April 11, 1950 R. JANZ 2,503,491

GUN SILENCER INCLUDING SIDE BRANCH CHAMBER

Filed March 29, 1948

Fig. 1.

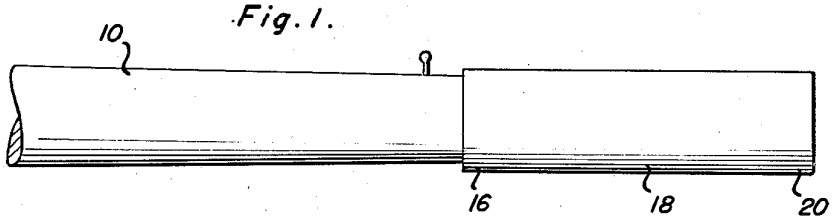


Fig. 2.

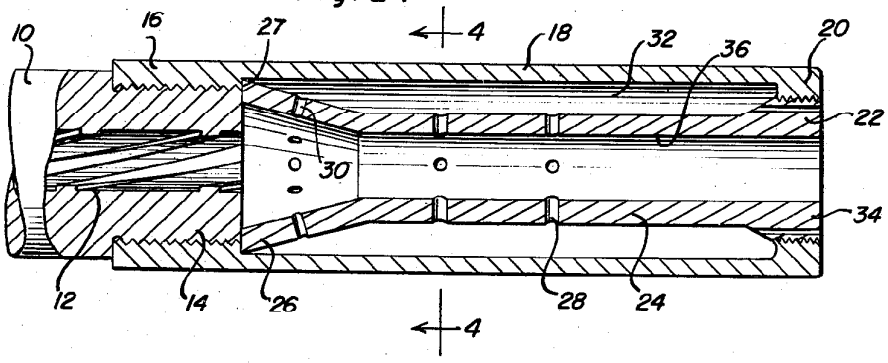
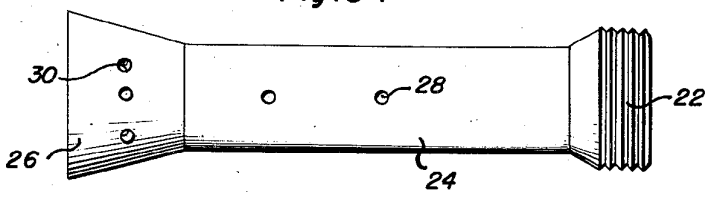


Fig. 3.



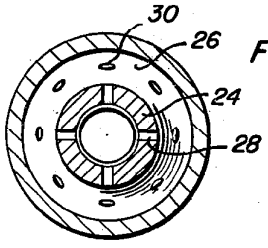


Fig. 4.

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GUN SILENCER, INCLUDING SIDE BRANCH CHAMBER

Robert Janz, Joliet, Mont.

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1 Claim. (Cl. 181—41)

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This invention relates to new and useful improvements in muzzle attachment for gun barrels and the primary object of the present invention is to provide a muzzle attachment for gun barrels including novel and improved gas relief means for reducing the normal sound emitted during the firing of a gun and the usual recoil effected by the firing of a gun.

Another important object of the present invention is to provide a muzzle attachment for gun barrels including a muzzle engaging member and a novel and improved projectile receiving guide so arranged as to be spaced from the muzzle engaging member to form a gas chamber which will reduce the pressure of the gases within the muzzle engaging member acting on a projectile, to stabilize the forward movement of the projectile as the same is discharged from the guide.

A further object of the present invention is to provide a muzzle attachment for gun barrels including a gun barrel engaging member, and a projectile guide having an axial bore removably carried by the body facilitating the placement of the guide by a further guide having an axial bore of a smaller or larger diameter for use of the guide with projectiles of various sizes.

