

UNITED STATES PATENT OFFICE

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RIFLE-BARREL ATTACHMENT AND AMMUNITION FOR SHOTGUN BARRELS

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The invention relates to means for adapting shot gun barrels for rifles and has for its object the provision of an improved construction of rifle barrel applicator for shot gun barrels including means for reducing the weight of the rifle barrel applicator consisting in the provision of a plurality of longitudinal grooves in the outer face of the rifle barrel providing a plurality of splines or fins that by engaging the inner face of the shot gun barrel serves to reinforce the rifle barrel when in place in the shot gun barrel and also to prevent bending of the rifle barrel when removed from the shot gun barrel, the invention also contemplating improved means for holding the rifle barrel attachment in the shot gun barrel.

A further object of the invention is the provision of an improved construction of ammunition for use with rifle barrel attachments for shot gun barrels.

The invention will be described in detail hereinafter and will be found illustrated in the accompanying drawings in which Figure 1 is a side view in elevation of a shot gun showing the rifle barrel attachment in position therein.

Figure 2 is a longitudinal sectional view of a shot gun barrel with the rifle barrel attachment and one type of ammunition in place therein.

Figure 3 is a transverse sectional view on an enlarged scale on a plane indicated by the line 3—3 of Figure 2, and

Figure 4 is a fragmental longitudinal sectional view similar to Figure 2 showing a modified construction of ammunition for the attachment.

In the drawings similar reference characters are used to designate corresponding parts throughout the several views.

In the drawings the rifle barrel attachment is shown applied to a shot gun of the Remington repeating type, model 10—A designated A, and having its barrel B provided with an enlarged chamber C at the breech of the barrel and formed with an inclined annular shoulder D between the chamber C and the bore *b* of the barrel. The rifle barrel attachment is designated 1 and is formed to snugly fit the bore *b* of the shot gun barrel B and provided with an enlarged breech 2 that snugly engages the forward end of the walls of the chamber C and having an inclined shoulder 3 engaging the circumferential shoulder D. The muzzle end of the barrel 1 has a reduced and threaded portion 4 that is engaged by a threaded ring nut 5 having a circumferential flange 6 that abuts the muzzle end of the shot gun barrel B to hold the rifle barrel attachment 1 securely within the bore *b* of said shot gun barrel B. The rifle barrel attachment 1 is provided with a plurality of longitudinal grooves 7 extending from the shoulder 3 within a short distance of the muzzle of the barrel, said groove being provided to lighten the weight of the attachment and of the adapted shot gun when in place in the barrel thereof, said grooves forming a plurality of radial fins 8 having their outer edges engaging the inner face of the bore *b* when the attachment is in position and serving to reinforce the rifle barrel, said fins also serving to prevent bending of the attachment when not in place in the shot gun barrel. The rifling of the bore 9 of the attachment 1 is shown as threads or beads 10, the number shown for illustration being four of such threads or beads, but it will be apparent that the number may be less than that shown or more as may be preferred. To promote greater accuracy in the use of the weapon the rifling 10 ends remote from the muzzle end of the barrel as shown at 11, to eliminate any possibility of the burrs formed at the rear end of the bullet caused by the cutting of the bullet by the rifling from causing any deflection as the projectile leaves the rifle barrel, since the projectile will pass out from a perfectly smooth surface, and at the same time the distance between the ends of the rifling and the muzzle of the barrel will be so slight that no apparent resistance will be given to the spinning motion that is imparted to the projectile. As hereinbefore stated the invention also includes ammunition adapted for use in connection with the rifle barrel attachment to provide means by which the ammunition chamber C of the shot gun barrel B may be

utilized for the rifle projectile and the ammunition may be used in connection with the magazine E of the shot gun A.

