

(No Model.)

2 Sheets—Sheet 1.

C. BECHIS.
SIGHT FOR GUNS.

No. 517,514.

Patented Apr. 3, 1894.

FIG. 1.

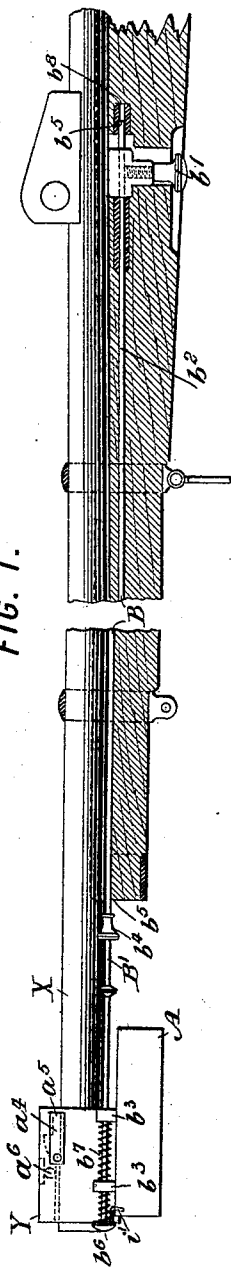


FIG. 2.

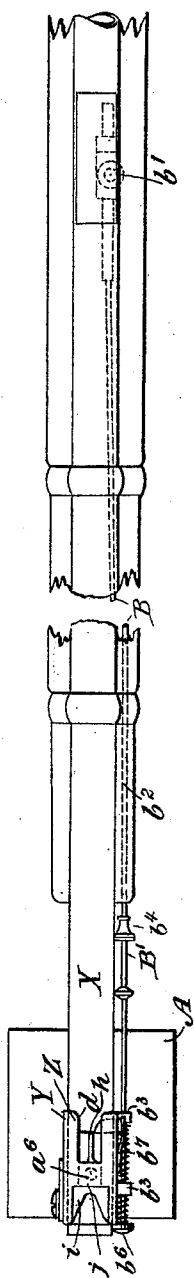


FIG. 4.

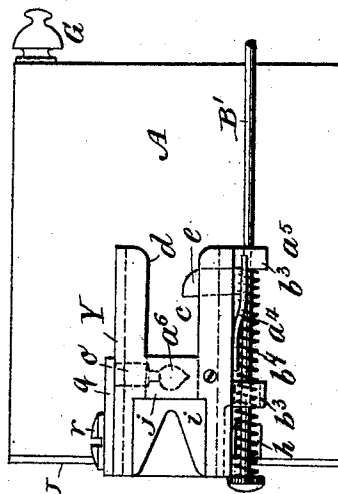


FIG. 3.

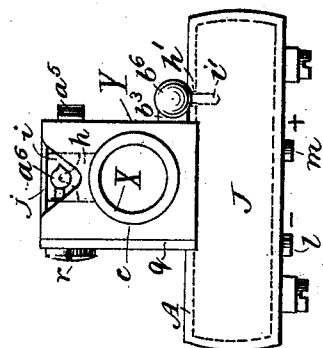
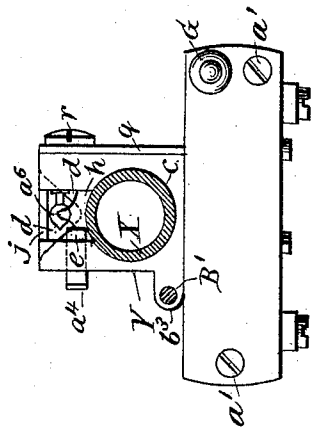


FIG. 5.



WITNESSES:

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C. K. Fraser.

INVENTOR:

Charles Bechis.

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FIG. 6.

