J. A. STEINMETZ.

WIRE ENTANGLEMENT SHOOTER CUTTER.

APPLICATION FILED JUNE 19, 1916.

1,211,779. Patented Jan. 9, 1917.

Fig. 1.

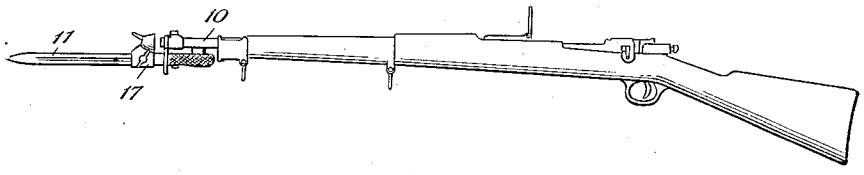


Fig. 2.

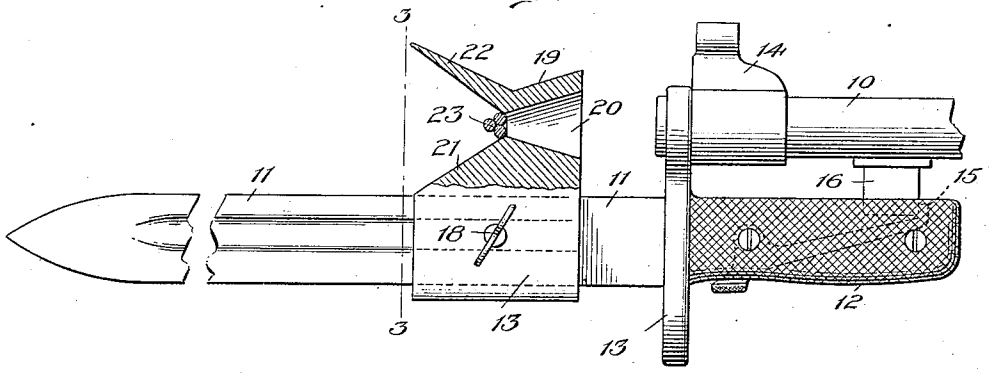


Fig. 3.

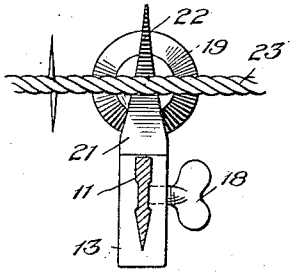


Fig. 4.

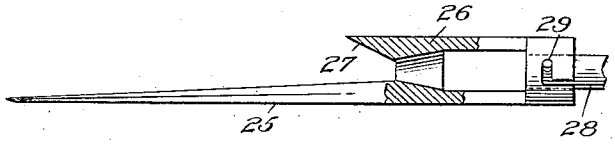


Fig. 5.

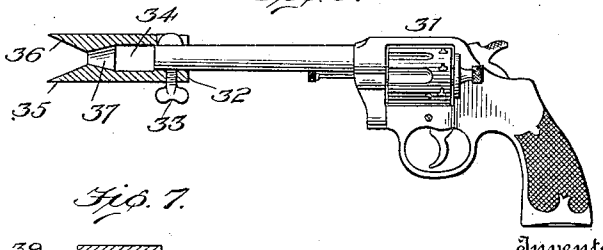


Fig. 9.

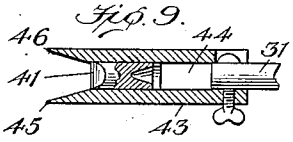
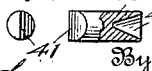


Fig. 6.

Fig. 7.

Fig. 8



Witness

Edwin L. Bradford

Inventor

Joseph A. Steinmetz

By

Munn & Munn,

Attorneys.

UNITED STATES PATENT OFFICE.

JOSEPH A. STEINMETZ, OF PHILADELPHIA, PENNSYLVANIA.

WIRE-ENTANGLEMENT SHOOTER-CUTTER.

1,211,779. Specification of Letters Patent. Patented Jan. 9, 1917.

Application filed June 19, 1916, Serial No. 104,513.

To all whom it may concern:

Be it known that I, JOSEPH A. STEINMETZ, a citizen of the United States, and resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Wire-Entanglement Shooter-Cutters, of which the following is a specification, reference being had therein to the accompanying drawing.

