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G. F. PRIDEAUX

2,385,649

FIREARM SIGHT

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Fig. 1.

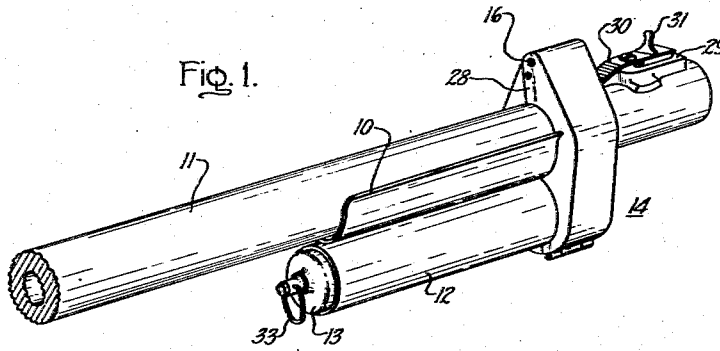


Fig. 2.

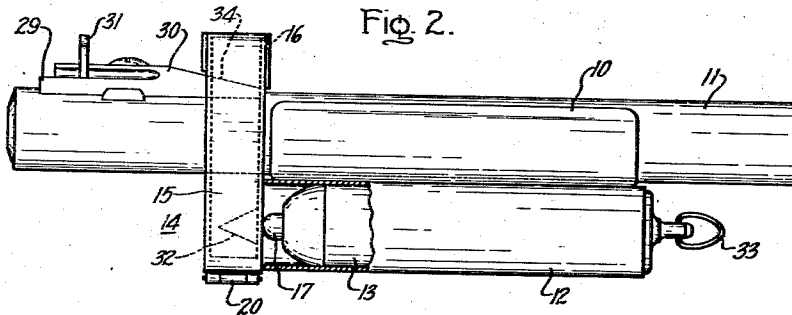
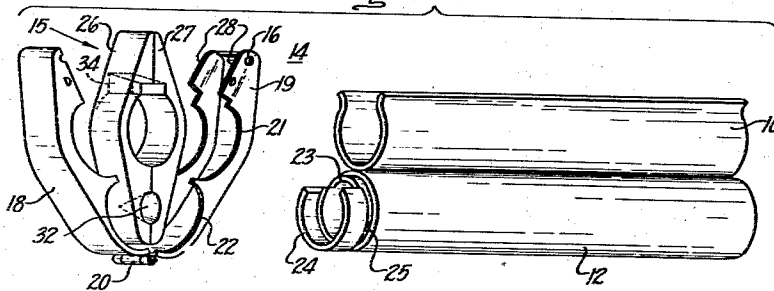


Fig. 3.



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UNITED STATES PATENT OFFICE

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FIREARM SIGHT

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5 Claims. (Cl. 33—47)

My invention relates to sights of the silhouette type for firearms, such as rifles, carbines, shotguns, revolvers and the like.

In aiming firearms equipped with sights of the silhouette type, the object aimed at must be visible and the sights must be silhouetted on the object. Under certain conditions of illumination, such as under starlight or moonlight, the object may be visible but it is impossible to see the conventional sight silhouetted against the object. Accurate aiming of the firearm equipped with conventional silhouette sights is thus impossible under such conditions.

The principal object of my invention is to provide a sight of the silhouette type which makes possible the accurate aiming of firearms under conditions of illumination such that conventional sights of this type are useless. Another object of my invention is to provide a silhouette type sight which is of simple structure and readily adjustable to suit the various conditions of illumination under which it may be used. Other objects and advantages of my invention will appear from the following detailed description of species thereof.

A feature of my invention is a luminous sight for mounting on the muzzle end portion of a firearm. Another feature of my invention is a luminous sight, the brightness of which may be changed to suit various conditions of surrounding illumination. A further feature of my invention is a sight having a luminous part which is visible when viewed from the breech end of a firearm and invisible when viewed from the muzzle end thereof.

In the drawing accompanying and forming part of this specification a species of my invention is shown in which Fig. 1 is a perspective view of my luminous sight mounted on the muzzle end of a rifle provided with a conventional silhouette sight; Fig. 2 is a side elevational view of the luminous sight and the muzzle end of a rifle with part of the sight broken away to show the light source; and Fig. 3 is an exploded view of the luminous sight illustrated in Figs. 1 and 2.