A still further aim of the present invention is to provide a muzzle attachment for gun barrels that is simple and practical in construction, strong and reliable in use, small and compact in structure, neat and attractive in appearance, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a fragmentary side elevational view of a gun barrel and showing the present muzzle attachment applied thereon;

Figure 2 is an enlarged longitudinal vertical sectional view taken substantially through the center of Figure 1;

Figure 3 is a side elevational view of the projectile guide used in conjunction with the present invention, and showing the said guide removed from the gun barrel engaging body; and

Figure 4 is a transverse vertical sectional view taken substantially on the plane of section line 4—4 of Figure 2.

Referring now to the drawings in detail, where-

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in for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents a gun barrel of any suitable length or size that is formed with a suitable projectile bore 12 and a reduced externally threaded forward end 14.

Receivably engaging the externally threaded forward end 14, is the internally threaded rear terminal 16 of a cylindrical body 18, the forward end 20 of which is also internally threaded. Receivably engaging the forward end 20 of the body 18, is the externally threaded, enlarged forward portion 22 of a cylindrical or tubular guide member 24 the rear portion of which is integrally formed with a hollow, frusto-conical element 26 the major end of which abuts the forward extremity of the gun barrel 10 as well as an internal shoulder 27 adjacent the inner end of the body 18.

A plurality of circumferentially and longitudinally spaced ports or apertures 28 are formed in the guide member 24, and a further plurality of ports 30 are formed in the frusto-conical element 26. These ports 28 and 30 communicate with a gas chamber 32 formed between the inner periphery of the body 18 and the outer surface of the guide member 24.

It is also preferred, that the forward portion 22 of the guide member 24, or the forward end 20 of the body 18, be formed with a plurality of discharge ports 34 that lead outwardly from the chamber 32.

In practical use of the muzzle attachment thus described, gas leaving the gun barrel 10 will enter the chamber 32 by the ports 28 and 30, thereby reducing the volume pressure of the gas acting upon the projectile and facilitating the same to be directed forwardly through the guide bore 36 formed in the guide member 24 without lodging or yawing therein. By reducing the normal pressure of the gas in the gun barrel acting upon the projectile, it has been found that the amount of recoil of the gun will be reduced and the projectile will follow a truer course than was heretofore possible as the same leaves the guide member.

It should be noted, that the size, shape and positioning of the ports 28, 30 and 34 are so designed as to be dependent upon the velocity of the projectile fired by the gun, so that the same would necessarily be increased for fire arms having a high muzzle velocity and decreased for fire arms having a low muzzle velocity. Further, the bore 36 for the guide member conforms to the bore 12, being equal in diameter thereto, for the gun barrel. The guide member 24 is removable

from the body 18 to facilitate a further guide member to replace the same having a smaller or larger diameter when the device is employed on gun barrels of various sizes.

The function of the present muzzle attachment is to reduce the normal pressure of the gas leaving the gun barrel, thus increasing the normal time for the gas to be dispersed from the gun barrel. It is known, that approximately seventy per cent of the fire power or gases employed during the firing of a projectile is employed for the forward direction of a projectile, the remaining thirty per cent being the proportion which effects a sound, flashing, or recoil to the gun. It is therefore the primary feature of this invention to reduce and restrict the escaping gases thus preventing the normal recoil of the gun, the sound emitted during the firing of a projectile, and the flashing prevalent during such firing operation.

In view of the foregoing description taken in conjunction with the accompanying drawings it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and the scope of the appended claim.

Having described the invention, what is claimed as new is:

A muzzle attachment for gun barrels comprising a cylindrical body having inner and outer internally threaded end portions, a projectile receiving guide having a flanged externally threaded end portion receivably engaging the outer internally threaded end portion of said body, said flanged end portion being apertured, and an annular internal shoulder provided in said body adjacent the inner end portion of said body, said guide having an enlarged end portion abutting said shoulder and one end of a barrel, said guide being apertured and having its outer periphery spaced from the inner periphery of said body to define a gas chamber between said body and said guide.

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