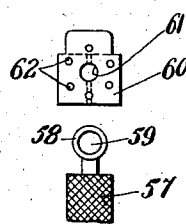
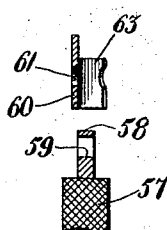
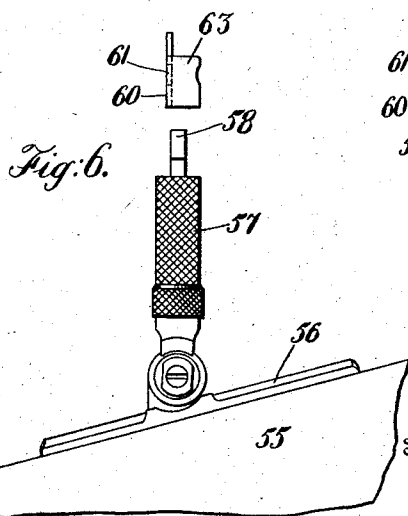
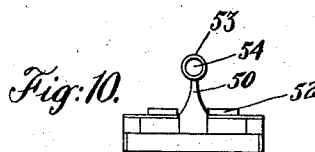
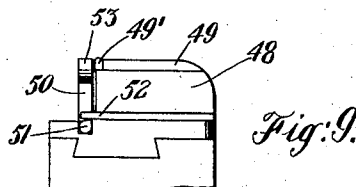
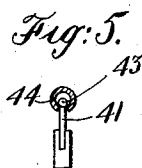
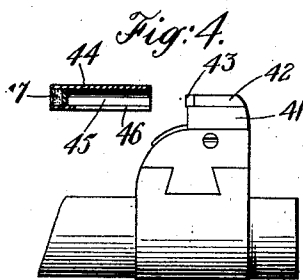
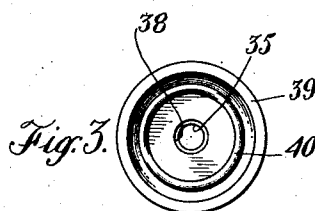
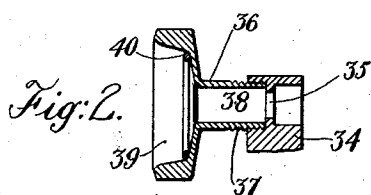
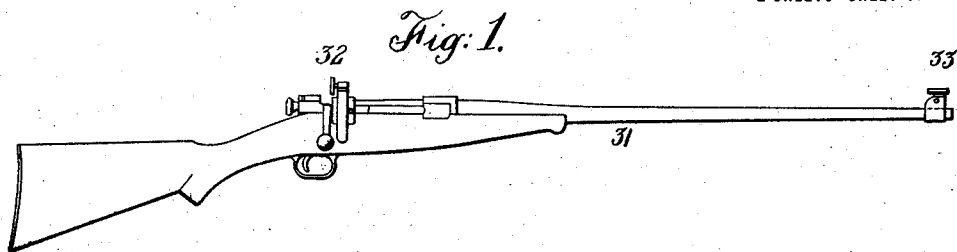


E. F. WATSON.
SIGHT FOR FIREARMS.
APPLICATION FILED MAR. 30, 1918.

1,307,646.

Patented June 24, 1919.

