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RIFLE FRONT SIGHT ILLUMINATOR

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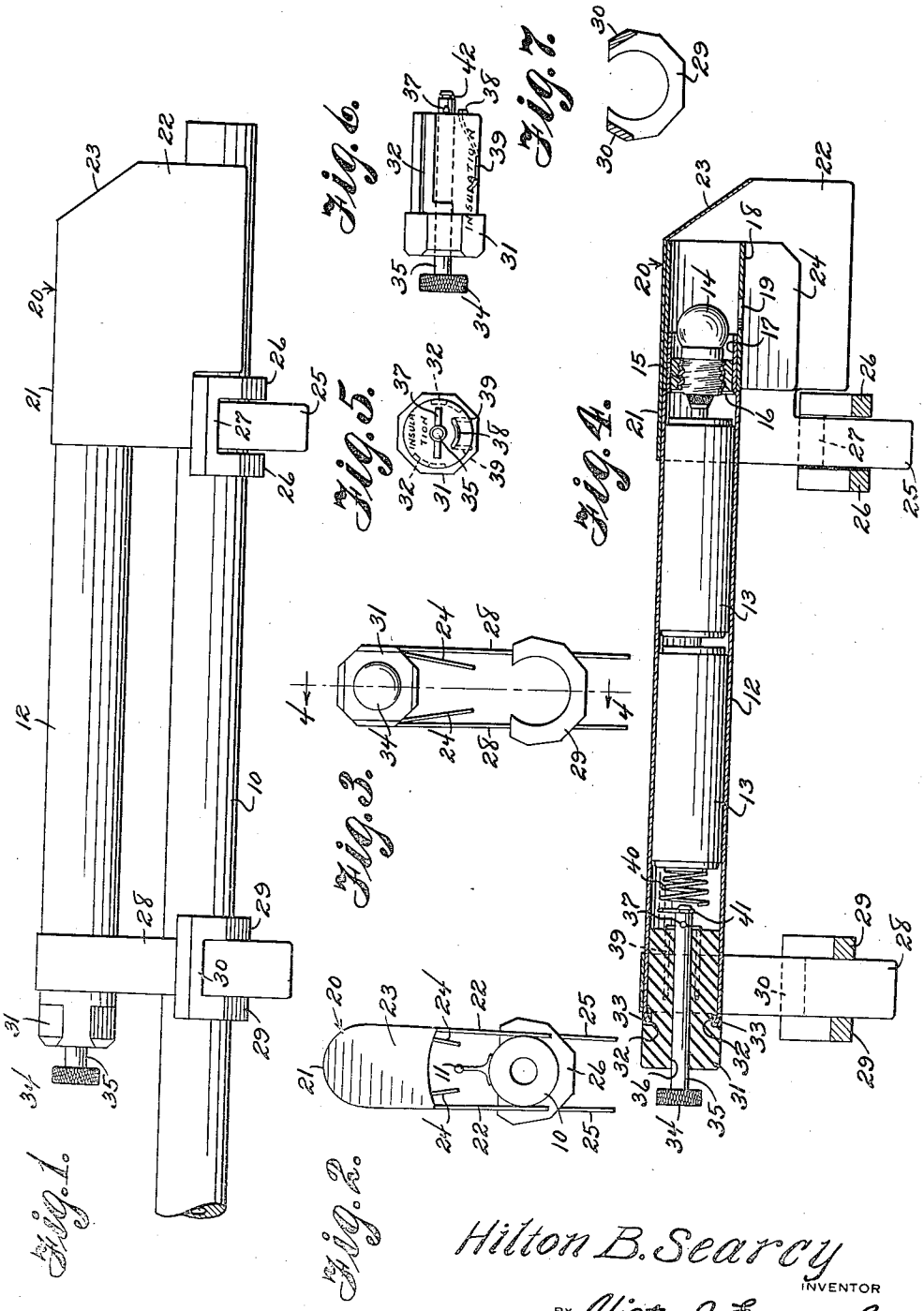


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

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RIFLE FRONT SIGHT ILLUMINATOR

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1 Claim. (Cl. 240—6.41)

This invention relates to rifle front sight illuminators and has for an object to provide a front sight illuminator which may be easily slipped on and off of the rifle without the use of tools, which may be conveniently carried in the pocket of the hunter for use in thickets and on cloudy days, which will be equally well applicable to pump rifles and other rifles, which will be formed of a few light, strong durable parts, which will be inexpensive to manufacture, and which will not easily get out of order.

A further object is to provide a device of this character in which the bulb, batteries, and switch will all be in a self-contained unit and in which the switch may be comfortably and conveniently reached by the shooter while at the same time the bulb will be so housed and positioned as to project its light rays directly downward upon the front sight to illuminate the front sight without the possibility of any stray light rays being projected out of the housing so as to be reflected from any surface and distract the shooter's attention when taking a sight.

With the above and other objects in view the invention consists of certain novel details of construction and combinations of parts hereinafter fully described and claimed, it being understood that various modifications may be resorted to within the scope of the appended claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing forming part of this specification,

Figure 1 is a side elevation of a front sight illuminator constructed in accordance with the invention in applied position upon a rifle barrel.

