G. F. EGBERS.

SUBCALIBER BARREL.

APPLICATION FILED JULY 25, 1916.

1,217,162. Patented Feb. 27, 1917.

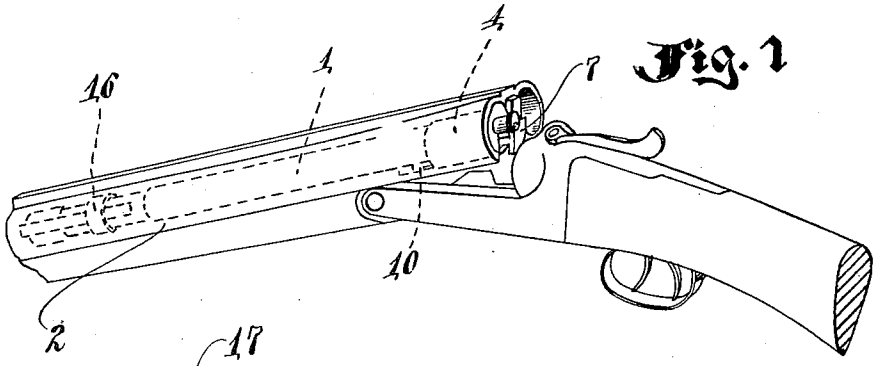


Fig. 1



Fig. 7

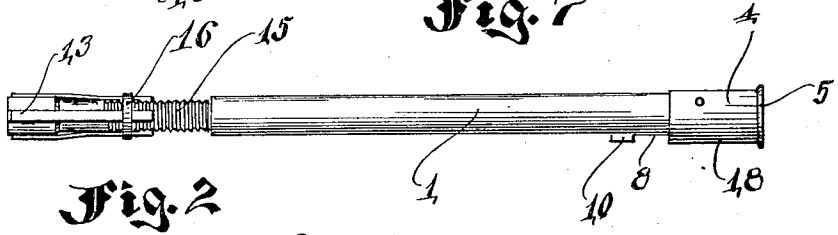


Fig. 2

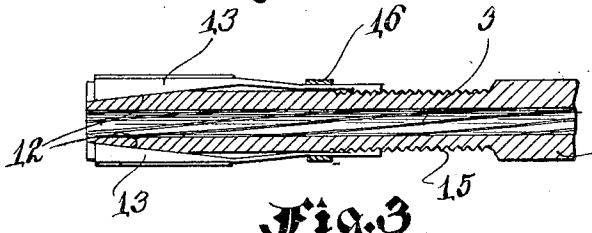


Fig. 3

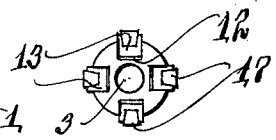


Fig. 5

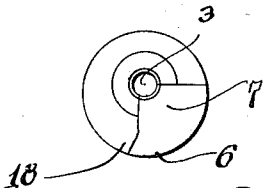


Fig. 6

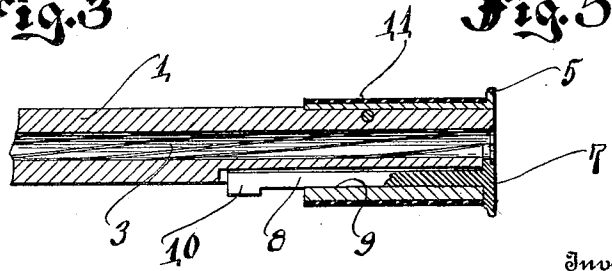


Fig. 4

Inventor

Guy F. Egbers

By Herbert E. Smith

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GUY F. EGBERS, OF PASCO, WASHINGTON.

SUBCALIBER-BARREL.

1,217,162. Specification of Letters Patent. Patented Feb. 27, 1917.

Application filed July 25, 1916. Serial No. 111,178.

To all whom it may concern:

Be it known that I, GUY F. EGBERS, a citizen of the United States, residing at Pasco, in the county of Franklin and State of Washington, have invented certain new and useful Improvements in Subcaliber-Barrels, of which the following is a specification.

My invention is designed especially for use with breech-loading shot-guns and other small arms, and adapted primarily for practice shooting.

The object of my invention is to provide a thoroughly practical auxiliary barrel, using a twenty-two or similar inexpensive small caliber cartridge, designed to be inserted and mounted within the barrel of a shot-gun, and more particularly adapted and intended for practice purposes, but which also combines all the essential qualities and advantages of an accurate, thoroughly reliable and efficient rifled fire-arm.

Broadly speaking, my invention comprises, the combination with a gun of the breech-loading type, of a rifle barrel mounted within the gun barrel, means for adjustment of the rifle barrel to secure accuracy in shooting, means for utilizing the firing mechanism of the gun to explode the rifle cartridge, and means actuated by the gun extractor for starting the said cartridge from its seat in the cartridge chamber of the rifle.

