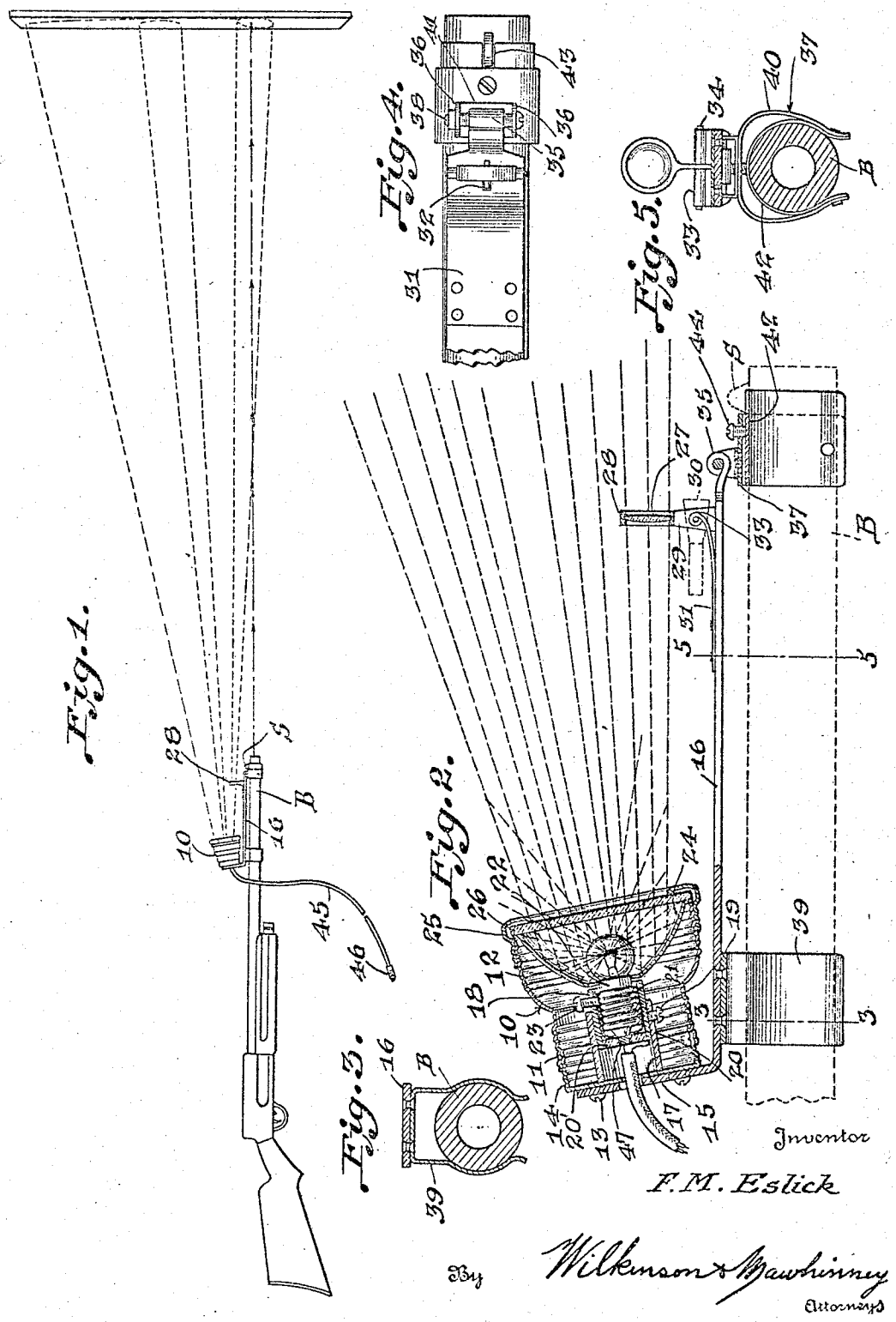
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FIREARMS SIGHTING DEVICE

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FIREARMS SIGHTING DEVICE

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7 Claims. (Cl. 240—6.41)

This invention relates to firearms, and more particularly to a sighting means therefor.

An object of this invention is to provide an attachment which may be applied to various types of firearms which will facilitate the firing of the firearms at night or in the dark.

Another object of this invention is to provide an attachment of this character which is so constructed that relatively accurate firing is possible at night or in dark places without sighting along the barrel of the gun or firearm to which the device is attached.

A further object of this invention is to provide an attachment of this character which will light up the object at which the gun or firearm is pointed, the lighting equipment including means for determining the spot where the bullet will strike.

Still another object of this invention is to provide an attachment of this character which may be quickly and easily mounted on the barrel of the firearm without changing any of the present parts thereof and which may be quickly removed therefrom so that the one firearm may be used in either light or dark places.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawing, wherein like symbols refer to like or corresponding parts throughout the several views:

Figure 1 is a detail side elevation of a gun sighting attachment mounted on a rifle pointed at a target which is shown in perspective.

