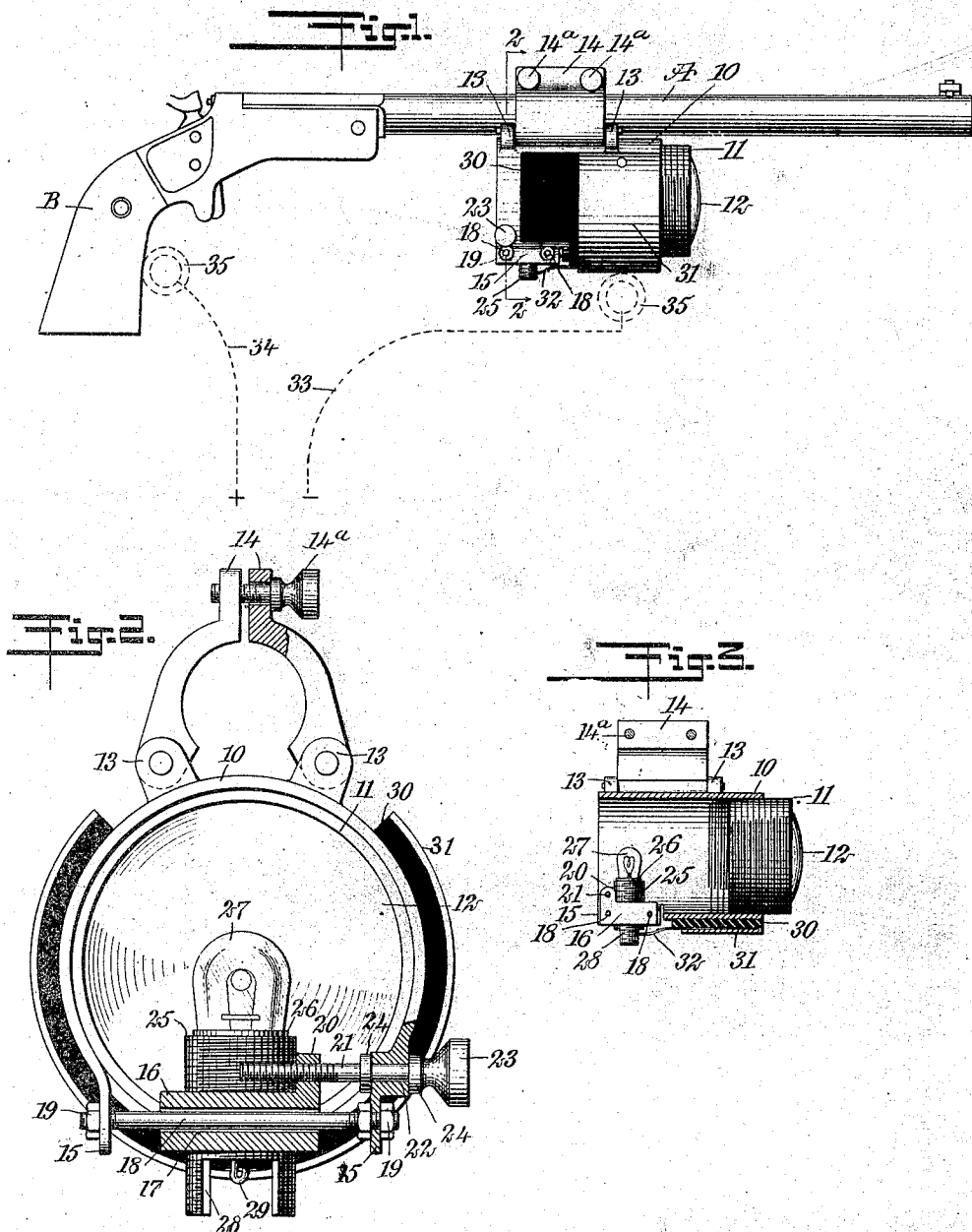


J. C. BARNES.
 AIM DIRECTOR.
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JOSEPH C. BARNES, OF MONTROSE, COLORADO.

AIM-DIRECTOR.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEPH C. BARNES, a citizen of the United States, and a resident of Montrose, in the county of Montrose and State of Colorado, have invented a new and Improved Aim-Director, of which the following is a full, clear, and exact description.