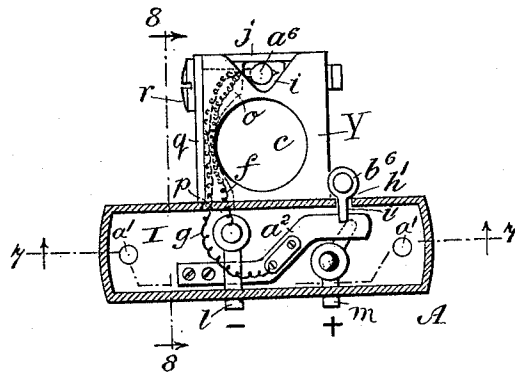


FIG. 7.

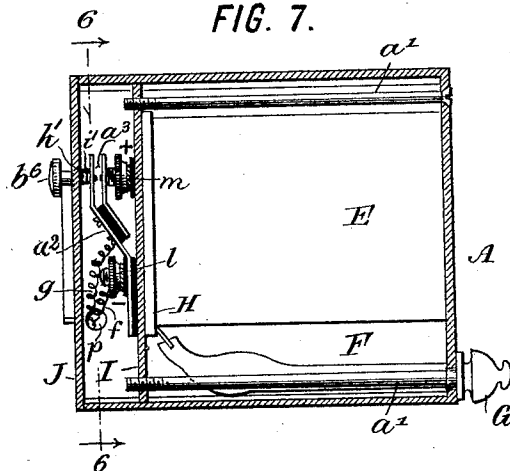
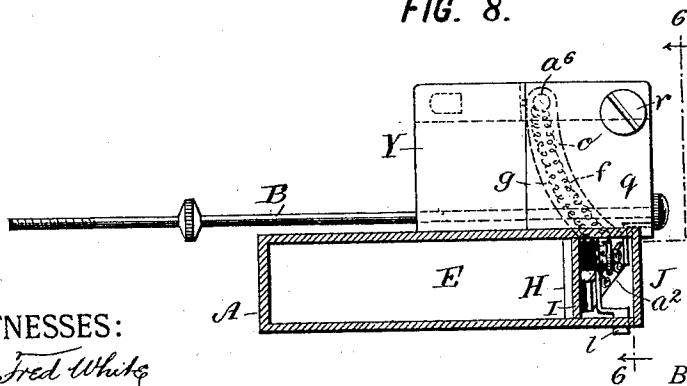


FIG. 8.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES BECHIS, OF TURIN, ITALY.

SIGHT FOR GUNS.

SPECIFICATION forming part of Letters Patent No. 517,514, dated April 3, 1894.

Application filed March 21, 1893. Serial No. 467,106. (No model.) Patented in Italy July 4, 1892, No. 32,138, and in England August 31, 1892, No. 15,613.

To all whom it may concern:

Be it known that I, CHARLES BECHIS, a subject of the King of Italy, residing in the city of Turin, in the Province of Turin, Italy, have invented certain new and useful Improvements in Sights for Guns, of which the following is a specification.

This invention has been patented in Italy by patent dated July 4, 1892, No. 32,138, and in Great Britain by patent dated August 31, 1892, No. 15,613.

This invention relates to fire-arms and ordnance, and aims to provide improvements in the means for sighting such devices in the dark.

To this end in carrying out my invention, I provide an electric illuminator, as a small incandescent lamp, for illuminating one or more of the sights of the arm or ordnance, an electric generator or source of electricity, as an accumulator, for operating said illuminator, and improved means under the control of the person manipulating the arm or ordnance for controlling the operation of the illuminator the parts being so disposed that the person sighting the gun, with the minimum of light applied only at the points where necessary, and only during the time necessary to take aim, can sight the arm or ordnance and then discontinue the light, thus permitting the easy and efficient employment of the arm or ordnance during the night. Preferably these features are provided directly upon the arm or ordnance.

My invention also comprises certain other features of improvement which will be hereinafter fully set forth.

Referring to the accompanying drawings which illustrate certain adaptations of my invention, Figure 1 is a fragmentary side elevation of a portable fire-arm to which the preferred form of my invention is applied, the stock being shown in vertical section. Fig. 2 is a plan view thereof. Fig. 3 is a front elevation thereof on a larger scale. Fig. 4 is a plan view of the illuminator removed. Fig. 5 is a rear elevation of the device, the gun muzzle being in section. Fig. 6 is a vertical cross section thereof on the line 6—6 in Figs. 7 and 8. Fig. 7 is a horizontal section looking from beneath, and cut on the line 7—7 in Fig. 6,

and Fig. 8 is a vertical section thereof on the line 8—8 in Fig. 6.

