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BARREL CLEANING CARTRIDGE FOR FIREARMS

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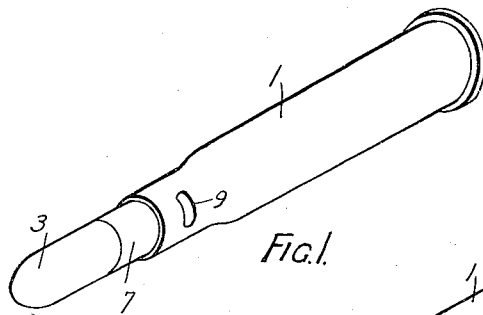


Fig. 1.

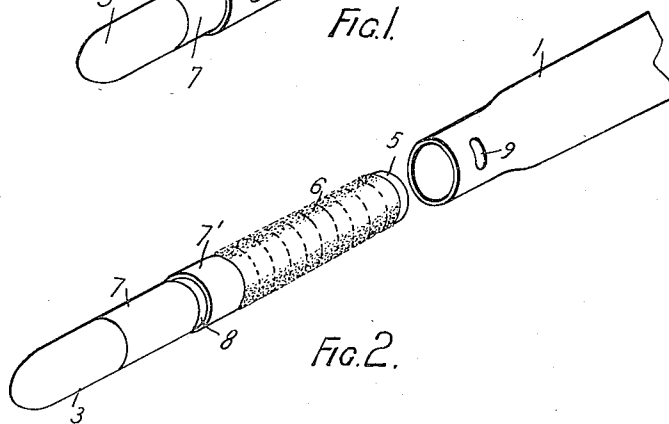


Fig. 2.

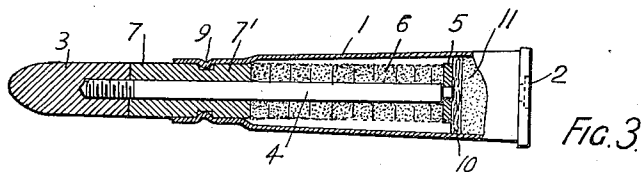


Fig. 3.

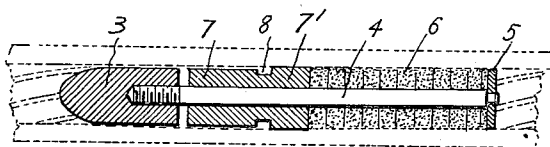


Fig. 4.

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UNITED STATES PATENT OFFICE

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BARREL CLEANING CARTRIDGE FOR FIREARMS

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Solomon IslandsApplication May 9, 1935, Serial No. 20,688
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2 Claims. (Cl. 102-12)

This invention relates to the cleaning and lubricating of the barrel of a firearm (rifle or artillery piece) by propelling therethrough a projectile which incorporates or has attached to it a cleaning wad which is axially compressed to expel to its peripheral surface the lubricating and cleansing compound with which it is impregnated, so that as the wad passes through the barrel the latter is cleaned of pre-deposited products of combustion and is oiled.

The object of this invention is to provide an improved cartridge for this particular purpose and for use in a firearm having a rifled barrel, but not adapted for use as ordinary ammunition, and including means whereby the barrel of the firearm is cleared of not only predeposited products of combustion, but also predeposited metallic or other hard substances, and is also oiled.

With the stated object the invention consists in a cleaning cartridge for use in a firearm having a rifled barrel, including a case containing a propellant charge and a projectile fitted in said case, said projectile comprising a bullet or head of a diameter to pass freely through the barrel and having a tail-rod extending into the case and freely slidable through a hollow metal collar or sleeve fitted in the forward end of the case and having a diameter to fit the major diameter of the barrel and engage the rifling, a washer or stop on the end of said tail-rod, and on the tail-rod, between the washer and the collar, a wad or wads of compressible material impregnated with a cleaning and oiling compound of a diameter not less than the major diameter of the barrel, also arranged that said wad or wads are compressed lengthwise to expel the impregnating compound to the peripheral surface thereof when, on propulsion of the projectile through the barrel resulting from explosion of the propellant charge, the forward movement of the collar is retarded, relatively to that of the bullet or head, by its engagement with the rifling.

The term "wads" has been used herein to indicate a plurality of comparatively thin discs, but it will be obvious that one long cylindrical wad or other similar arrangement will serve the purpose.

To more clearly and fully explain the invention in one form I will now refer to the accompanying drawing which depicts a preferred construction of cartridge according to this invention adapted for use in a rifle.

In the drawing,

Figure 1 is a perspective view of the complete cartridge, and

Figure 2 a similar view with the bullet and attachments withdrawn from the cartridge case;

Figure 3 is a view in part section of Figure 1, and

Figure 4 a sectional view showing the bullet and attachments in passage through a rifle barrel, the latter (in part) being shown in dotted lines.

Referring to the drawing, the case 1 is of conventional type having at its base a percussion cap 2. The bullet 3 has screwed into its rear end the tail-rod 4, terminally fitted with a fixed washer 5, and on this tail-rod are fitted the impregnated felt wads 6 and the collar 7 of suitable solid material (preferably brass) which at its forward end is of the same diameter as the bullet 3 but as its rear end as at 7¹ is of slightly larger diameter to neatly fit the major diameter of the barrel. The collar is formed with an annular recess 8 and is secured in the case by indenting portions of the case as at 9 into the recess, as clearly shown in Figure 3 and as in known practice.

Rearwardly of the washer 5 is a packing or wad 10 of flexible material such as cotton-wool, and behind this is the propellant charge 11 retained in place by the wad 10.

The wads 6 are impregnated with any suitable compound, and I have found that a small proportion of finely ground abrasive material such as powdered carborundum mixed with gun oil is effective.

Cartridges according to this invention are intended for occasional use only, as when a rifle requires cleaning, and in use a cartridge is inserted in the rifle in the usual way, the bullet 3 and leading end of the collar 7 projecting into the barrel. When the cartridge is fired, the resulting explosion propels the bullet, collar and attached cleaning wads through the barrel; when the rear and larger end of the collar meets the rifling its motion is somewhat hindered thereby, but the momentum of the bullet being unhindered carries the washer 5 towards the collar, thus compressing the wads 6 and expressing the cleaning compound therefrom, so that as the whole assembly of bullet, collar and wads are forced through the barrel the latter is cleaned and smeared with lubricant.

I claim:

1. A cleaning cartridge for use in a firearm with a rifled barrel, comprising a case containing a propellant charge and means for firing it, a hollow collar or sleeve of solid material releasably fitted in the front end of said case and of a

diameter to engage the rifling of the barrel of the firearm, a bullet or head having a tail-rod which passes through said collar or sleeve and is terminally fitted with a stop, and a wad of compressible material impregnated with a cleaning and oiling compound, mounted on said rod between the terminal stop and the collar.

2. A cleaning cartridge for use in a firearm with a rifled barrel, including, in combination, a case containing a propellant charge, means for firing said charge and a barrel cleaning projectile fitted in said case, said projectile comprising a tubular collar or sleeve releasably fitted in the front end of said case and having a diameter to neatly fit

the major diameter of the barrel, a rod slidable through said collar or sleeve, a bullet or head fixed on the front end of said rod and of a diameter to pass freely through the barrel of the firearm, a stop on the rear end of said rod, and a wad of compressible material, impregnated with a cleaning and oiling compound, mounted on said rod between the terminal stop and the rear face of the sleeve or collar, said wad being normally uncompressed axially and of a diameter not less than the major diameter of the barrel of the firearm in which the cartridge is to be used.

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