In the accompanying drawings,

Figure 1 is a view in perspective of a double-barreled shot-gun broken at the breech showing a cartridge in place and the inclosed portion of my improvement in dash lines.

Fig. 2 is a longitudinal plan view of my improvement assembled.

Fig. 3 is a sectional view of the forward portion of the rifle barrel and adjusting members.

Fig. 4 is a sectional view of the breech end of the rifle barrel showing the cartridge extractor details.

Fig. 5 is an end view of the muzzle of the barrel as it appears with the adjusting elements in position.

Fig. 6 is a diagrammatic plan view of the breech end of the rifle barrel minus the extractor and showing the offset or eccentric disposition of the cartridge chamber.

Fig. 7 is a view in perspective of one of the adjusting members.

Referring specifically to the said drawings in which like reference characters indicate like parts in the several views, 1 is the rifle barrel proper of a somewhat shorter length than the gun barrel 2 in which it is designed to be mounted, and having the customary rifled bore 3. The said rifle barrel is provided with a collar 4 secured upon its breech end said collar being of the same size as the shell that is usually inserted within the gun. A flange 5 similar to a cartridge flange extends about the rim or periphery of the collar with the exception of a section 6 thereof which is for the purpose of receiving the rifle extractor 7 and to allow for movement of the gun extractor which actuates the former. This collar serves to adjust the rear end of the rifle barrel to the shell chamber of the gun and also to provide a means for retaining the rifle extractor 7, which is slidably mounted therein by means of the longitudinal key 8 in the recess 9, the said key extending somewhat past the inner end of the collar. A stop section 10 of the said key serves to limit the movement of the extractor. The face of this extractor is a sector adapted to seat within the cut-out section 6 of the collar 4 its innermost edge being adapted to engage the rim of the rifle cartridge and its outer flanged edge fitting against the extractor of the gun so that when the gun is "broken" the movement of the gun extractor will start the rifle cartridge from its chamber. The collar 4 is of metal, but directly surrounding the same is the fiber sleeve 11 of such substance as to prevent marring of the shell chamber of the gun.

On the forward end of the rifle barrel is mounted my adjusting device for alining the barrel to conform with the sighting of the gun.

This adjusting means consists in providing the forward portion of the rifle barrel with the longitudinal tapered slots 12, preferably four in number, adapted to receive the adjusting key members 13 which are shown in detail in Fig. 7. These key members are wedge shaped in part and tapering to fit the said slots 12, and by proper adjustment toward the breech of the barrel they serve to bear against the surrounding surface and retain the forward end of the rifle barrel rigidly within the shot-gun. The inner ends of the key members are provided with the teeth or threads 13 which

correspond to and are adapted to engage the threads or teeth 15 upon the rifle barrel. After the desired longitudinal adjustment of the members 13 has been obtained they are secured in place by a ring 16 which may be solid or which may consist of several windings.

Now, in fitting said rifle barrel in the shot-gun, it may be necessary to raise or lower or to shift the front end to the right or left of the center, and yet at all times to maintain the front support rigidly in contact with the shot-gun. By moving the adjusting members, Fig. 7, in the proper direction, a very accurate adjustment can be secured and which, once made, need not be altered, but will conform with and fit the gun bore and render possible accurate shooting while in adjustment.

To provide against marring of the barrel by the forward adjusting elements, I provide fiber inserts 17 therefor which have direct contact with the inside of the gun barrel.

When the practice barrel has been mounted within the shot-gun, a breaking of the gun will operate the extractor to throw out the shell or at least start it from its seat, while the regular firing-pin of the gun will serve to explode the cartridge. It will be noticed by reference to Fig. 6 that the cartridge chamber is slightly offset with respect to the center of the shot-gun shell chamber, the purpose of which is to cause the firing-pin to strike the edge of the rifle cartridge, thus providing a rim fire construction which is usually necessary in exploding small caliber cartridges. This offset is secured by making a portion 18 of the collar of greater thickness.

It is to be understood that I do not confine myself to the particular and specific device above described but, on the other hand reserve the right to make such changes in form and arrangement of the several elements as will not constitute a departure from the spirit of the invention as set forth in the annexed claims.

Having described my improvements, I claim as new and desire to protect by Letters Patent of the United States:

1. The combination of a breech-loading gun, an auxiliary barrel mounted within the gun barrel, means for firing a cartridge in the auxiliary barrel, and means for transverse adjustment of the said auxiliary barrel, said means consisting of tapered and toothed members mounted upon a portion of the said auxiliary barrel, and a retaining member for the said tapered and toothed members.

2. The combination of a breech-loading gun, an auxiliary barrel mounted within the gun barrel, means for firing a cartridge in the auxiliary barrel, means for transverse adjustment of the auxiliary barrel, said means consisting of tapered and toothed members mounted upon a portion of said auxiliary barrel, facings secured to the outer faces of said tapered and toothed members, and a retaining member for said tapered and toothed members.

In testimony whereof I affix my signature.

GUY F. EGBERS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."