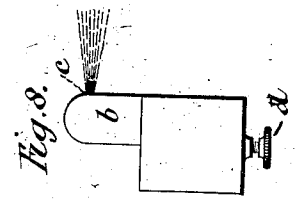
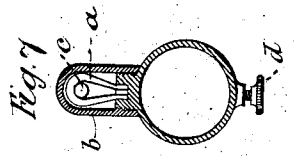
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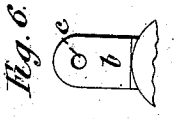
W. WINANS.

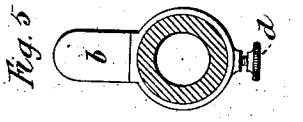
ELECTRIC SIGHT FOR FIRE ARMS.

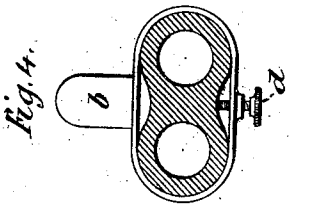
No. 320,200. Patented June 16, 1885.

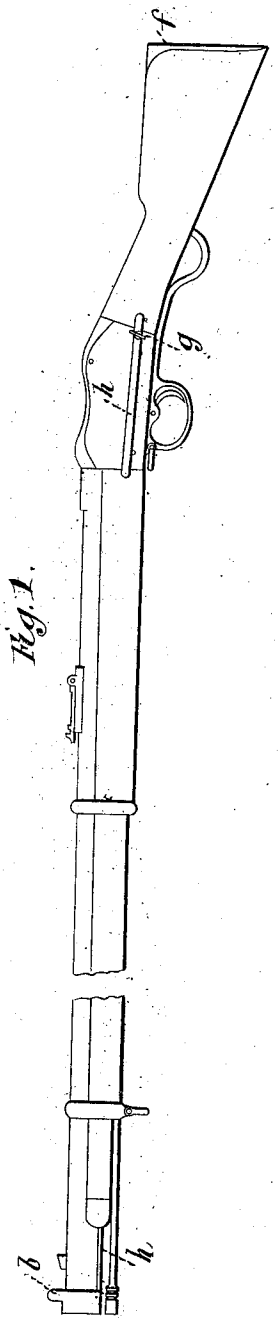




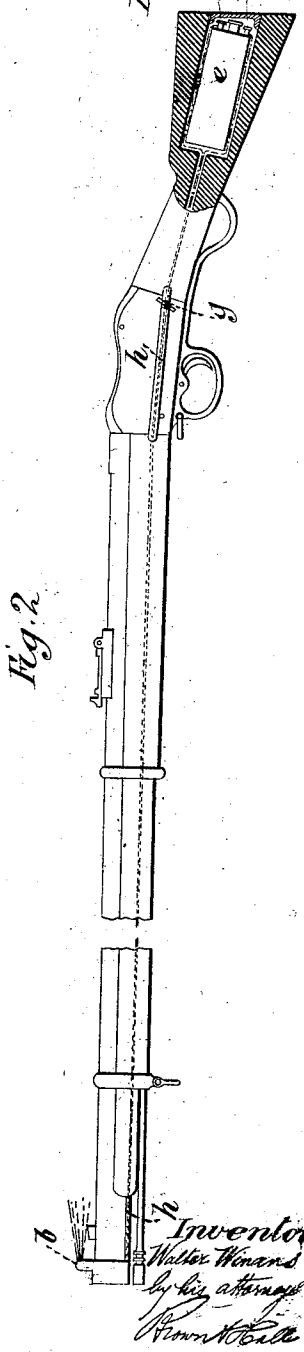












Witnesses:
C. L. Sundgren
Matthew Pollock

Inventor:
Walter Winans
by his attorneys
Brown & Ball

UNITED STATES PATENT OFFICE.

WALTER WINANS, OF BRIGHTON, COUNTY OF SUSSEX, ENGLAND.

ELECTRIC SIGHT FOR FIRE-ARMS.

SPECIFICATION forming part of Letters Patent No. 320,200, dated June 16, 1885.

Application filed April 1, 1835. (No model.)

To all whom it may concern:

Be it known that I, WALTER WINANS, of 2 Clarendon Terrace, Brighton, in the county of Sussex, England, have invented certain new and improved means for facilitating the sighting of fire-arms in the dusk or at night, of which the following is a specification.

The object of the present invention is to facilitate the sighting of fire-arms in the dusk or at night. To this end I adapt to the weapon an electrical front sight and preferably a small electric lamp in which a carbon filament is rendered incandescent by the current from an electric generator or apparatus of any suitable kind adapted to the weapon in any convenient manner. I prefer to employ a primary battery of small size for rendering the fore sight, of whatever character it may be, luminous by electricity, and to adapt it to the stock of the rifle, fitting it within a chamber prepared to receive it.

In the accompanying drawings I have shown my invention as applied to a Martini rifle by way of example.