This invention relates to aim directors for firearms and similar weapons, and more particularly to a device of this class which can be removably attached to the barrel or other suitable portion of a firearm, which comprises a source of light such as an electric lamp, lenses for concentrating the light and projecting a beam of the same along the line of flight of the projectile thrown by the gun, so that when the beam of light falls upon an object the bullet fired from the gun will strike at substantially the point indicated by the spot of light; a suitable electrical circuit being provided for the source of light if the latter is an electric lamp.

An object of the invention is to provide a simple, inexpensive and efficient aim director, which can be removably attached to and detached from firearms or other weapons, by means of which the aim of the weapon and the direction of flight of the projectile therefrom can be accurately controlled in darkness, and which can be intermittently controlled so that the beam of light is projected only when it is needed.

A further object of the invention is to provide a device of the class described, which can be adjusted so that the projected beam of light shall coincide substantially with the line of flight of the bullet, and so that the spot of light which falls upon the object shall have a definite predetermined relation to the point at which the bullet strikes.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a side elevation showing an embodiment of my invention applied to a firearm, shown for example as a pistol; Fig.

2 is an enlarged cross section on the line 55 2—2 of Fig. 1; and Fig. 3 is a longitudinal section of the director.

Before proceeding to a more detailed explanation of my invention, it should be clearly understood that the same can be advantageously employed with various kinds of firearms and similar weapons. Needless to say, it is impossible in darkness, to sight a firearm by means of the ordinary sights employed for the purpose, and that therefore, it is impossible to shoot with accuracy in the darkness. By means of my invention a beam of light can be projected from the weapon and this beam can of course be easily directed so that it falls upon the object which it is desired to hit. The arrangement is such that the bullet when fired from the weapon strikes at substantially the point at which the beam of light falls, so that by means of this beam of light the aim of the weapon can be accurately directed. The beam of light may be of different kinds; that is to say, the director may throw a spot, a line, or a cross of light upon the object aimed at, depending upon the construction of the lenses and the other parts of the device. By adjusting the lenses closer to or farther away from the light, the beam may be so regulated that it leaves the front lens nearly parallel with the barrel of the gun. Of course, in operation, the rays are preferably somewhat concentrated, so that they focus at the extreme distance over which the gun is designed to shoot.

If a spot of light is thrown by the director, the device can be so arranged that the bullet will strike at the spot itself. On the other hand, if a line of light is thrown by the director, or if the beam when falling upon an object presents a cross of light, the point of impact of the bullet may have any desired relative position with respect to the line of the cross, depending upon the adjustment of the parts.

Referring more particularly to the drawings, A represents the barrel of a firearm provided with a stock B. I provide a hollow cylindrical body 10 which is interiorly threaded at the forward end to receive a correspondingly threaded lens frame 11, within which are mounted the lenses 12. These may be of any suitable form to concentrate and project beams of light. The

body 10, near the top has pairs of spaced ears 13. Between the corresponding ears are pivotally arranged clamping jaws 14, by means of which the device can be removably mounted upon the barrel A, the clamping jaws being adjustably secured together by means of thumb screws 14^a or the like.

Near the rear end the body, at the bottom, is cut away and has downwardly extending cheeks 15 between which is arranged a block 16. The block 16 has transverse openings 17 therethrough which receive guide rods 18. The latter have the ends arranged in suitable openings of the cheeks and secured in place by means of nuts 19, the guide rods being threaded to receive the nuts. The block is slidable upon the guide rods and has an upward extension or lug 20 having a threaded opening therethrough adapted to receive the correspondingly threaded end of an adjusting screw 21. The latter is movably arranged in an opening 22 in the side of the body 10 and has a head 23 and collars 24 which engage respectively at opposite sides of the opening 22 to prevent the movement of the adjusting screw in the direction of its length. It will be understood that by means of the adjusting screw, the block 16 can be moved transversely of the body for purposes of adjustment.

The block carries a lamp socket 25, into which can be screwed the base 26 of an electric lamp 27, the latter being of any suitable type. The socket 25 extends below the block and has a cut away part 28 into which extends the lamp terminal 29.

A curved insulating member 30 encompasses the body 10 at the sides and the bottom thereof, and carries a contact plate 31 similarly formed. The insulating member is fashioned from rubber or any other suitable material, and serves electrically to isolate the plate 31 with respect to the body. A contact finger 32 is arranged between the member 30 and the plate 31 and extends into the cut away portion 28, engaging the lamp terminal to effect electrical communication therewith.

