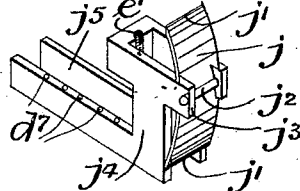


Fig: 10.

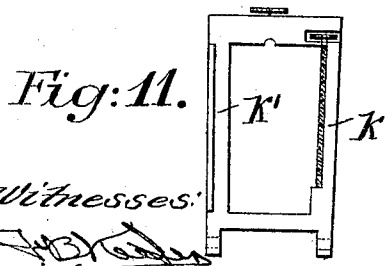


Fig: 11.

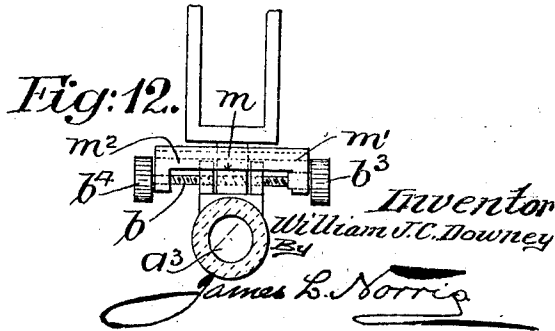


Fig: 12.

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SIGHT FOR FIREARMS.

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Specification of Letters Patent.

Patented Nov. 9, 1909.

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To all whom it may concern:

Be it known that I, WILLIAM JOHN CARLIN DOWNEY, a subject of the King of Great Britain, residing at South Perth, in the State of Western Australia and Commonwealth of Australia, have invented certain new and useful Improvements in Sights for Firearms, of which the following is a specification.

This invention relates to new and useful improvements in sights for firearms.

In this invention the first chief feature consists in the means whereby the sight leaf with its sight bar and sight plate as a combined whole is made to traverse bodily across the barrel of the rifle, said movement being obtained by two milled wheels fixed to the ends of a screw threaded spindle which inter-screws into the seat block on which the sight leaf slides, the whole being held on the ordinary bracket of the rifle.

The second chief feature consists in the locking and unlocking means whereby the sight plate and sight bar may be rapidly moved up and down the sight leaf and without the use of the elevator screw.

The third main improvement consists in the employment of a rotatable orthoptic disk which is secured to the top of the sight leaf and formed with notches and openings to coincide with the back sight of the rifle.

The invention comprising the above and other improvements will now be explained in conjunction with the attached drawings in which:—

Figures 1 and 2 are respectively front and back views showing the sight leaf as in vertical position on the barrel of the rifle. Fig. 3 is a part plan view of Fig. 1 and showing the attachment of the orthoptic disk. Fig. 4 shows the sight leaf in its horizontal position on the barrel of the rifle. Fig. 5 is a perspective view of the lock device for the sight plate. Fig. 6 is an enlarged view of the orthoptic disk. Figs. 7 and 8 are respectively front and sectional views of the sight bar. Fig. 9 shows an alternative construction of the sight leaf seat for its easy attachment to and removal from the rifle

barrel and without disturbing the traversing gear. Fig. 10 shows an altered form of sight bar and means for holding it to the sight leaf. Fig. 11 shows a divergent form of sight leaf for automatically overcoming the drift of the bullet. Fig. 12 illustrates the application of my traversing movement to the government regulation sight leaf.

In this invention the sight leaf as *a* is slidably related to the seat block *a*¹ on which the sight leaf sits, said block being held between the cheeks of the bracket *a*² formed on the barrel *a*³ of the rifle. This seat block *a*¹ is internally threaded to receive the screw threaded spindle *b* which rotates loosely and is guided in the cheeks *b*¹ of the bracket *a*² and also in the shoulders *b*² of the sight leaf as shown in Figs. 1 and 2. This spindle *b* is rotated by the milled wheels *b*³ and *b*⁴ which are fixed at each end of the spindle and butt up flush against the shoulders *b*². The rotation of these wheels causes the sight leaf and its attached parts to bodily traverse in either direction across the face of the barrel *a*³. The spindle *b* acts as the traversing agent for the sight leaf and also acts as the usual hinge pin for allowing the sight leaf to be raised or lowered as shown in Figs. 1, 2 and 4. One of these milled wheels *b*³ (see Figs. 1 and 2) is made with an inwardly extending boss *b*⁵ having a square section terminal as *b*⁶ for engagement with a spring as *c* which latter is secured as at *c*¹ to the sight leaf. By means of this spring and square formation I obtain an indicator or escapement action at each quarterly turn of the traverse spindle *b*, whereby the rifleman may set the gage by feel in addition to that of sight. Said spring may be pushed aside on *c*¹ so as to release it from the square *b*⁶. The sight plate slides up and down the face of the sight leaf and being made with the upper cross bar *d* whose left hand end *d*¹ is suitably cut out and butts up against the guide ridge *d*² formed on the side of the sight leaf. The back of this bar *d* engages with the ramp *d*³ when the sight leaf is used for short range firing and in the position as shown in Fig. 4. The lower bar *d*⁴ carries the sight piece *d*⁵ made in the form of a clip