Figure 2 is a front elevation of the parts shown in Figure 1 looking from the right in Figure 1.

Figure 3 is a rear elevation of the device looking toward the left of Figure 1, with the barrel removed.

Figure 4 is a longitudinal sectional view of the device taken on the line 4—4 of Figure 3.

Figure 5 is an end elevation of the switch.

Figure 6 is a side elevation of the switch.

Figure 7 is a cross sectional view of one of the clamps.

Referring now to the drawing in which like characters of reference designate similar parts in the various views, 10 designates a conventional rifle barrel and 11 the front sight thereof. The front sight illuminator comprising the subject matter of this invention includes a substantially cylindrical metal casing 12 adapted to receive therein flash light cells 13 of the vest pocket type, as best shown in Figure 4. A flash light bulb 14 is mounted in a suitable socket 15 which is secured by a spider 16 in a uniformly reduced end 17 of the casing, as best shown in Figure 4.

A cylindrical sleeve 18 is detachably received at one end on the reduced end 17 of the casing and the sleeve is provided in the bottom with an opening 19 through which light rays from the bulb are projected directly downward upon the front sight to illuminate the bead of the sight.

A housing 20 of substantially U-shape cross section is provided with an arcuate portion 21 adapted to straddle the sleeve and the front end of the casing 12, and with side wings 22 which depend below the sleeve and casing. The side wings are connected at the front by a downwardly and forwardly inclined wall 23 which performs the function of a reflector for reflecting light rays downwardly and rearwardly in the sleeve to intensify the illumination of the bead of the sight and also conceals the bulb from the vision of animals or birds being shot at.

The wings extend downwardly along the sides of the rifle barrel as best shown in Figure 1 to prevent escape of light rays laterally and also a second pair of wings 24 are secured to the bottom of the sleeve and they are of sufficient length to be supported upon the base of the front sight when the light housing is in applied position, although in Figure 2 these wings are not so shown. These wings 24 also assist in concentrating the light rays upon the front sight and bead thereof.

For detachably securing the device upon the rifle barrel the housing 20 is provided at the rear ends of the wings 22 with spring tabs 25 which are adapted to extend downwardly upon the sides of the rifle barrel. These tabs are clamped frictionally against the rifle barrel by a clamp including a pair of substantially U-shaped members 26 adapted to cradle the rifle barrel and receive between them the spring tabs 25. The members are connected at the top by straight cross members 27 which bear against the outer sides of the spring tabs and force the same to tightly frictionally engage the barrel.

Also the rear end of the casing 12 is provided with a substantially U-shaped spring strap 28, which straddles the casing and the legs of which are adapted to pass downwardly along the sides of the rifle barrel 10. The legs are frictionally clamped to the rifle barrel by a clamp similar to the clamp just described and comprising U-shaped members 29 adapted to receive the barrel, these members being connected at the top by a transverse member 30 adapted to engage the

outer faces of the legs of the strap and force the same to frictionally engage the rifle barrel. By moving the clamps downwardly on the spring tabs of the housing and on the spring strap the device may be easily slipped onto and slipped off of the rifle without the use of tools.

A switch is disposed at the rear end of the casing 12 within convenient reach of the shooter for controlling the light circuit. The switch comprises a plug 31 of insulating material which is removably inserted in the rear end of the casing 12. The plug is provided at opposite points with bayonet slots 32, best shown in Figure 6, to receive projections 33, best shown in Figure 4, to permit removal and insertion of the switch when the batteries need to be replaced.

The switch button 34 is provided with a metal stem 35 which is rotatably mounted in a central bore 36 in the plug and is provided with a pin 37, best shown in Figure 5, which is adapted to engage a staple-like spring switch contact 38. The switch contact is provided with legs 39 which are disposed in engagement with the casing 10 and close the lamp circuit when the switch is rotated to bring the pin 37 into engagement with the contact 38. A helical spring 40 is disposed against the end of the casing of one of the batteries 13, as best shown in Figure 4, and is provided with an eye 41 that is sleeved in a groove 42 formed on the tip of the stem 35. This spring holds the battery cells in electrical connection with each other and also holds the stem 35 of the switch button stationary when the stem is turned to either circuit closing position or to open circuit position.

From the above description it is thought that the construction and operation of the invention will be fully understood without further explanation.

What is claimed is:

An illuminating device for a gun sight comprising a casing, a light source and a source of electricity in circuit with the light source housed within the casing, a switch carried by the casing controlling the light circuit, a housing of inverted U-shape cross section on the front end of the casing depending below the casing and having a downwardly and forwardly inclined front wall, there being an opening in said casing permitting downward projection of light rays directly upon the sight of the gun to which the device may be applied, the side walls of the inverted U-shaped housing being adapted to extend below the gun barrel at the sides thereof and the gun barrel being adapted to form a bottom for the housing, the gun barrel, the side walls and said downwardly inclined front wall coacting in preventing escape of light in any direction except directly down upon the gun sight, means for attaching the housing and casing to a gun barrel in such manner that the shooter may view the illuminated gun sight underneath the casing, and a pair of wings carried by the housing and adapted to bear upon the base of the gun sight on opposite sides of the gun sight to properly locate the device on the gun barrel.

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