2 SHEETS—SHEET 1.



Inventor
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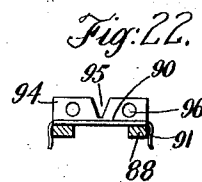
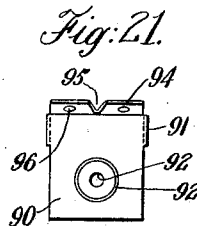
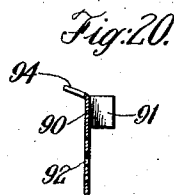
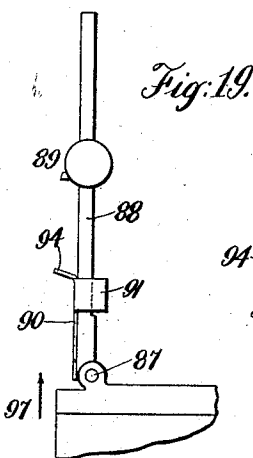
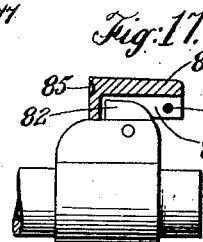
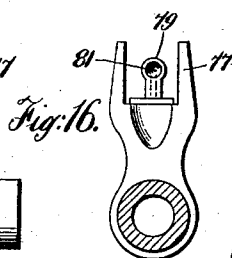
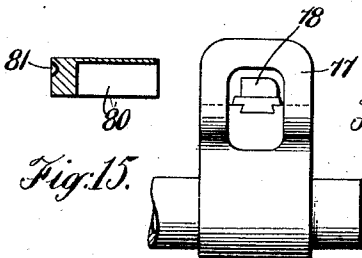
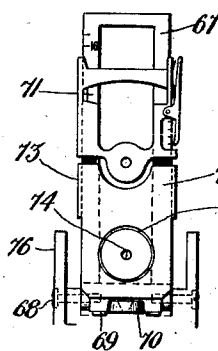
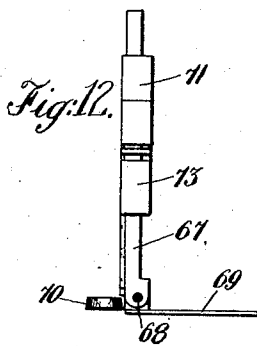
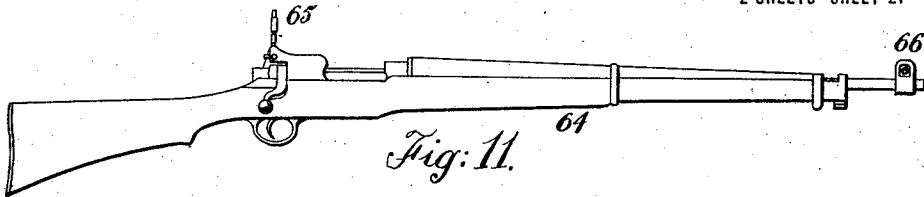
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2 SHEETS—SHEET 2.



Inventor
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UNITED STATES PATENT OFFICE.

EARLE F. WATSON, OF DUMONT, NEW JERSEY.

SIGHT FOR FIREARMS.

1,307,646. Specification of Letters Patent. Patented June 24, 1919.

Application filed March 30, 1918. Serial No. 225,612.

To all whom it may concern:

Be it known that I, EARLE F. WATSON, a citizen of the United States, residing at Dumont, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Sights for Firearms, of which the following is a specification.

The principal object of my invention is to provide a new and improved firearm sight adapted for use in the dark. Another object of my invention is to provide an improved self luminous sight for firearms. Still another object of my invention is to provide sights that are luminous and readily attachable to the ordinary day sights so that they can be attached or removed as there may be occasion. These and other objects of my invention will be made apparent in the following specifications and claims taken with the accompanying drawings in which I have disclosed several specific embodiments of my invention. It will be understood that modifications may be made falling within the scope of the invention.

Referring to the drawings,

Figure 1 is a side elevation of a sporting rifle equipped with my improved sights;

Fig. 2 is an enlarged section of the rear sight;

Fig. 3 is a rear elevation of the rear sight;

Fig. 4 is a side elevation of a front day sight showing my improved night sight in section in position in readiness for application to the day sight;

Fig. 5 is a cross-section of the front sight shown in Fig. 4;

Fig. 6 is a side elevation of another form of day sight with my improved attachment in position to be applied thereto;

Fig. 7 is a section viewed in the same direction as that for Fig. 6;

Fig. 8 is a rear elevation of the same parts;

Fig. 9 is a side elevation of another form of front sight;

Fig. 10 is a rear elevation of the same;

Fig. 11 is a side elevation of a United States rifle, model 1917 equipped with my improved attachments;

Fig. 12 is a side elevation of the rear sight with my improvement applied thereto;

Fig. 13 is a rear elevation of the same;

Fig. 14 is a longitudinal section of the same when folded forward;

Fig. 15 is a side elevation of the front sight with the attachment in position to be applied thereto, the attachment being shown in section;

Fig. 16 is a rear elevation of the front sight with my attachment applied thereto;

Fig. 17 shows a modified front sight attachment with clamping means;

Fig. 18 shows a cross-section of the same;

Fig. 19 is a side elevation of another form of folding rear sight equipped with my improved attachment;

Fig. 20 is a section of the attachment;

Fig. 21 is a rear elevation of the attachment, and

Fig. 22 is a rear elevation of the same attachment as it appears when the sight is folded forward.

