W. H. SNYDER.

FIREARM.

APPLICATION FILED AUG. 23, 1905.

958,332. **Patented May 17, 1910.**

Fig. 1.

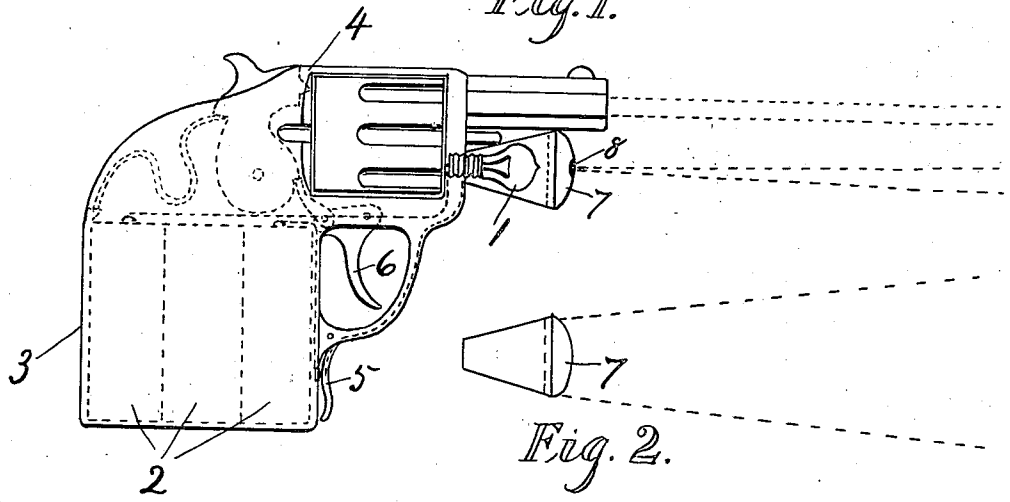

Fig. 2.

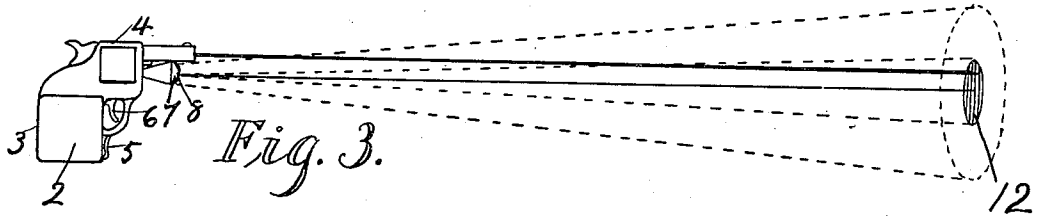

Fig. 3.

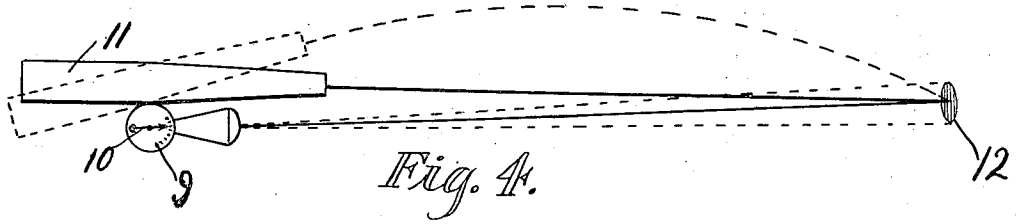

Fig. 4.

Witnesses

Lillie M. Simon.

C. W. Magee

Inventor:

Ward H. Snyder

By James N. Ramsey

His Attorney

UNITED STATES PATENT OFFICE.

WARD H. SNYDER, OF CINCINNATI, OHIO, ASSIGNOR TO EDWIN L. ROBINSON, OF NORTH ATTLEBORO, MASSACHUSETTS.

FIREARM.

958,332. Specification of Letters Patent. Patented May 17, 1910.

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To all whom it may concern:

Be it known that I, WARD H. SNYDER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Firearms, of which the following is a specification.

My invention relates to improvements in firearms.

The object of my invention is to obtain the range of a firearm up to any distance that can be reached in the dark by a light.

My invention consists in providing the firearm with a light adapted to be thrown in the path of the projectile, and it also consists in means for throwing a target shadow or target spot within the area of the light projected.

My invention further consists in the construction and arrangement of the light with relation to the firearm which permits the light to be projected on a line parallel with the projectile or at an angle thereto, as desired.