Figure 2 is an enlarged longitudinal section of the sighting attachment.

Figure 3 is a sectional view taken on the line 3—3 of Fig. 2.

Figure 4 is a fragmentary top plan of the device.

Figure 5 is a sectional view taken on the line 5—5 of Fig. 2.

Referring to the drawing, wherein like symbols refer to like parts throughout the several views, the letter B designates generally the barrel of a gun, which may be a rifle, pistol or other form of firearm, it being understood that the hereinafter described sighting attachment may be mounted on various types of firearms and that the firearm here shown is only illustrative of one of such types. The barrel B has a fixed forward sight S on the upper side thereof at the forward end which is used in the use of the gun when sighting along the barrel B is possible, as in daylight.

In order to facilitate the accurate shooting by law enforcement officers, watchmen, or the like in the apprehension of criminals I mount a spot light on the top of the barrel B which comprises a casing 10 having a threaded cylindrical rear portion 11 and an enlarged partially threaded forward portion 12. The reduced and threaded rear portion 11 is threaded onto a cup-shaped base member 14 which is secured as by screws 13 or like fastening elements to the upturned rear end 15 of an elongated base bar 16.

The base member 14 has a sleeve 17 disposed therein which extends axially into the reduced portion 11 and constitutes a guide for a socket holding sleeve 18. The sleeve 18 is held against movement in the socket or fixed sleeve 17 by means of a screw 19 or the like. A light socket 20 including a threaded metal shell 21 and an insulated end wall 20' is fixed as by soldering to the adjustable sleeve 18, and the plug portion of a light bulb 22 is adapted to be threaded into the socket 20 and is held against displacement due to the concussions or other vibrations to which the gun barrel B is subjected during the handling or firing thereof by means of a screw 23 which extends through the adjustable sleeve 18 inwardly of the inner end of the sleeve 17.

A light reflector 24 is disposed in the enlarged forward end of the casing 10 and is provided with a relatively large central opening through which the light bulb 22 loosely projects in order to permit adjustment of the reflector 24 relative to the light bulb by threading the reduced rear portion 11 either forwardly or rearwardly. A bezel 25 receives the flanged outer edge of the reflector 24 and a lens 26 is mounted in the bezel and engages against the forward end of the reflector 24. The reflector 24 is preferably of the type which will spread the light rays from the light source over a fairly large area, but of course this area may be reduced or enlarged by forward or rearward adjustment of the reflector so that the desired spread of light is obtained at the desired distance forwardly of the spot light.

A light ray concentrating lens 27 is disposed forwardly of the spot light hereinbefore described and is so positioned as to have the lower light rays from the spot light which are projected in a plane parallel with the longitudinal axis of the barrel B pass therethrough. In other words, the reflector 24 and the light bulb 22 will light up a circular area substantially above the longitudinal axis of the gun barrel B with a small por-

tion of the lighted area slightly below the point at which a bullet fired from the barrel B will strike an object. The light ray concentrating lens 27 will describe a relatively small circular lighted area, the center of which is so adjusted for effective range as to be slightly below the point at which the bullet will strike the object.

The light ray concentrating lens 27 is mounted in a bezel or frame 28 secured to a bar 29, and the bar 29 is provided with a flat lower portion 30 which is adapted, when the lens 27 is in operative position, to engage the upper side of the supporting bar 16. A spring or resilient strip 31 is secured adjacent one end to the bar 16 and is provided at the opposite end with a slot 32 in which the lower end of the supporting bar 29 is received, and the opposite or forward end of the strip 31 has a hinge barrel 33 through which a pintle 34 extends, the pintle 34 also extending through an opening in the lower portion of the bar 29. This resilient strip 31 will maintain the lens supporting structure, including the bar 29 and the bezel 28 in either upright operative position or in inoperative position, the latter position being shown in dotted lines in Fig. 2.

The forward end of the supporting bar 16 is provided with a hinge barrel 35 which engages between a pair of ears 36 carried by the upper side or bight of a clamping member generally designated as 37. A pintle 38 engages through the ears 36 and the barrel 35 so as to swingably secure the supporting bar on the clamping member 37. A rear substantially U-shaped clamping member 39 is secured to the rear portion of the supporting bar 16 and removably secures the rear portion of the bar 16 onto the barrel B.

The forward clamping member 37 comprises an outer substantially U-shaped member 40 which is fixed to the base portion 41 of the ears 36, and an inner segmental barrel engaging member 42 which is substantially larger than a half circle so as to snugly engage about the periphery of the barrel B. The forward end of the inner clamping member 42 is provided with a forwardly opening slot 43 in which the sight S engages, and a screw 44 is threaded through the outer clamping portion 40 and engages against the bight of the inner clamping member 42 so as to tension the clamping member 37 on the barrel B and thus prevent movement of the bar 16 when the barrel B recoils.