I now proceed to a description of the specific embodiments of my invention shown in these drawings.

The gun 31 shown in Fig. 1 is equipped with an ordinary rear sight 34 having a peep hole 35. This is the complete rear sight 80 equipment for day time use. For night service the attachment 32 may be applied. This attachment 32 consists of a tubular stem 36 screw-threaded at 37 to engage the sight 34. At the rear a disk or a flanged cup 39 is formed opening at its center into the hole 38, coaxial with the hole 35. Concentric with this axis within the disk or cup 39 is a ring of radio active material 40.

The day time front sight consists of a blade 41 carrying a little cylindrical enlargement 42 at its upper end with a bead 43 at the end thereof. The attachment 33 for night service consists of a little tube 44 slotted at 46 so that its interior 45 can be slipped around the bead 43. The edges of the slot 46 tightly engage the blade 41, the wall of the tube 44 having sufficient spring to facilitate this. At its end toward the operator the attachment 44 has a little pocket in which is placed a small quantity of radio active material 47.

In sighting through the hole 38 the operator will readily see the radio active material 47 in the dark and he will readily center this with respect to the ring of light 40 so that the operation of sighting will be very similar to that of ordinary day time sighting with a ring for the rear sight and a bead for the front sight.

Both front and rear sights 33 and 32 are quickly and readily detachable or attachable. They are capable of use in day time sighting so that in a condition of twilight they are not objectionable and may be advantageous. For full daylight they are unnecessary and may be removed.

Referring to Figs. 6, 7 and 8, the folding rear sight 58 with its hole 59 is carried on the stem 57 pivoted to the member 56 which is secured to the gun stock 55. The night attachment consists of a metal plate 60 with a central hole 61 and with spring wings 63 on either side adapted firmly to engage the day sight 58. Around the hole 61 are symmetrically spaced pits 62 filled with radio active material. Looking through the hole 61 at night the operator sees the front sight and naturally and easily centers it with respect to the luminous spots 62 on the rear sight.

The front sight shown in Figs. 9 and 10 comprises a blade 48 carrying a cylindrical enlargement 49 at the top and a bead 49' at the end toward the operator which serves as the front sight for day service. On the end toward the operator there is a folding sight 50 having a pivot 51 held by leaf springs 52. At the top is the cup 53 filled with radio active material 54 on the side toward the operator. This night attachment is shown in Fig. 9 in operative position, but in the day time it can be turned down 90°, that is to the left as viewed in Fig. 9, so as to be entirely out of view and leaving the day sight 49' to be used.

The military rifle 64 shown in Fig. 11 has a folding rear sight 65 with a vertically adjustable peep hole member 71. Also, this sight comprises another day time peep hole 70 which comes in service when the sight as a whole is folded down forward as shown in Fig. 14. For night service the plate 72 may be attached. This has spring wings 73 which crowd firmly on the sides of the frame 67 and has a peep hole 74 surrounded by a concentric ring 75 of radio active material. The folding sight 65 is pivoted at 68 and is held in either vertical or horizontal position by the leaf springs 69. When folded down forward it lies between the guards 76 and at this time the attachment 72 may remain and permit use of the sight 70.

The mode of operation of the attachment with the peep hole 74 and the self luminous material 75 will be apparent in view of the foregoing description of other modifications.

The front sight 66 consists of a blade 78 between the guards 77. The night attachment 79 has a slot 80 that fits firmly on the blade 78 and carries a depression 81 at the end toward the operator which is filled with radio active material.

In the modification shown in Figs. 17 and 18, the day sight 82 and the night attachment 83 are similar to those shown in Figs. 15 and 16, but in addition a clamping screw 86 is provided, by which the sides of the slot 84 may be drawn with even greater firmness against the blade 82 if that should be thought desirable. The depression 85 is filled with radio active material the same as for Fig. 15.