In the drawing: Figure 1 is a side elevation of a revolver showing my invention applied thereto. Fig. 2 is a side view of the light with the spot omitted. Fig. 3 is a side elevation of a gun showing the gun barrel and the direction of the light parallel to each other. Fig. 4 is a side elevation showing my invention applied to a gun barrel and so adjusted that the projectile and the dark spot will converge at any predetermined distance desired and indicated by the dial.

When my invention is used in connection with a revolver I prefer to apply and arrange it substantially as illustrated in Fig. 1, which shows an electric light bulb 1, suitably connected to a battery 2 in the handle 3 of the revolver 4 which I provide with a trigger 5 to display the light and a trigger 6 to discharge the projectile after the light has been displayed. I preferably provide in or near the lens 7 an opaque spot 8 which, when the light is thrown, will cause a dark spot to be projected into the light area in the path of the projectile, and enable the user to shoot an object with accuracy at night by simply aiming at the projected target shadow or spot without sighting.

It will be seen that in Figs. 1 and 3 the light is projected on a line parallel with the projectile while in Fig. 4 I have shown the projectile as thrown at angles to the line of the light.

While I have shown my invention applied to a revolver and gun barrel it is obvious that it may be used in connection with any firearm.

My invention is specially applicable for use in connection with large guns used principally by the Government where the target is at long range and it is necessary to discharge the projectile at an angle to the line of light as shown in Fig. 4 in order to carry the projectile to the target fired at.

The dial 9 is used to determine the point at which the target spot (used to mark the object fired at) and projectile will be coincident with each other. The pointer 10 will always be on a line with the center of the cone of light radiation, and the barrel 11 will be adjusted at an angle thereto to carry the projectile to the desired distance which will be shown by the target spot, 12, the dial 9 preferably moving with the gun barrel.

I have arranged the trigger 5 for operating the light on a different plane and independent of the trigger 6 for operating the gun, so that the light may be displayed as long as desired before discharging the gun and without any danger of discharging the gun by unintentional excessive pressure on the trigger 5 for displaying the light, said triggers being arranged in a convenient manner to be operated by different fingers, and being preferably arranged upon different planes. This makes the use of the light displaying device absolutely safe when used to discover the identity of an individual.

It will be apparent that my invention is capable of considerable modification without departure from the scope or spirit thereof, and for this reason I do not wish to be understood as limiting myself to the details of construction, but

What I desire to secure by Letters Patent is:

1. A search light for firearms having a lens provided with an opaque spot at its vertex, said lens being transparent continuously about said spot, whereby a shadow will be cast at the center of the circle of the light rays passing through the transparent part of the lens.

2. In combination with means for directing a projectile, a source of light, a lens associated with said light, an opaque spot on

said lens in the line of its principal axis, said lens being transparent continuously about said spot, whereby a shadow will be cast at the center of the circle of the light rays passing through the transparent part of said lens.

3. In a device of the class described, means for directing a projectile, a source of light, means associated with said source for concentrating light rays emanating therefrom, means for projecting a shadow within said concentrated light rays and surrounded thereby, the trajectory of said projectile and said shadow coinciding at one or more points.

4. In a device of the class described, means for directing a projectile, a source of light, means associated with said source for concentrating light rays emanating therefrom, means for projecting a shadow within said concentrated light rays and surrounded thereby, said means being relatively adjustable whereby said shadow and the trajectory of said projectile may be made to coincide at any desired point.

5. In combination with means for directing a projectile, a source of light operatively associated with said directing means, means associated with said source of light for concentrating said light rays emanating therefrom into a light pencil, means for projecting a shadow centrally of said pencil of rays and surrounded entirely by said pencil of rays and means for adjusting said light directing and concentrating means relative to said projectile directing means to secure coincidence of trajectory at a predetermined point.

6. In a device of the class described, adjustable means for directing a projectile, a source of light, means associated with said source of light for concentrating the light rays emanating therefrom into a pencil of light rays, means for projecting a shadow centrally of said pencil of light rays and entirely surrounded by said light rays and an adjustable connection between said projectile directing means and said light directing means including an indicator whereby said two means may be disposed in a predetermined angular relation to each other to secure coincidence of trajectory of the two at any predetermined range.

WARD H. SNYDER.

Witnesses:
JAMES N. RAMSEY,
CLARENCE L. PERDEW.