A. FIALA.

SILENCER AND FLASH OBSCURER.

APPLICATION FILED MAR. 26, 1919.

1,341,363.

Patented May 25, 1920.

Fig. 1.

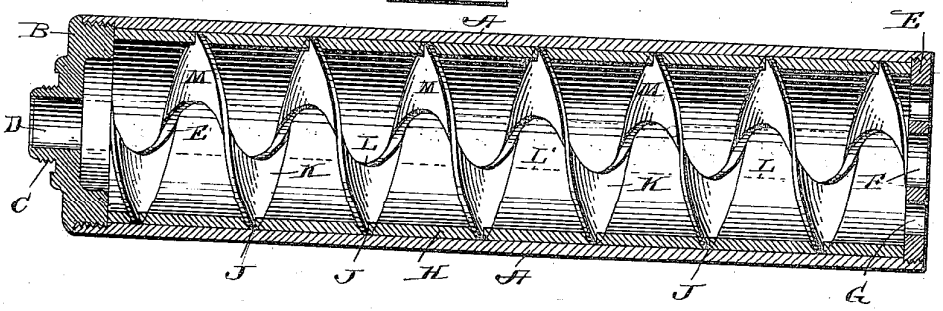


Fig. 2.

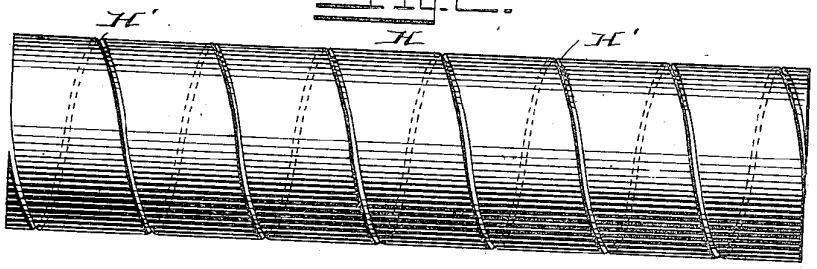
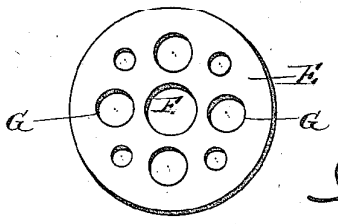


Fig. 3.



Inventor

UNITED STATES PATENT OFFICE.

ANTHONY FIALA, OF THE UNITED STATES ARMY.

SILENCER AND FLASH-OBSCURER.

1,341,363. Specification of Letters Patent. Patented May 25, 1920.

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To all whom it may concern:

Be it known that I, ANTHONY FIALA, major, Ordnance Department, U. S. A., a citizen of the United States, stationed at Springfield Armory, have invented an Improvement in Silencers and Flash-Obscurers, of which the following is a specification.

The invention described herein may be used by the Government, or any of its officers or employees in prosecution of work for the Government, or by any other person in the United States, without payment of any royalty thereon.

My invention relates to an improved silencer and flash obscurer, one object being the provision of a small, compact and practical device of this character, particularly adapted for service upon the Browning machine gun, although not limited to such use, and capable of ready application and removal from the water-jacket contiguous to the muzzle of the gun and having means to guide the projectile, silence or muffle the report of the discharge, as well as to hide or obscure the flash produced by said firing charge.

Another object of my invention is the provision of a device of the character and for the purpose stated, which will be comparatively inexpensive of construction; which may be quickly inspected or taken apart for the purpose of repairing or cleaning; and which generally will prove highly efficient for the purposes intended.

With these objects in view, the invention, broadly stated, consists of an outer casing having a means at one end for attaching the device to the water-jacket or to the muzzle of the gun, means at the other end having a passage for the projectile and openings for the escape of confined gases, a retaining sleeve having a spiral groove mounted in the casing and confined between said end means of the casing and a spiral or screw mounted in said spiral groove of the retaining sleeve and having a projectile passage therein, in line with the entrance and exit projectile passage in the ends of the casing.