In the particular adaptation shown an electric accumulator is utilized as the source of electric energy.

I will describe one adaptation of the invention as applied to portable fire-arms, referring to the drawings.

The apparatus here shown consists of a box A which is intended to contain the accumulator, and is made of sheet steel or other suitable material. On this is firmly fixed an iron piece or appendix Y, which serves to secure the apparatus to the muzzle end X of the gun partly through the medium of a bayonet joint Z. This appendix is shown as constructed with a cylindrical hole *c* fitting over the muzzle of the gun, and having a groove *d* receiving the front sighting point *h* of the barrel, and carrying a spring lettered *a*⁴ controlled by a button or thumb piece *a*⁵, which spring carries a catch nose *e* at rear of the sight to lock the apparatus to the gun. The appendix is constructed with a longitudinal groove *i*, which groove is V shaped at the forward end and is covered by a bridge *j*, between the groove *d* and the front. When the apparatus is in place, a small incandescent lamp *a*⁶ carried in the groove *i* beneath the bridge *j* on the appendix rests in front of and above the sight, in such manner as to illuminate or light it when the lamp becomes incandescent through the instantaneous action of the accumulator. The form of the lamp, its brilliant casing or other disposition, is such as to permit a luminous ray to be reflected along the axis of the barrel of the gun, so that the line of sight can be determined with sufficient accuracy to aim at the mark in complete darkness. The accumulator *E* lies within the box A, and there is left at one of its sides a sufficient space *F* for a discharge valve *G* for escape of the gas produced when the accumulator is charged. The cover *H* of the accumulator is of india rubber coated with a steel sheet *I*. The positive pole marked + and the negative pole marked —, are arranged at this cover within the front cover *J* of the box A. From the negative pole a wire *f* leads to the small lamp *a*⁶. The return wire *g* starts from the small lamp and is united to the

spring a^2 fixed at one of its ends to and insulated from the sheet I of the cover H of the accumulator. This spring acts as an interrupter, that is, it serves to close the circuit through two contact points of platinum a^3 when the thumb-piece or button b^6 is drawn toward the stock of the gun, and causes the spring to be moved rearward. This button b^6 has a finger i' projecting through a slot h' in the top of the box A, by which finger it engages the spring to move it.

The appendix Y is constructed with a wire groove o in its side wall, leading from the hole p in the box A up to the lamp groove i , beneath the bridge j , through which wire groove the wires fg rise to the lamp a^6 . This groove o is covered by a plate q held on the side of the appendix by a screw r .

To charge the accumulator it is not necessary to remove the cover J of the box, as the two poles or terminals are provided with projections lm duly protected and insulated, preferably arranged at the under side of the box, by which they can be connected in the charging circuit. The accumulator is fixed in the box by two bolts a' which engage sheet I of the cover H of the accumulator and the rear wall of the box, see Fig. 7.

The means for controlling the illuminator preferably consists of a movable rod B consisting of a wire of small diameter which passes along a channel or slot b^2 formed in the stock U of the gun alongside the ram rod channel. This rod ends at b^5 when in the outward position. This rod carries a thumb-piece b' diametrically opposite the heel of the back sight V of the gun, which thumb-piece is inserted into an aperture R in the wood at the stock or butt end of the gun, and projects with only its head within reach at the under side of the stock. The thumb-piece b' is united to the rod B with its head at right angles thereto. At its other end the rod is provided with a screw-coupling b^4 to which is screwed a second part B' of the rod which part is carried by the box A in eyes b^3 b^3 carried on the side of the appendix Y, and is connected to or disconnected from the main part of the rod as the box is applied to or removed from the gun. This outer part B' of the rod is movably connected to the box by the two eyes b^3 , and at its front end it is provided with the button b^6 which carries a finger i' engaging the interrupter through the slot h' as before described. The spiral spring b' serves to press the rod forward after its two parts are connected by the coupling b^4 , that is, when the apparatus is applied to the gun, and thus, by reason of the forward position of the rod, the interrupter spring a^2 is not compressed by the button b^6 , and the circuit is thus left broken, so that the lamp is not illuminated.