The object of this invention is to provide for severing wire entanglement, using an attachment for small arms whereby the discharge of the weapon breaks the wire by direct impact.

In the accompanying drawings, Figure 1 is a side view of a service rifle provided with a bayonet and with my devices. Fig. 2 is a similar enlarged view of the forward portion of the barrel and its attachments. Fig. 3 is a section on the line 3—3 of Fig. 2. Fig. 4 shows a modified construction. Fig. 5 is a side elevation of a revolver provided with one form of my devices. Figs. 6 and 7 are axial diametrical sections of special bullets which may be used. Figs. 8 and 9 show modifications.

In Figs. 1, 2, 3, 10 designates the barrel of a rifle provided with a bayonet 11 having a handle 12 so that the bayonet serves as a knife when detached. The upper end of the guard 13 of the blade is perforated to slip over the end of the barrel against the sight 14 and the handle is provided with a spring catch 15 to engage, detachably, a lug 16 on the barrel, these parts being without novelty.

A closely fitting steel block 17 is slipped over the blade of the bayonet 11 to a point at some distance from the end of the barrel and, if desired, secured by a set screw 18. The block has upon its upper rear side an integral lug 19 provided with a forwardly converging aperture 20 alining with the bore of the gun and at its smaller end of nearly the bore's diameter. From this forward end of the lug diverge downwardly and upwardly integral, relatively narrow, wire-guiding projections 21, 22, the upper one being preferably relatively slender and pointed, since it has only a guiding function.

In use, whether the user be prone or otherwise, the gun is thrust forward until an entanglement wire 23 is engaged between the projections 21, 22 and brought to the forward end of the block and directly across the opening 20. The gun is then fired, the ball instantly severing the wire—or even, as experiment shows, a rod of several times the usual diameter of a barbed wire or cable. The space between the block and the muzzle allows gases to escape laterally so that neither gun nor soldier are endangered and the velocity of the ball and gases is so high that inertia prevents any strong tendency of the block to move forward bodily.

As shown in Fig. 4, a special bayonet 25 may have an integral block 26 provided with a suitable divergent guide 27 secured to the barrel 28 by any suitable lock 29, the block having openings near the muzzle to allow lateral escape of gases as before.

Fig. 5 illustrates a similar device secured to a revolver 31. The device is shown as a cylinder 32 slipped over the revolver barrel and secured by suitable means, for example, by a set screw 33. The block is laterally cut away at 34 for escape of gas and is provided with guiding projections 35, 36, for securing alining of the wire with the bore and at the forward end of the conical aperture 37. The bullet used may if desired be a cylinder 38, Fig. 6, with its forward end cut away in any desired manner to give a cutting edge, or it may be made without the recess in its end, as indicated at 39 in Fig. 7. Soft lead bullets are sometimes used with side arms, and in such case the wire may be cut by a steel member 40, Figs. 8, 9, having a cutting edge 41 and provided at its opposite end with a recess 42 to receive the lead bullet. When this expedient is adopted, the device 32 of Fig. 5 is replaced by a similar internally cylindrical device 43, Fig. 9, leaving as before lateral openings 44 and guiding projections 45, 46, which may be as long and diverge as widely as desired. The slug 40 is placed on the forward end of this sleeve, which it fits somewhat closely while free to be shot forward by the discharge of the weapon. My experiments, however, indicate that the use of the ordinary service cartridge of either arm is quite satisfactory.

It may be noted that the device does not

seriously interfere with the effectiveness of the shot, at least, at moderate distances, where no wire is to be cut.

What I claim is:

1. The combination with the barrel of a small-arm weapon, of a block supported by the barrel and provided with a forwardly converging passage alining with the bore of the weapon and having forwardly extending divergent projections adapted to bring a transverse wire against which the block is thrust into position across the smaller end of said passage.

2. The combination with a rifle barrel, of a bayonet fixed thereto, a block mounted on the bayonet at some distance from the muzzle of the gun, and provided with a passage registering with the bore of the gun and further provided with projections forwardly divergent from opposite sides of said passage, substantially as set forth.

3. The combination with a rifle and its bayonet of a sleeve block fixed upon the bayonet at some distance from the end of the barrel and provided with a forwardly converging passage alining with the bore of the firearm and with faces forwardly divergent from the passage, substantially as set forth.

In testimony whereof I hereunto affix my signature.

JOSEPH A. STEINMETZ.

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