Referring to the drawing, the luminous sight comprises a spring clip 10 which engages with the rifle barrel 11 to support a casing 12 for the flashlight 13. One end of the casing 12 opens into an opaque housing 14 which encloses light-transmitting material 15. The casing 12 and the housing 14 constitutes an enclosure for the other parts of the luminous sight. The material 15 is of the kind through which light passes as does water through a pipe. Quartz and "Lucite" are ma-

terials of this kind, the latter being an organic plastic material and, since its cost is less than that of quartz, the preferred material for the purposes of my invention. The housing 14 and the enclosed material 15 are perforated to accommodate the barrel 11 and are in two parts which fit together about said barrel 11, as best shown in Fig. 3. The part of the opaque housing 14 on top of the barrel 11 is perforated as shown at 16 to form an aperture on the side thereof facing the breech end of the rifle barrel 11 so that part of the upper portion of the material 15 is visible through the aperture 16 from that direction. The material 15 is also juxtaposed to the end of the casing 12 opening into the housing 14. The flashlight 13 has an incandescent lamp 17 disposed at one end thereof and is inserted lamp end foremost into the casing 12. The casing 12 fits tightly about said flashlight to hold the latter firmly enough to resist the force of gravity when the rifle barrel is tilted from the horizontal and to resist the physical shocks incident to the discharge of the rifle. The flashlight is movable longitudinally of the casing 12, however, so that the distance between the lamp 17 and the material 15 may be selected to attain the desired brilliancy of the portion of the piece 15 visible through the aperture 16 of the housing 14.

The casing 12 and the housing 14 are separably joined to each other in the following manner. As shown in Fig. 3, the housing 14 comprises two parts 18 and 19 which are secured to each other by the hinge 20 and which thus act as a pair of jaws. In the closed position of the jaws the opening 21 extends through the housing 14 and an opening 22 is provided for accommodating one end of the casing 12. The end of casing 12 to be held in the housing 14 has secured to the interior thereof, as by soldering, an annular sleeve 23 which extends beyond said casing 12. The width of the sleeve 23 increases abruptly, the portion of greater width extending through a circular arc of more than 180°. A member 24 is secured, as by soldering, to the outer surface of the wider portion of sleeve 23 and is spaced from the end of casing 12 to form a groove or slot 25. The diameter of the opening 22 is less than the outer diameter of the casing 12 and is approximately the same as the inner diameter of said casing 12. In connecting the casing 12 and the housing 14 the parts 18 and 19 are separated and the casing 12 is disposed with the member 24 in the housing 14 and the groove 25 aligned with the parts of the housing 14 defining the opening 22. The parts

18 and 19 are then moved together to join the casing 12 and the housing 14.

While the parts 18 and 19 of the housing 14 are separated, the parts 26 and 27 of the material 15 are also separated and are disposed in said parts 18 and 19, respectively. For clearness of illustration, parts 26 and 27 are shown in contact in Fig. 3. The sight may be mounted on the barrel 11 by first moving the spring clip 10 into engagement with said barrel 11 with the member 24 of the casing 12 in the direction of the muzzle end of the barrel 11. The housing 14 with the parts 26 and 27 of the material 15 disposed therein is then clamped about the casing 12 and the barrel 11. The parts 18 and 19 overlap and releasably lock together as shown at 28 (Figs. 1 and 3) to hold the housing 14 and the material 15 on the barrel 11 and to engage the casing 12 with said housing 14.

In order to align the aperture 16 with the conventional sight 29 on the rifle barrel 11 the material 15 and the housing 14 are so shaped as to form a wedge-shaped opening 34 to accommodate the sloping portion 30 of the conventional sight 29, as shown in Fig. 2. The orifice 16 is so spaced with respect to said wedge-shaped opening that the former is aligned with bead 31 of conventional sight 29 when the illuminated sight is mounted in the position shown in Figs. 1 and 2 of the drawing.

The portion of material 15 juxtaposed to the lamp end of the flashlight 13 has a conical recess or niche 32 therein, the base of which is larger in diameter than the lamp 17 of the flashlight 13, as shown in Fig. 2. The lamp 17 is of the kind shown in U. S. Patent 1,983,362, issued December 4, 1934, having a lens to direct the light from the incandescent filament of the lamp 17 in a beam of parallel rays having a longitudinal axis coincident with that of the flashlight 13, and the lens end of the lamp 17 may be inserted in the recess 32 to obtain maximum brightness of the material 15. Preferably the apex and the axis of the conical recess 32 lie in the longitudinal axis of the flashlight 13 when the latter is in the casing 12. The light emitted by the lamp 17 impinging upon the surface of the material 15 defining the recess 32 enters said material 15 which then appears as a luminous body, a portion of which is visible through aperture 16 in the housing 14. The brightness of the material 15 may be selected to meet the conditions of surrounding illumination for effectively aiming the rifle without dazzling the eye of the operator by moving the flashlight 13 longitudinally of the casing 12 to vary the distance between the lamp 17 with respect to the recess 32 as pointed out above.