In Figure 2 is shown one form of the adapter in which the shell 12 may be of paper as is commonly used for shot gun ammunition in which is provided a tubular filler 13 that receives a rifle cartridge 14 of conventional type in which the projectile is designated 15, explosive 16, and a fulminate 17. The breech end of the adapter is provided with the sheet metal closure commonly used with shot gun shells and designated 18, the closure 18 being provided with an opening 19 to receive the shell or cartridge 14. 20 indicates a wad of any suitable material to hold the tubular filler 13 in position, said wad being provided with an opening 21 that is alined with the tubular opening in the filler 20 13 and with the rifle barrel bore 9, said wad being held in position by crimping the adjacent edge of the shell 12 as shown at 22. The breech end of the rifle barrel attachment 1 is reduced as shown at 23 to receive the crimped portion 22 of the shell when the ammunition adapter is in position as shown in Figure 2.

In Figure 4 is shown a modified form of ammunition in which the shell 24 is also made of any cheap material, such for instance as paper, as hereinbefore described in connection with the shell 12 and the filler 25 is provided with an enlarged chamber 26 to receive the explosive 27, and the projectile 28 is held in position in the tubular opening 29, 30 indicating the wad similar to the wad 20 and 31 is the crimped portion of the shell that fits in the reduced portion 23 of the attachment 1. 32 is the fulminate for exploding the explosive 27, the cartridge therefor being held in the sheet metal reinforcement 33.

What is claimed is:—

1. In an attachment for gun barrels, a small caliber gun barrel adapted to be inserted in a gun barrel and having longitudinal grooves in its outer surface.

2. In an attachment for gun barrels, a small caliber gun barrel adapted to be inserted in a gun barrel, and a shoulder on said small caliber barrel to engage a shoulder in the bore of the gun barrel.

3. In an attachment for gun barrels, a small caliber gun barrel adapted to be inserted in a gun barrel, the breech end of said small caliber barrel being enlarged to provide a shoulder to engage a shoulder in the gun barrel, the muzzle end of the tubular member being reduced and exteriorly threaded, a ring nut engaging said threaded end, and a flange on said ring nut abutting the end of the gun barrel.

4. A rifle barrel attachment for gun barrels, comprising a tubular member, longitudinal fins on said tubular member, said member being adapted to be inserted in a gun barrel

and the edges of said fins to engage the inner wall of said barrel, the breech end of the tubular member being reduced to receive the crimped end of a shell, and means to hold the tubular member in the barrel.

5. A cartridge adapter for firearms, comprising a shell, a tubular filler in said shell, a compressible wad in said shell in front of said tubular filler adapted to be compressed against the rear end of a subcaliber barrel within a firearm barrel to provide a gas tight joint with said rear end.

6. An adapter cartridge for firearms equipped with subcaliber barrels comprising a shell, a tubular filler in said shell extending from the base of said shell substantially to the forward end thereof, said tubular filler being adapted to contain an explosive and projectiles, a compressible wad in said shell in front of said tubular filler adapted to be compressed against the rear end of a subcaliber barrel within a firearm barrel to provide a gas tight joint with said rear end.

7. An adapter cartridge for firearms equipped with subcaliber barrels comprising a shell, a tubular filler in said shell extending from the base of said shell substantially to the forward end thereof, said tubular filler being adapted to contain an explosive and projectiles, a compressible wad in said shell in front of said tubular filler adapted to be compressed against the rear end of a subcaliber barrel within a firearm barrel to provide a gas tight joint with said rear end, and the shell provided with a recess in front of said gas check.

8. In a rifle barrel, a barrel having a bore of the same diameter throughout its length, rifle ribs projecting inwardly of the walls of said bore, said ribs ending remote from the muzzle of the barrel, the smooth bore at the muzzle of the barrel permitting escape of the gases of the explosion in advance of the projectile through the grooves formed therein by the ribs and reducing the pressure behind the projectile before discharge from the barrel to prevent deflection of the projectile.

9. A rifle barrel attachment for gun barrels, comprising a tubular member, longitudinal fins on said tubular member, said member being adapted to be inserted in a gun barrel, the breech end of the tubular member being reduced to receive the crimped end of a shell, and means to hold the tubular member in the barrel.

In testimony whereof I affix my signature.
EDGAR A. WILLIAMS.