(see Figs. 7 and 8) and having the usual V notch and also formed with the orthoptic opening d^6 for fine sighting. This sight piece d^5 is reversible on its bar d^4 so permitting either the V notch or the opening d^6 to be employed as desired. This sight piece is made with small dents which fit into corresponding indentations d^7 formed on the upper face d^8 of the bar d^4 as shown clearly in Fig. 7, the purpose being that each indentation coincides with a given number of degrees to the right or left and retains the sight piece at any such desired point. The sight plate $d-d^4$ is operated in its up and down movement on the sight leaf by the screw spindle e for fine adjustment. Said spindle interscrews into a nut as e^1 having a threaded groove and formed on the upper bar d of the sight plate, said grooved nut is made to close for action upon the spindle e by means of the locking and unlocking cam device e^2 which is pivoted on the pin e^3 . The construction of this device e^2 is clearly shown in Fig. 5; it is made with spiral incline faces e^4 which engage with correspondingly incline faces formed on the outer end of the bar d . This device is formed with the shoulders e^5 oppositely to each other so as to lock home against the back and front faces of the side of the sight leaf. The screw e is actuated by the milled wheel f so as to give the vertical traversing movement to the sight plate, said screw being formed with the square f^1 for engagement with the spring f^2 for obtaining a similar indicator or feel action as above mentioned in connection with the traverse setting of the sight plate. When it is desired to rapidly raise or lower the sight plate without the aid of the spindle e , the device e^2 is unlocked by giving a quarter turn whereupon the sight plate is thrown out of operative engagement with said spindle and is free for being raised or lowered. On the head of the sight leaf and for fine sighting I attach an orthoptic disk g (see Figs. 3 and 6) formed with V notches and orthoptic openings g^1 of varying sizes. This disk is rotatable on its pin g^2 and adapted to be brought so that the openings g^1 and notches coincide with the usual V sight of the sight leaf.

Referring to Fig. 9 there is shown in section an alternative construction of the seat block a^1 for the easy attachment and detachment of the sight leaf to or from the barrel. Said construction consists in forming the seat block with a downward extension as h in which is formed the additional hole to receive the hinge pin h^1 for connecting the sight leaf and its parts to the barrel and independent of the traversing spindle b . By removing the pin h^1 the sight leaf and its attached parts as a whole is unshipped from

off the barrel when not required and without disturbing the traversing gear.

The alternative means for the rapid up and down travel of the sight plate on the sight leaf as shown in Fig. 10 consists of a leaf spring as j which impinges at its edges j^1 against the edge of one side of the sight leaf and is held in position by the pin j^2 and recessed guides as shown in the shoulders j^3 of the sight plate j^4 . In this figure the sight plate is made with the back bar as j^5 for engagement with the ramp when the sight leaf is used in the horizontal position as in Fig. 4. In Fig. 11 the sight leaf is made with its one side k divergent from the fellow side k^1 so that upon the raising or lowering of the sight plate the sight bar is automatically brought to the right so as to overcome the drift of the bullet which latter has a tendency owing to its left handed spin to leave its true line of fire.

Referring to Fig. 12 there is shown the application of my invention to a regulation sight leaf, this result being obtained by hinging the sight leaf at m by the pin m^1 to the carriage bed m^2 and which latter with its attached sight leaf is made to traverse by the screw b and wheels b^3 and b^4 in similar manner as above described in connection with Figs. 1 and 2. The sight leaf and sight plate are marked with the degrees for reading in the usual manner.

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

1. In a sight for firearms, the combination with a sight leaf having a pair of spaced shoulders and a slidably related seat block between the shoulders, of a bracket having means for holding the seat block against movement and a transverse spindle having threaded engagement with the seat block and carried by the sight leaf and rotatably mounted on the shoulders but having no axial movement relative thereto.

2. In a sight for firearms, the combination with a sight leaf of a sight plate adjustable longitudinally of the sight leaf and including a transverse bar, and a sight piece mounted on the bar and having a V-shaped notch at one end and an opening at another end, the sight piece being reversible on the bar.

3. In a sight for firearms, a pivotally mounted sight leaf arranged to assume a vertical or horizontal position on the barrel of a firearm and a disk provided with sight openings and pivotally mounted at the free end of the sight leaf in a plane at a right angle to the plane of the sight leaf.

4. In a sight for firearms, the combination with a sight leaf and an adjusting screw extending longitudinally thereof, of a sight plate having a threaded grooved portion

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rigid therewith for engagement with the
screw, and a member provided on the sight
plate for engagement with the sight leaf to
maintain the engagement of the screw and
5 grooved portion, said member being oper-
able to permit of the movement of the sight
plate in effecting a disengagement of the
screw and the grooved portion.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit- 10
nesses.

WILLIAM JOHN CARLIN DOWNEY.

Witnesses:

RICHARD SPARROW,
UDOLPHO WOLFE BURKE.