

1,187,218.

Patented June 13, 1916.

Fig. 1.

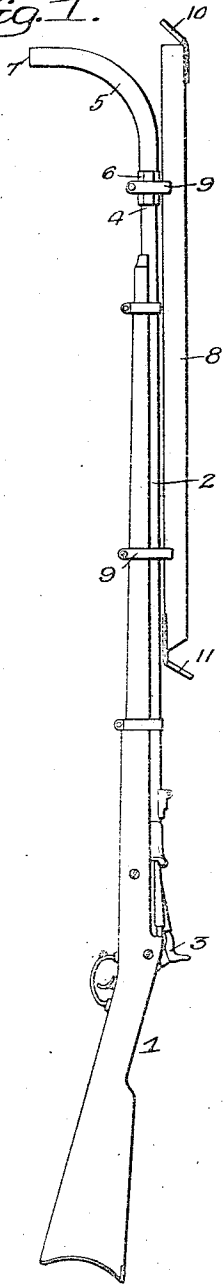


Fig. 5.

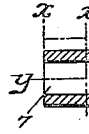
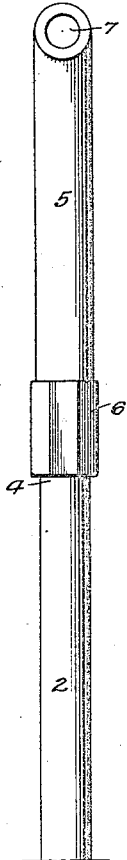


Fig. 2.

Fig. 4.

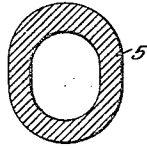


Fig. 3.

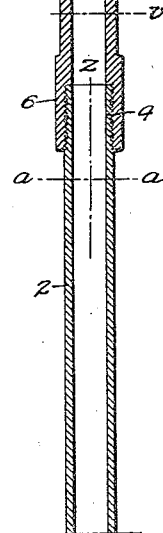
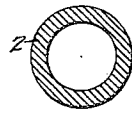
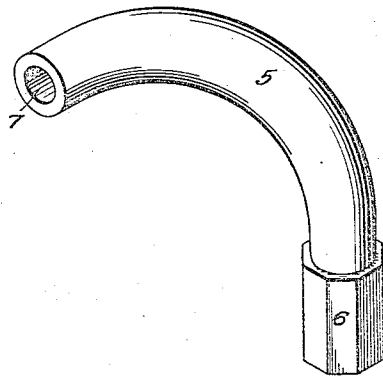


Fig. 6.



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UNITED STATES PATENT OFFICE.

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FIREARM.

1,187,218.

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To all whom it may concern:

Be it known that I, JONES WISTER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Firearms, of which the following is a specification.

My invention relates particularly to fire arms used in trench warfare.

While the invention is especially adapted for use in connection with small arms, such as rifles, it can be used in connection with certain types of cannon without departing from the essential features of the invention.

One object of the invention is to so construct a fire arm that it can be used in a trench with the aid of a periscope without exposing the soldier to the fire of the enemy. This object I attain by curving the outer end of the barrel so as to deflect the projectile in a direction at an angle to the longitudinal line of the fire arm.

A further object of the invention is to so design the curved portion of the fire arm that it will provide sufficient clearance to allow the projectile to pass freely around the curve.

In the accompanying drawings:—Figure 1, is a side view of the rifle illustrating my invention; Fig. 2, is an enlarged sectional view of the muzzle end of the rifle, showing the curved attachment; Fig. 3, is a transverse sectional view on the line $a-a$, Fig. 2; Fig. 4, is a transverse sectional view on the line $b-b$, Fig. 2; Fig. 5, is a view of the muzzle end of the curved section of the barrel; and Fig. 6, is a perspective view of the curved section.

Referring to the drawings, 1 is the stock of an ordinary rifle.

2 is the barrel and 3 is the hammer, which can be of any ordinary standard type, as the invention only relates to the muzzle end of the rifle.

The muzzle end 4 of the barrel of the rifle has a screw thread thereon, in the present instance, as shown clearly in Fig. 2.

5 is a curved section threaded at one end 6 to screw onto the end 4 of the barrel 2 and has a muzzle 7 of substantially the same diameter as the interior diameter of the barrel 2 and, in the present instance, is at right angles to the barrel.

Between the lines $x-x$ the walls of the muzzle end of the extension 5 are parallel with the center line y , which is at right angles to the line z of the barrel, but the in-

terior of the curved section 5 from the line x to the line v , in the present instance, gradually increases from both lines x and v to the center line w . I prefer to make this curved portion of the extension 5 oblong in cross section, as clearly shown in the enlarged view, Fig. 4, the width of the section being a trifle greater than the width of the interior of the barrel.

By this construction the projectile will freely pass through the curved section without binding, but there will be a certain amount of frictional resistance, due to the projectile coming in contact with the outer portion of the curved wall, but this will not materially decrease the velocity of the projectile, and, in the present instance, this portion of the wall is increased in thickness as shown.

The projectile I prefer to use is a round ball which fits the barrel, or a shell having a series of smaller balls, known as "buck shot," although an elongated bullet can be used and when such a bullet is used the diameter of the curved portion of the extension will have to be increased accordingly and this will depend entirely upon the length of the bullet.

By making the section detachable the rifle can be used as an ordinary rifle with a straight barrel and when used in "trench" warfare the attachment can be secured in place very readily.

I preferably combine a periscope 8 with this rifle and this periscope can be detachably secured to the barrel of the rifle by clamps 9. At the upper end of the periscope is a mirror 10 arranged at an angle of forty-five degrees to the longitudinal line of the periscope and at the lower end is a mirror 11, which is also arranged at an angle of forty-five degrees to the longitudinal line of the periscope, so that when the rifle is discharged it can be aimed correctly without the user being exposed to the enemy's fire.

As hereinbefore stated, while the invention is particularly adapted for use in connection with rifles, it can be used with certain types of machine guns and with some types of cannon where it is desired to throw a charge a given distance.

A gun of this type is not intended to be used for long distance firing as it is particularly adapted for trench warfare, where the trenches of the combatants are comparatively close together, the proximity of the

firing lines preventing a soldier taking accurate aim with an ordinary rifle unless exposed to the fire of the opposing party, but with my improvement accurate aim can be taken while in a position of comparative safety.

When long distance firing is necessary, the curved attachment, as well as the periscope, can be easily removed.

10 I claim:—

1. A fire arm having a barrel with a curved muzzle end, the bore of the curved section being greater in diameter than the bore of the straight portion of the barrel and the bore at the muzzle end of the curved section.

2. The combination in a rifle, of a barrel;

a curved extension secured to the muzzle end of the barrel, the muzzle end of the extension being parallel for a given distance with a line at right angles to the longitudinal line of the barrel and the curved portion between this muzzle end and the straight portion, which aligns with the barrel, being of a greater diameter than the barrel and the muzzle end of the attachment.

3. A curved section adapted to be secured to the barrel of a fire arm, said section being the same bore as the barrel of the fire arm at both ends, and greater in diameter midway between the ends, the bore tapering toward each end.

JONES WISTER.