Figure 1 is a side view of the rifle complete with my invention applied thereto. Fig. 2 is a similar view, partly in section, showing the battery inside the stock. Fig. 3 is a rear end view of the rifle. Figs. 4 and 5 are front views on an enlarged scale of a double and single barreled rifle, respectively, with an electric front sight affixed thereto. Fig. 6 represents the sight as seen by the firer. Fig. 7 is a section through the metal case inclosing the electric lamp with the lamp in place; and Fig. 8 is a side view of the lamp-case.

The incandescent lamp *a* (made as small as practicable) is inclosed in a metal case, *b*, in which is a small hole, *c*, facing the firer, so that a bright spot of light appears just above or on a line with the ordinary fixed sight of the weapon when the current from the generator or battery is passing. The lower part of the case *b* is of a form to fit around the barrel, and is provided with a small clamping-screw, *d*, by which it can be secured in its proper position. The aperture *c* is protected by a piece of glass, and a reflector is arranged within the case *b*, opposite thereto, thus making a miniature electrical bull's-eye or dark lantern of the lamp. The lamp is mounted on a spring or springs after the manner commonly practiced with respect to incandescent lamps, and is packed round with cotton wool, horse-hair, or other elastic substance to prevent breakage by the concussion of the rifle on discharge. This electrical front sight is preferably mounted upon the rifle or gun in the manner illustrated in Figs. 4 and 5; but it might be mounted in a horizontal hollow arm carried by a bracket extending from one side of the barrel; but in any case the opening in the case through which the electric light is seen should be turned toward the rear sight or butt of the weapon, and should be arranged to be seen just above the fixed front sight of the rifle when taking aim, in which case the leaf of the rear sight should be slightly raised or otherwise accordingly adjusted. If the incandescent lamp clasps onto the barrel or barrels of the rifle behind the fixed front sight, the aperture in the metal case is best fixed at the exact height of the top of the fixed front sight, thereby enabling the same aim to be taken as when using the fixed sight.

Referring now to Figs. 2 and 3, *e* is the battery by which the electric front sight is rendered luminous, as required, and it is conveniently adapted to the stock, as shown, and covered in or protected by the heel-plate *f*. *e' e'* are the terminals of the battery, and insulated conductors leading, respectively, to and from the electric lamp are attached thereto. *g* is a switch, of any suitable construction, for making and breaking the electrical circuit. The conductors are preferably laid in a groove in the stock beneath the barrel, and where they emerge from the wood are protected by a metal tube or tubes, *h h*. I have found a chloride-of-silver battery to answer my purpose admirably; but it is obvious that other batteries of small size may be used and may be adapted to the weapon or be connected with the electric sight in other ways than that hereinabove described and illustrated. A silver battery of two cells of rectangular form, each two and one-half inches high by two and one-fourth inches wide and one half inch thick, has been found sufficient for my purpose; but the shape of the cells may be altered to suit the stock, retaining, however, about the same capacity—viz., some five and one-half cubic inches. In some cases the metal work of the rifle may be used to form part of the conductor for the re-

turn-current. A small accumulator or secondary battery might be used in place of the primary battery, and if a regiment of soldiers were to have their rifles fitted with electric front sights these accumulators would be charged and served out each evening. The switch *g* is fixed at a point suitable for operation by the firer in the act of aiming; but it might be connected with the hammer or striker, so that when the rifle is at full-cock the front sight glows, and when the trigger is pulled the light goes out. The battery or accumulator should only be of such power as to make the lamp glow sufficiently to enable the firer to see it plainly, as, if too bright, it would prevent his seeing the object aimed at. The battery or other source of electricity might be carried about the person of the shooter and be connected with the rifle by means of wires, which could be readily attached or detached.

I would remark that I do not limit myself to the use of a miniature incandescent lamp with a carbon filament as the electric front sight, as in some cases a platinum or other wire might be rendered luminous or incandescent by electricity, or electric sparks might be caused to play between two points, in which case an induction-coil may be used in combination with the battery, or a small electro-magnet and make-and-break device may be mounted on the weapon for the same purpose.

Having now particularly described my said invention, I declare that what I claim is—

1. The combination, with the barrel or barrels of a fire-arm, of an electric front sight and a battery or equivalent source of electricity adapted to supply a current of electricity to the said sight for the purpose of more clearly indicating the position of the front sight and thereby facilitating the sighting of the weapon in the dusk or at night, substantially as set forth.

2. The combination, with the barrel or barrels of a fire-arm, of an incandescent electric lamp elastically supported within a detachable protecting hood or case having a small aperture facing the firer, and a battery connected with the said lamp by suitably-arranged conductors, as and for the purpose set forth.

3. The combination, with the barrel or barrels of a fire-arm, of a battery adapted to the stock of the weapon, a front sight capable of being rendered luminous by electricity, and conductors for conveying the current to said front sight when taking aim, as and for the purpose set forth.

WALTER WINANS.

Witnesses:

H. MONTAGUE WILLIAMS,
Solicitor, Brighton, Sussex, England.

A. STANLEY BISHOP,
Solicitor, Brighton, England.