The rear sight 88 shown in Fig. 19 is pivoted at 87 and carries a vertically adjustable peep hole member 89 for day time service. My attachment is shown at 90 and consists of a metal plate with the spring wings 91 engaging the frame 88. The peep hole 92 is surrounded by the ring 93 of radio active material. At the top (when the sight stands up as in Fig. 19) the end of the plate 90 is bent back at 94 and notched at the middle at 95. On each side of this notch 95 is a depression 96 filled with radio active material. When the sight is folded down it will be viewed by the operator of the firearm as shown in Fig. 22, that is looking in the direction of the arrow 97 in Fig. 19, and the operator will see the two luminous spots 96 and will readily position the front sight midway on a line joining the two spots 96, which will be facilitated by the notch 95.

The luminous elements of the front and rear sights may be made of different colors to aid the eye in quickly getting the proper alinement. If the rear sight is of the specific variety shown in Fig. 22 and if the spots 96 differ in color from the front sight, then the operator can be sure to get the front sight between the two spots 96 constituting the rear sight.

It will be seen that I have provided self luminous front and rear sights that are exceedingly simple and rugged in construction, that may be readily attached to the day sights or detachable therefrom as occasion requires and that provide a spot of light for the front sight to be centered with respect to symmetrically disposed sources of light constituting the rear sight.

I claim:—

1. In combination, a firearm, front and rear day sights therefor, and respective attachments to serve as night sights, the front attachment comprising a single compact mass of self luminous material to serve as the essential visible element thereof, and the rear attachment comprising radio active self luminous material symmetrically disposed with respect to the line of sight determined by said front night sight attachment, each

attachment having a spring clip element adapted for securing it in place on the firearm by a mere push and by frictional engagement only and adapted for disengaging it from the firearm and removing it by an opposite pull.

2. In combination, a firearm and front and rear sights therefor, the front sight comprising a compact mass of self luminous material and the rear sight comprising self luminous material of a different color.

3. In combination, a firearm, a front day sight, a rear day sight, a displaceable front night sight comprising a compact mass of self luminous radio active material, and a displaceable rear night sight having an opening and adapted to be adjusted to bring this opening across the same line of sight determined by said displaceable front night sight and having self luminous radio active material symmetrically distributed around said opening, both said night sights being displaceable away from said line of sight to facilitate ordinary use of the day sights.

4. In combination, a fire-arm, a vertical frame near the breech, an adjustable day sight on said frame, a detachable plate on the same frame, said plate having a sight hole therethrough, and radio active self luminous material symmetrically disposed on said plate around said hole.

5. In combination, a fire-arm, a vertical frame near the breech, a plate having means detachably engaging said frame, said plate having a sight hole therethrough, and radio active self luminous material symmetrically disposed on said plate around said hole.

6. In combination, a fire-arm, a folding frame near the breech adapted to lie down or to stand up vertically in operative position, an adjustable sliding day sight on said frame, a plate having means detachably to engage the frame below the day sight when

the latter is moved up, said plate having a sight hole therethrough, and radio active self luminous material symmetrically disposed on said plate around said hole.

7. In combination, a fire arm, a folding frame near the breech adapted to lie down or to stand up vertically in operative position, an adjustable sliding day sight on said frame, a plate having its edges turned to form clips yieldingly to clamp the frame below the day sight when the latter is moved up, said plate having a sight hole therethrough, and radio active self luminous material symmetrically disposed on said plate around said hole.

8. In combination a firearm, a front blade day sight and a night sight having a slot adapted firmly but detachably to engage said day sight and having a recess toward the operator with radio active self luminous material therein.

9. In combination, a firearm, a front blade sight and a rear folding frame sight both for day use, a front night sight having a slot to clamp on said front day sight and having a mass of self luminous radio active material toward the rear sight, and a rear night sight consisting of a plate with a sight opening and means detachably to engage said rear day sight and having self luminous radio active material symmetrically disposed around said opening.

10. In combination, a firearm, a folding frame near the breech adapted to lie down or stand up vertically in operative position, an adjustable sliding day sight on said frame, a plate having means detachably to engage the frame at a different height from said day sight, said plate having a sight hole therethrough and radio active self luminous material symmetrically disposed on said plate around said hole.

EARLE F. WATSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."