No. 745,561. PATENTED DEC. 1, 1903.

P. BERGERSEN.

PRACTICE BARREL FOR RIFLES.

APPLICATION FILED MAR. 31, 1902.

NO MODEL.

Fig. 1.

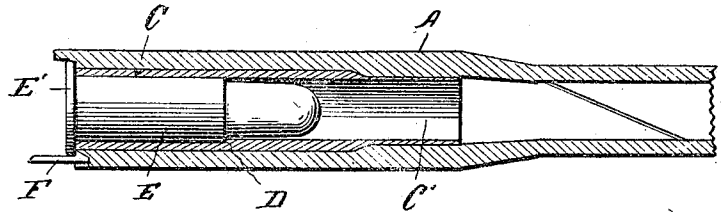


Fig. 2.

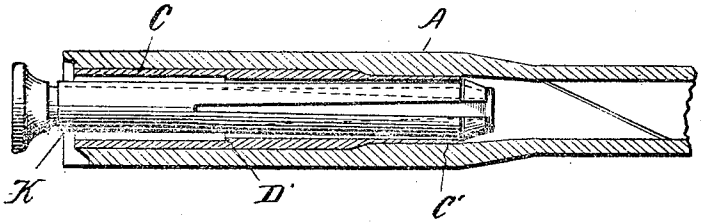


Fig. 3

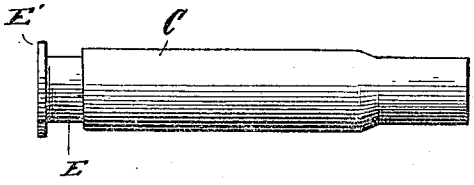


Fig. 5.

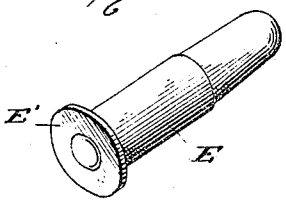


Fig. 4.

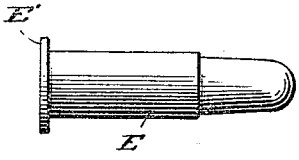
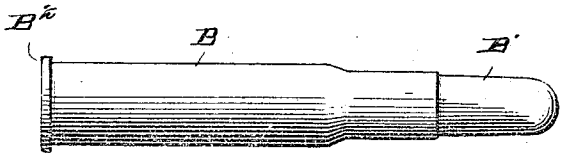


Fig. 6.



Witnesses
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No. 745,561. Patented December 1, 1903.

UNITED STATES PATENT OFFICE.

PETER BERGERSEN, OF CHEYENNE, WYOMING.

PRACTICE BARREL FOR RIFLES.

SPECIFICATION forming part of Letters Patent No. 745,561, dated December 1, 1903.

Application filed March 31, 1902. Serial No. 100,759. (No model.)

To all whom it may concern:

Be it known that I, PETER BERGERSEN, residing at Cheyenne, in the county of Laramie and State of Wyoming, have invented certain new and useful Improvements in Practice Barrels for Rifles, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to practice barrels for rifles.

The object of the invention is to provide a rifle in which high-power cartridges are habitually used with attachments by which cartridges containing only moderate charges and having shorter bullets may be employed in gallery practice and at short ranges.

It is well known that a rifleman prefers to shoot habitually with the same weapon to reach a high degree of excellence in marksmanship. Guns of the same weight and otherwise of similar construction frequently vary considerably in accuracy, for reasons generally unknown. Hence it is desirable that all practice be with the same weapon; but the cost of ammunition and the danger which results from using heavy charges at short range makes some form of light practice ammunition desirable. It is common to use an inserted rifle-barrel in a shotgun and also in machine-guns and heavy ordnance. This practically discards the effect of the ordinary barrel altogether. When used in a shotgun, the weight and "balance" of the gun are changed.

My idea is to approximate the usual conditions of the gun as to weight, &c., as nearly as possible and to use the rifle-barrel to guide the projectile, but to reduce the charge for high-power rifles, as will be explained.

Figure 1 is a longitudinal section of a rifle-barrel with my reducing sleeve or bushing shown in section and a low-power cartridge therein in elevation. Fig. 2 is a similar section of barrel and bushing and an elevation of a tool used to withdraw the bushing. Fig. 3 is a side elevation of the bushing and low-power cartridge partly entered therein. Fig. 4 is a side elevation, and Fig. 5 a perspective view, of a low-power cartridge. Fig. 6 is a side elevation of a high-power cartridge.