When desired, the apparent brightness of the material 15 may be reduced by interposing a light screen or filter between the eye of the operator and the portion of the material 15 visible through the aperture 16. The screen or filter is conveniently disposed over the aperture 16; for example it may be secured to the inner surface of 18 so as to extend over the aperture 16 when the parts 18 and 19 are in the closed position shown in Figs. 1 and 2. The light screen or filter may be disposed between the lamp 17 and the material 15; for example, it may be in the form of a disc mounted in the casing 12 between the lamp 17 and the recess 32 for the purpose of reducing the brightness of the material 15. Screens or filters which transmit red light are satisfactory. The joints between the various parts of the luminous sight and between the barrel 11 and the sight are

light tight so that the only light visible is that which may be seen through the aperture 16.

The flashlight 13 may be used as a general utility flashlight when removed from the casing 12. The handle 33 of the flashlight 13 is used to move the flashlight 13 longitudinally of the casing 12 and to impart a rotary motion to the flashlight when the latter is inside or outside the casing 12 to switch the lamp 17 on and off. The frictional fit between the flashlight 13 and the casing 12 makes it possible to turn the battery enclosing portion of the flashlight 13 while the lamp holding part 34 thereof remains stationary to engage and disengage the electrical contacts of the flashlight 13 to switch the lamp 17 on and off.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. An illuminated sight for a firearm, said light comprising in combination, a light source, a body of light pervious material which appears luminous when irradiated by said source and an opaque enclosure for said source and said material, said enclosure comprising a housing for said material and a casing for said light source, said housing comprising a pair of separable jaws for clamping about the barrel of said firearm and a portion of said casing, said material being separable into parts conforming approximately to the shape of said jaws, said housing having an aperture which, when the sight is in position, is in alignment with the normal sight line of the firearm.

2. An illuminated sight for a firearm, said sight comprising in combination, a light source, a body of light pervious material which appears luminous when irradiated by said source and an opaque enclosure for said source and said material, said enclosure comprising a housing for said material and a casing for said light source, said light source being in frictional engagement with said casing and movable longitudinally thereof, said housing comprising a pair of separable jaws for clamping about the barrel of said firearm and a portion of said casing, said material being separable into parts conforming approximately to the shape of said jaws, said housing having an aperture which, when the sight is in position, is in alignment with the normal sight line of the firearm.

3. An illuminated sight for a firearm, said sight comprising in combination, a light source, a body of light pervious material which appears luminous when irradiated by said source and an opaque enclosure for said source and said material, said enclosure comprising a housing for said material and a casing for said light source, said housing being arranged as a pair of separable jaws for clamping about the barrel of said firearm and a portion of said casing, said material being separable into parts conforming approximately to the shape of said jaws, said housing having an aperture spaced from the part thereof clamping about said casing and through which a portion of said material is visible, said housing and said material providing an opening for the reception of a portion of the conventional sight of said firearm, said opening being so disposed with respect to said aperture that the latter is aligned with the bead of said conventional sight.

4. An illuminated sight for a firearm, said sight comprising in combination, a light source, a body of light pervious material which appears luminous when irradiated by light from said source and an opaque enclosure for said source and said material, said enclosure having an aperture through which a portion of said material may be seen, said light source being movable in said enclosure

toward and away from said material for effecting changes in the brightness of said material visible through said aperture, said aperture, when the sight is in position, being in alignment with the normal sight line of the firearm.

5. An illuminated sight for a firearm, said sight comprising in combination, a light source, a body of light pervious material which appears luminous when irradiated by light from said source and an opaque enclosure for said source and said material, said enclosure having an aperture

through which a portion of said material may be seen, said material having a conical recess spaced from the portion thereof visible through said aperture, said light source being movable in said enclosure toward and away from said recess for effecting changes in the brightness of said material visible through said aperture, said aperture, when the sight is in position, being in alignment with the normal sight line of the firearm.

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