

Feb. 21, 1928.

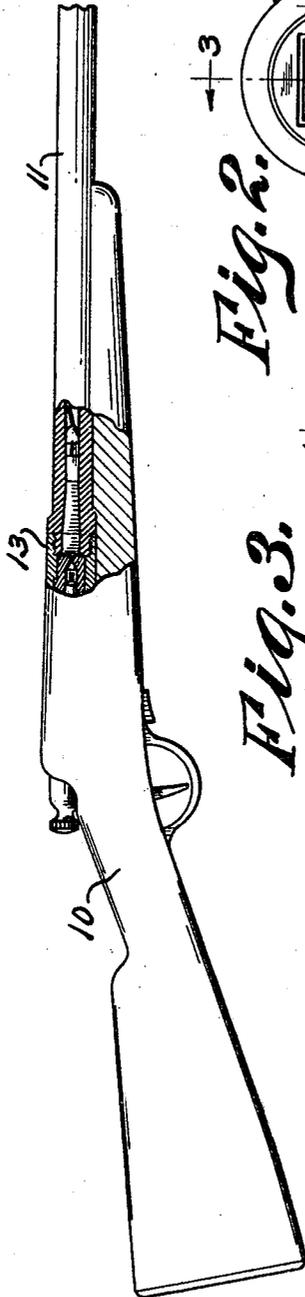
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A. A. COWAN  
RIFLE AND BULLET

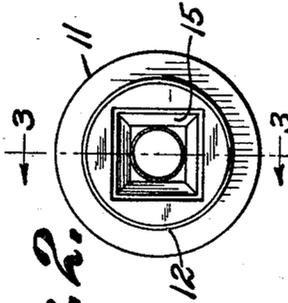
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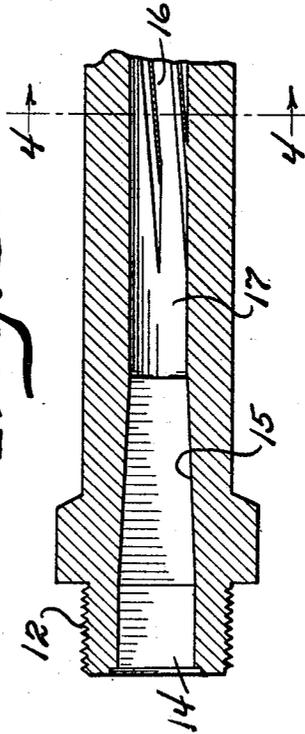
*Fig. 1.*



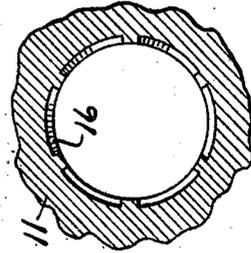
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



WITNESS:

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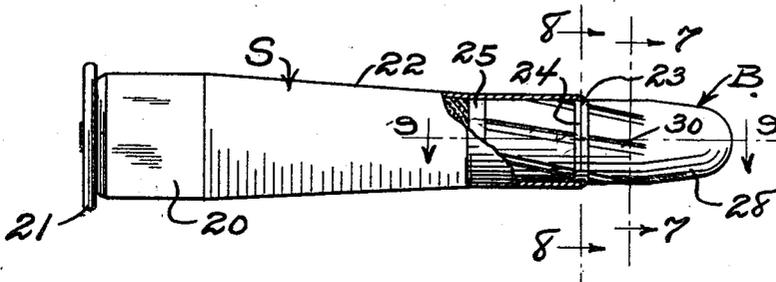
A. A. COWAN

RIFLE AND BULLET

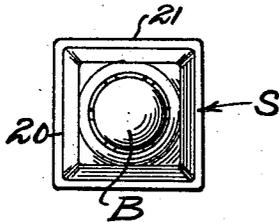
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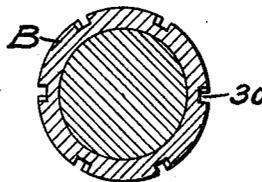
*Fig. 5.*