The rifle-barrel A is of any usual construction for firing heavy charges, chambered to receive any of the usual high-power cartridges, as at B, Fig 6. To use the same barrel with the low-power cartridge, I insert a bushing or sleeve C. This sleeve is preferably of brass or other metal but little liable to corrosion. Outwardly it conforms to the size and shape of the ordinary cartridge-shell B, except that it has no head or flange or other means for extraction, being by so much shorter than the cartridge-shell of cartridge B. Internally the sleeve or bushing C preferably has a shoulder D, which forms a rest for the front end of the low-power cartridge E. The bore of the bushing C in front of the low-power-cartridge seat is a little greater than the internal diameter of a cartridge-shell in which the ordinary bullet B′ rests.

The low-power cartridge E has a flange E′ greater in diameter than would ordinarily be used and practically such a flange as would be used with cartridge B—say such a flange as the flange B^2 on the service cartridge B. The projectile will also preferably be shorter than projectile B′, but of caliber to take the rifling in the barrel A.

It is obvious that the extractor of an ordinary gun does not have sufficient latitude of movement to be adapted to all calibers of cartridges. Thus there are few, if any, guns made in which the extractor intended for a .45-caliber cartridge can be made to close onto and extract a .22-cartridge centered in the barrel.

By making the cartridge-flange of a small-caliber cartridge of the same diameter usual for larger cartridges, I enable the gun to be used under the conditions under which it was intended to be used and secure a certainty of extraction of the cartridge-shell without unusual position for or strain upon the extractor.

As the cartridge-flange projects beyond the thickness of the bushing at all times, it is quite immaterial which side up the bushing may be placed. The cartridge-shell holds the bushing "home" in the breech-chamber, and the bushing cannot be withdrawn with the cartridge if made to fit the chamber as closely as does the ordinary full-caliber cartridge.

Bushing C having been inserted in barrel

A will not be removed by the extractor F. Extractor F may be any common extractor. The ammunition E E′ may be used as long as desirable, and the shells will be extracted by the usual extractor of the gun.

When it is desired to remove sleeve or bushing C, the same can be withdrawn by an expansible tool K, which tool extends forward of the bushing and is expanded by drawing back on the central plunger.

The sleeve C is light, durable, and does not injure the gun. When present, the weight of sleeve C and cartridge E is almost identical with the weight of the common service cartridge. Thickening of the wall of the bushing in advance of the seat for the low-power cartridge makes the weight of the bushing greater than that of an ordinary high-power cartridge-shell, although such shells with the head removed and expanded a little at C′ might be used.

In firing the low-power cartridges the bullet should pass through the chamber C′ in the bushing without contact. It is obvious that as the bullet does not bear on the bushing as it passes through the same there will be less wear and strain on the bushing. Providing a shoulder in the bushing at the front of the shell of the low-power cartridge insures the seating of the bushing snugly in its seat when the cartridge is pushed home whether the flange of the cartridge be in close contact with the rear of the bushing or not.

With the gun-barrel bushed as described there need be no change whatever in the loading and extracting mechanism of an ordinary rifle in order to use either the service or the practice cartridges.

What I claim is—

1. The combination with a rifle-barrel of usual construction, of a headless sleeve or bushing constructed to fit the cartridge-chamber, said bushing having a shoulder against which the front end of the shell of a low-power cartridge rests, and a caliber in front of said shoulder in excess of the rifled bore of the gun.

2. The combination with the barrel of a rifle, of a headless sleeve or bushing of brass or similar soft metal, said sleeve having a seat for a low-power cartridge, and a caliber in front of said cartridge-seat in excess of the rifled bore of the barrel.

3. A bushing or sleeve for a rifle-barrel, composed of brass or other metal but little liable to corrosion, which outwardly conforms to the shape of a common cartridge-shell, except that it is without head or flange, combined with a rifle-barrel into the cartridge-chamber of which the sleeve fits, said sleeve having a bore greater than the rifled caliber of the barrel.

4. The combination with the cartridge-chamber of a rifled barrel, of a headless sleeve or bushing externally constructed to fit the cartridge-chamber of the gun, internally of greater caliber than the rifled bore of the gun, and having a shoulder against which the front end of the shell of an inserted short cartridge bears.

In testimony whereof I affix my signature in presence of two witnesses.

PETER BERGERSEN.

Witnesses:
C. W. BURCHARD,
I. I. SMITH.