A conductor 45 including two wires is provided at one end with a plug 46 which may be threaded into the conventional light socket provided in spot lights, and the other end of the conductor 45 is connected to the socket 20 and to a central contact 47 which is engaged by the central terminal or contact of the light bulb 22. It will, of course, be understood that any suitable means may be provided for conveying electric current to the light bulb 22 and that if desired light cells may be incorporated directly in the casing 10.

In the use of this sighting attachment, the plug 46 is first connected to the source of current supply so as to light up the bulb 22, and the clamping members 37 and 39 are mounted on the barrel B in a manner to position the bar 16 on the top thereof with the sight S disposed in the slot 41 of the clamping member 42. The screw 44 may then be tightened so as to firmly clamp the bar 16 onto the barrel B. When once adjusted to a particular gun barrel the screw 44 need not be further adjusted. The lens support 28—29 is then raised as shown in full lines in Fig. 2, and with the light bulb 22 lighted, the gun barrel B is pointed at the desired object. The major portion of the light rays emanating from the light source 22 and the reflector 24 will light up the object at which the gun is pointed, the rays being spread over the desired area by adjustment of the casing 10 relative to the support 14. The lower rays passing through the lens 27 will define a relatively small and bright area within the field of the major light rays, and this bright area is adjusted to locate the spot where the bullet from the barrel B will strike so that the bullet will strike the bright area in the upper portion thereof.

It will be apparent from the foregoing that an efficient and relatively accurate sighting attachment has been provided which may be mounted on gun barrels of various types, and that it is only necessary for the user of the device to locate the lightly defined area within the field of the spot light to determine the exact spot where the bullet will strike the object at which the barrel B is aimed.

It is obvious that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of this invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:

1. A sighting means for a gun comprising a light member for throwing a bright beam forwardly of the gun, a base bar, means for securing the member to the base bar, clamping means carried by the base bar for removably clamping the member on the barrel of the gun, and a light ray concentrating means carried by the bar forwardly of the member in the lower part of the bright beam for projecting a brilliant spot in the beam at the point of impact at effective range.

2. A sighting means for a gun comprising a light member for throwing a bright beam forwardly of the gun, a base bar, means for securing the member to the base bar, clamping means carried by the base bar for removably clamping the member on the barrel of the gun, a light ray concentrating means carried by the bar forwardly of the member in the lower part of the bright beam for projecting a brilliant spot in the beam at the point of impact at effective range, and means for holding said clamping means against circumferential movement on the gun barrel.

3. A sighting means for a gun comprising a light member for throwing a bright beam forwardly of the gun, a base bar, an obliquely disposed extension carried by one end of the bar, means for securing the member to the extension to throw the beam at an angle to the gun barrel, a light ray concentrating member disposed forwardly of the light member, means for mounting the light ray concentrating member on the bar adjacent the opposite end thereof to project a brilliant spot in the beam at the point of impact at effective range, and means for removably securing the base bar on the upper side of the gun barrel.

4. A sighting means for a gun comprising a light member for throwing a bright beam, a base bar, an upwardly inclined extension carried by one end of the bar, means for securing the member to the extension to throw the beam forwardly of the gun, a light ray concentrating lens disposed

forwardly of the member, pivotal mounting means for mounting the lens in vertical or horizontal position on the bar adjacent the opposite end thereof to project a brilliant spot at the point of impact at effective range when in vertical position, and a pair of clamping members carried by the bar one adjacent each end thereof.

5. In a fire arm sighting device a light source for projecting a beam of light for illuminating the field of view, means for mounting said light source on a fire arm to project its beam at and above the point of impact of the fire arm, a light collecting and concentrating lens, and means for mounting said lens in the path of the lower part of the beam from said light source whereby the lens projects a bright spot of light within the lower part of the beam at the point of impact at the effective range of the fire arm.

6. A sighting attachment for a gun comprising a spotlight member, a light concentrating member, means for mounting said concentrating member on the barrel of the gun, and means for mounting said spotlight member on the barrel of the gun rearward of said concentrating means in position to project its light forwardly of the gun with the central part of its beam slightly above the top of said concentrating means, said concentrating means collecting a portion of the light in the lower part of said beam and mounted to project the concentrated light to the point of impact of the gun at a predetermined range, and said beam from the spotlight member being uninterrupted in the direction above the gun.

7. A sighting attachment for a gun comprising a spotlight member, a light concentrating member, means for mounting said concentrating member on the barrel of the gun, and means for mounting said spotlight member on the barrel of the gun rearward of said concentrating means in position to project its light forwardly of the gun with the central part of its beam slightly above the top of said concentrating means and forming a small angle with the axial center of the gun barrel, said concentrating means collecting a portion of the light in the lower part of said beam and mounted to project the concentrated light to the point of impact of the gun at a predetermined range, and said beam from the spotlight member being uninterrupted in the direction above the gun.

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