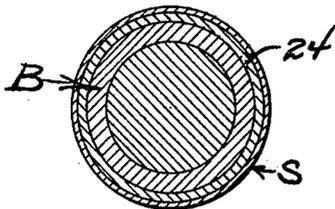
*Fig. 6.*



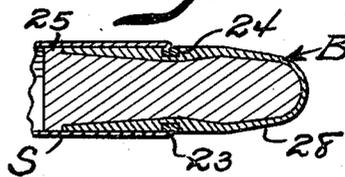
*Fig. 7.*



*Fig. 8.*



*Fig. 9.*



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# UNITED STATES PATENT OFFICE.

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RIFLE AND BULLET.

Application filed February 26, 1926. Serial No. 90,911.

The object of this invention is to provide a rifle and bullet so constructed that friction shall be reduced, and the effectiveness of the weapon when a given quantity of powder is employed shall be greatly increased.

A further object is to provide a bullet and shell for use with a barrel and breech formed to correspond with the new construction, the shell being angular in cross section and the bullet being rifled and connected with the shell in a particular manner, the rifling of the barrel being cut away as described.

With the foregoing and other objects in view, the invention consists in the novel construction and arrangement of elements to be described, illustrated and claimed, it being understood that modifications may be made within the scope of the claim without departing from the spirit of the invention.

In the drawing forming part of this application,

Figure 1 shows the rifle in side elevation, portions being broken away and other portions being in longitudinal section.

Figure 2 shows a shell in position and in end elevation.

Figure 3 shows a portion of the barrel in longitudinal section.

Figure 4 is a section on line 4—4 of Figure 3, showing the rifling of the barrel.

Figure 5 is an enlarged view of the shell and bullet, the view being chiefly in elevation.

Figure 6 is an end view of the cartridge.

Figure 7 is a section through the bullet, the section being on line 7—7 of Figure 5.

Figure 8 is a section on line 8—8 of Figure 5.

Figure 9 is a section on line 9—9 of Figure 5.

The rifle may be of standard construction except as regards the feature hereinafter described and showing departure from usual form and construction. The stock of the gun is designated 10, and the barrel 11 has threaded connection at 12 with the internally threaded portion 13 of the breech chamber. The barrel is provided with a square, or other form of angular bore 14, the walls of which are straight, these walls merging into tapered walls 15. The rifles 16 of the barrel

are cut away at 17 to form portions permitting the rifles of the bullet to be described below to enter the rifles of the barrel. The rifles of the barrel will therefore have an edge portion on the non-friction side thereof which is parallel with the main axis of the barrel, the friction side of the rifle being in spiral form. The shell is designated generally by the letter S and includes the square or other angular portion 20, corresponding with the angular portion 14 of the bore, said portion 20 having at one end thereof an extracting rim or flange 21 serving the usual purpose.

The shell is tapered at 22, the taper extending to the point shown, and the extreme end being crimped at 23 for engagement with the bullet. The forward band 24 of the bullet is in contact with the crimped portion 23, and is of soft metal. The rear band 25 is also of soft metal. The rifling of the bullet referred to below, is interrupted by the bands 24 and 25.

The bullet B includes a forward tapered portion 28, the taper assisting in bringing the bullet to place in the barrel, and with reference to the rifles thereof. The rifled portion of the bullet is designated 30, it having already been noted that the rifles are interrupted by band 24, this band tending to prevent the escape of gases.

The shell is designed to place the bullet properly in the barrel, and the bullet is designed to enter the rifling and pass through the barrel with as little friction as practicable, thereby increasing the efficiency of the powder charge and increasing the speed of the missile. It is also possible to carry out the principle involved by making use of a round shell, the form here described being preferred.

What is claimed is:—

In a fire-arm, a breech chamber, square in cross section, and a rifled barrel, the non-friction edge of the rifles being cut away near the breech to form walls substantially parallel with the main axis of the barrel, and a chamber tapering toward a reduced forward portion.

In testimony whereof I affix my signature.

ALBERT A. COWAN.