I have shown in the accompanying drawings a form of my invention in which an electric light is used, as I have found this to be the most convenient source of light for the purpose. It will be understood however, that any other suitable illuminant can be employed for the purpose. The battery which supplies current for the lamp can be carried by the user of the weapon in a pocket or belt, and the wires which serve to conduct the current from the battery can if so desired be arranged within the sleeves of the coat of the user. I prefer to provide the wires 33 and 34 respectively with contact rings 35 at the ends. One of the rings 35 is placed upon a finger of the hand which grips the stock

so that the ring is brought into engagement with the metallic part of the stock. The other ring 35 is placed upon a finger of the other hand of the user, so that it can when necessary, be placed in contact with the plate 31. When both the rings are in contact with the designated parts, the circuit is closed and current flows to the lamp to cause the latter to glow, whereupon the lenses project a beam of light in the direction of the line of fire. By merely moving the finger so that a ring 35 is out of engagement with the plate 31, the lamp can be extinguished.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:

1. A device of the class described, comprising a cylindrical body having clamping jaws whereby said body can be mounted upon a gun barrel, a block adjustable transversely of said body and having a lamp socket, a lamp in said socket, a lens adjustably carried by said body and adapted to project a beam of light from said lamp, an insulating member mounted upon said body, a contact plate mounted upon said insulating member and having a contact finger engaging said lamp to form an electrical connection therewith, a source of electrical supply, and conductors adapted to contact respectively with said plate and the gun to include said lamp in the circuit of said source of supply.

2. A device of the class described, comprising a body fashioned from conducting material and having clamping jaws whereby said body can be mounted upon gun barrel, a block adjustable transversely of said body and having a lamp socket, a lamp in said socket, said body having a threaded part, a threaded lens-frame adjustably mounted in said threaded part of said body, a lens mounted in said frame and adapted to project a beam of light from said lamp, an insulating member mounted upon said body, a contact plate mounted upon said insulating member and having a contact finger engaging said lamp to form an electrical connection therewith, a source of electrical supply, and conductors adapted to contact respectively with said plate and the gun, to include said lamp in the circuit of said source of supply.

3. A device of the class described, comprising a body fashioned from conducting material and having clamping jaws, whereby said body can be mounted upon a gun barrel, a block having a threaded opening, a manually operable stem carried by said body and engaging said threaded opening to permit the adjustment of said block transversely of said body, said block having a lamp socket, a lamp in said socket, a lens adjustably carried by said body and adapted

to project a beam of light from said lamp, and means including said lamp in an electrical circuit.

4. A device of the class described, comprising a body having clamping jaws, whereby said body can be mounted upon a gun barrel, a block adjustable transversely of said body, a lamp socket carried by said block, a lamp in said socket, means for including said lamp in circuit with a source of electrical supply, and a lens carried by said body and adapted to project a beam of light from said lamp.

5. A device of the class described, comprising a body adapted to be removably mounted upon a gun barrel, a guide rod extending transversely of said body, a block slidably located upon said rod, a lamp carried by said block, a lens for projecting a beam of light from said lamp, and a manually operable device for moving said block longitudinally of said rod.

6. A device of the class described, comprising a cylindrical body having clamping jaws, whereby said body can be mounted upon a gun barrel, said body having downwardly extending cheeks, guide rods mounted between said cheeks, a block slidably mounted upon said guide rods and having a lamp socket carried by said block, said block having a threaded opening, a threaded stem rotatably mounted at the side of said body and engaging said threaded opening of said block to permit the adjustment of said block, a lamp in said lamp socket, a lens frame adjustably carried by said body, a lens in

said frame adapted to project a beam of light from said lamp, and means for including said lamp in circuit with a source of electrical supply.

7. A device of the class described, comprising a cylindrical body having clamping jaws, whereby said body can be mounted upon a gun barrel, said body having downwardly extending cheeks, guide rods mounted between said cheeks, a block slidably mounted upon said guide rods and having a lamp socket carried by said block, said block having a threaded opening, a threaded stem rotatably mounted at the side of said body and engaging said threaded opening of said block to permit the adjustment of said block, a lamp in said socket, a lens frame adjustably carried by said body, a lens in said frame adapted to project a beam of light from said lamp, an insulating member partly encompassing said body, a partly cylindrical contact plate encompassing said insulating member and having associated therewith a contact finger engaging said lamp to form an electrical connection therewith, a source of electrical supply, and conductors contacting respectively with said plate and the gun, to include the said lamp in the circuit of said source of supply.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH C. BARNES.

Witnesses:

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WALTER P. CROSE.