To take aim, the person manipulating the arm draws rearwardly the button b' against the resistance of the spring b^2 , whereby the parts b^2 and B' of the rod B are caused to move backward, and the finger of the button

b^6 engages the interrupter spring a^2 and draws the latter rearward until the contact points a^3 meet and the circuit is closed, whereupon instantaneously the current from the accumulator will pass through the lamp a^6 , which will illuminate the parts sufficiently to permit an accurate aim. The rear end b^2 of the rod B when in the forward position rests at the point b^5 , see Fig. 1, and its maximum movement is from this point to the point b^8 , which is sufficient to operate the interrupter spring and light the lamp.

As the internal construction of the accumulator E permits charging it without opening the box A, it is easy to charge in series and together many of the apparatus. The charging of five hundred of such apparatus at once will only require an electric energy equal to one horse power.

It will be understood that the invention is not limited to all the particular details of construction set forth, nor to the particular arm shown, as it may be availed of as the judgment of those skilled in the art may dictate, without departing from its essential features.

What I claim is the following-defined novel features and combination, substantially as hereinbefore set forth, namely:

1. In a sighting device for portable guns, an electric lamp at the muzzle end of the gun, an electric generator at the muzzle end of the gun connected to said lamp for operating it, and an electric circuit comprising the connection between said lamp and generator, in combination with a circuit closer at the muzzle end of the gun, and in said circuit for controlling said connection, and a rod B for operating said circuit closer extending toward the rear consisting of two separable sections and terminating in a thumb piece b' in the stock of the gun, substantially as and for the purpose set forth.

2. A sighting device for arms consisting of a box A beneath the muzzle of the gun, an accumulator E carried thereby, an appendix Y fixed to the upper side of said box and having a tubular aperture c fitting the muzzle of the gun, and an electric lamp a^6 carried by said appendix for lighting the sight of the gun, electrical connections between said lamp and accumulator and a circuit closer for said connections, substantially as and for the purpose set forth.

3. In a sighting device for arms, the box A removably mounted beneath the muzzle of the gun, an accumulator E carried thereby, an appendix Y fixed to the upper side of said box for connecting it to the gun and having a hole c fitting over the muzzle of the gun, an electric lamp a^6 carried by said appendix for illuminating the sight of the arm, an electric circuit between said lamp and accumulator, a circuit closer in said circuit, and a rearwardly extending rod B connected to said circuit closer for operating it and consisting of two portions B' b^2 and an intermediate separable

coupling b^4 , whereby when said portions are separated said box can be removed, substantially as and for the purpose set forth.

4. A sighting device for arms, consisting of
5 a box A beneath the muzzle of the gun, an accumulator E carried thereby, an appendix Y fixed to the upper side of said box and having a tubular aperture c fitting the muzzle of the gun, said appendix having a groove d embracing the sight of the gun, a catch-nose e engaging said sight to lock the appendix to the gun, a groove i in line with the sight of the gun, and a bridge j over said grooves, and an electric lamp a^6 carried by said appendix
15 for lighting the sight of the gun, electrical connections between said lamp and accumulator and a circuit closer for said connections, substantially as and for the purpose set forth.

5. A sighting device for arms consisting of
20 a box A beneath the muzzle of the gun, an ac-

cumulator E carried thereby, an appendix Y fixed to the upper side of said box and having a tubular aperture c fitting the muzzle of the gun, and an electric lamp a^6 carried by said appendix for lighting the sight of the 25 gun, electrical connections between said lamp and accumulator and a circuit closer for said connections, and contacts l and m for said accumulator projecting externally of said box, whereby said accumulator can be charged 30 without its removal from the box, substantially as and for the purpose set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CHARLES BECHIS.

Witnesses:

LORENZO RAIMONDO FUGE,
FELICE BAZETTA.