The invention further consists of a device of the character and for the purpose stated embodying novel features of construction and combination of parts substantially as shown, described and particularly defined and distinguished by the claims.

In the accompanying drawings, I have shown a combination silencer and flash obscurer constructed in accordance with my invention and embodying a practical structure for obtaining the objects of my invention, but it will be understood that I reserve the right to make any changes or modifications which come within the scope of my invention.

In the said drawings:—

Figure 1 represents a vertical central sectional view of a combined silencer and flash obscurer constructed according to my invention;

Fig. 2 represents a side elevation of the spiral screw retaining sleeve; and

Fig. 3 represents a view in front elevation of the end member of my device, showing the location of the projectile opening or passage and the outlets for the escape of confined gases.

The invention is made of the desired size or capacity to meet the requirements for which it is intended and consists of an outer barrel or casing A, a cap B, screwed into one end of said casing and formed with a threaded connecting stem C, for application to the threads of the water-jacket at the muzzle of the fire arm and having a projectile passage D, while in the other end of said casing is mounted the plate or disk E, having a projectile passage F, in line with the passage D, and further provided with openings G, providing outlets for the escape of confined gases.

From this construction it will be apparent that I provide a casing or barrel provided with an attaching member at one end and a disk or plate at its other end, both being provided with passages for the projectile, while within the said barrel or casing and confined in proper relation to the casing and end members is located the spiral shell or sleeve H, whose equally distanced grooves H′, are adapted to receive and confine the edges J, of the muffling screw K, which is provided through the body of its convolutions with cut-away or rounded portions L, which aline and form a projectile guiding passage L′ through the center of the said screw, such projectile guiding passage being in perfect alinement with the entrance passage of the inner end member and the exit passage of the outer end member, while the convolutions of the screw are in a more or less perpendicular or vertical position

forming impact surfaces M, which effect the muffling or silencing of the report and at the same time present practically a continuous wall or barrier to hold within the retaining shell the flash produced by the discharge.

One of the most vital features of my invention resides in the mounting of the retaining spiral shell and the muffling screw with reference to said shell which insures the accurate fitting of the screw in the shell and the proper directing or guiding of the projectile during its passage and presents a long continuous series of walls or barriers which serve to deaden or muffle the sound from the report of the charge and also obscure the light or flash from such charge, the invention thus performing all of the necessary requirements in an efficient and practical manner and insuring the production of a highly desirable commercial product of this character.

The spirals of the screw as near as possible conform to the pitch of the rifling of the gun, as it has been found by experience that this construction produces the most satisfactory silencing and flash hiding results.

I claim:—

1. A device of the character and for the purpose stated, consisting of a casing, detachable members mounted in the ends of said casing, one having a projectile passage and the other having a projectile passage and gas escape openings, a screw or spiral mounted in said casing and confined between the said end members, said screw having a projectile passage alining with the similar passages of the end members, a sleeve mounted between the end members and fitting the casing, and having a spiral groove through its length to receive and retain the outer edge of the convolutions of said screw.

2. A device of the character and for the purpose stated, consisting of a casing having projectile passages in its ends, a sleeve snugly fitting within the casing, said sleeve formed with a spiral groove and a muffling screw having a bullet passage in its walls and having the peripheral edge of its convolutions confined within the groove of said sleeve.

3. A device of the character and for the purpose stated, consisting of a casing, detachable members mounted in the ends of said casing, one having a projectile passage and the other having a projectile passage and gas escape openings, a screw or spiral mounted in said casing and confined between the said end members, said screw having a projectile passage alining with the similar passages of the end members and having convolutions, a sleeve mounted between the end members and fitting the casing, and having a spiral groove through its length to receive and retain the outer edge of the convolutions of said screw.

ANTHONY FIALA.