

No. 714,688.

Patented Dec. 2, 1902.

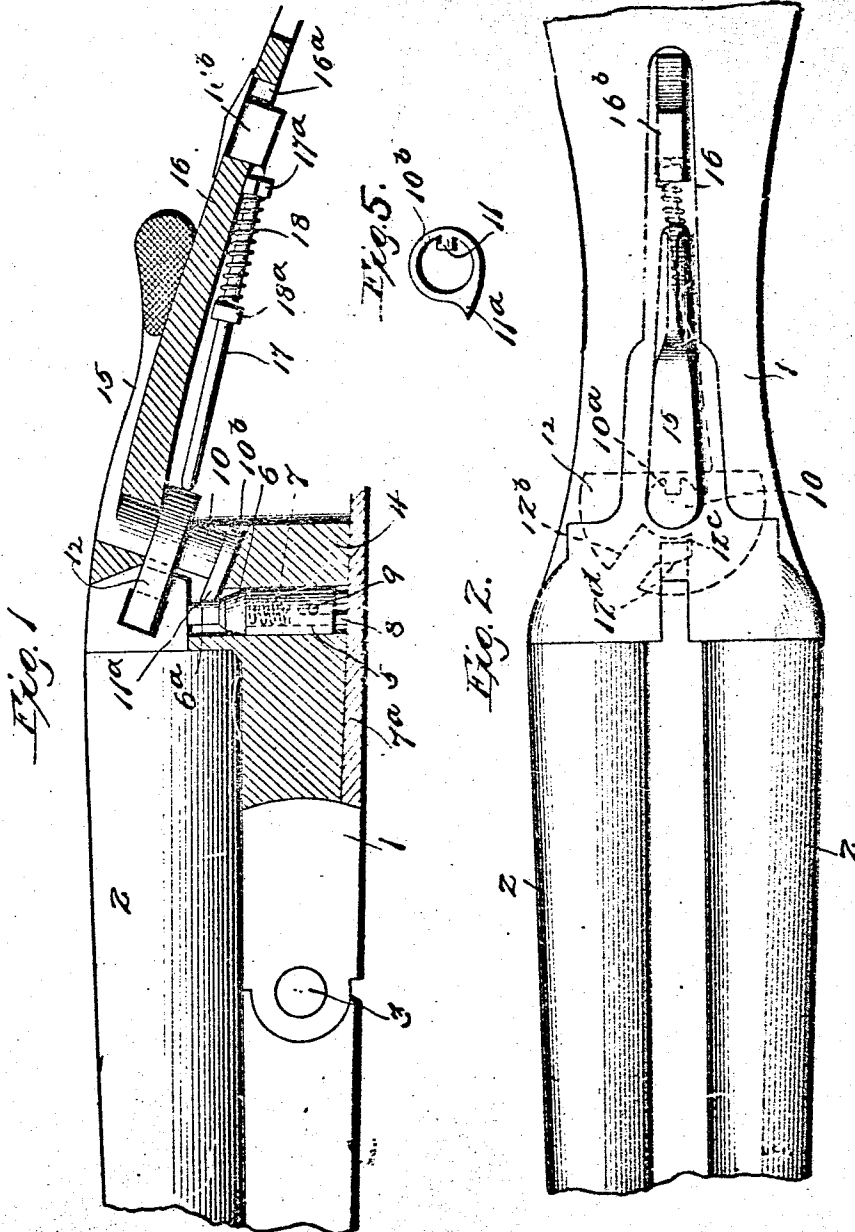
A. H. FOX.

BREECH LOADING FIREARM.

(Application filed Jan. 17, 1902.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
D. K. Neocham
W. M. Hing

Inventor
Ansley H. Fox
by Jas. L. Whitmore
his Attorney.

No. 714,688.

Patented Dec. 2, 1902.

A. H. FOX.
BREECH LOADING FIREARM.

(Application filed Jan. 17, 1902.)

(No Model.)

2 Sheets—Sheet 2.

Fig. 3.

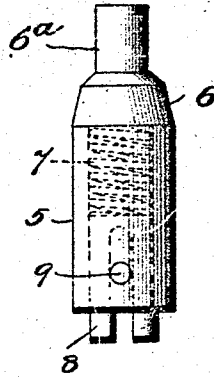
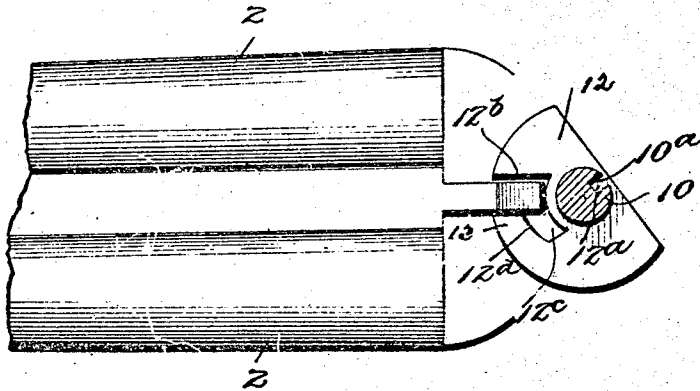


Fig. 4.



Witnesses
P. L. McGowan
W. M. Fung

Inventor
A. H. Fox,
By Jas. L. Skidmore
his Attorney.

UNITED STATES PATENT OFFICE.

ANSLEY H. FOX, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO PHILADELPHIA ARMS COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

BREECH-LOADING FIREARM.

SPECIFICATION forming part of Letters Patent No. 714,688, dated December 2, 1902.

Application filed January 17, 1902. Serial No. 90,195. (No model.)

To all whom it may concern:

Be it known that I, ANSLEY H. FOX, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Breech-Loading Breakdown Hammerless Guns; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to breech-loading firearms, and more particularly to that class of guns known in the art as "breech-loading breakdown hammerless guns."

The first object of the invention is to provide improved means for locking the barrels to the breech-frame and compensating for the wear incident to the breaking down and locking of the gun.

A further object is to provide improved means for connecting the barrel-locking mechanism with the safety-slide of the gun to insure the movement of said slide simultaneously with the breaking down of the gun.

The construction of the improvements will be fully described hereinafter in connection with the accompanying drawings, which form a part of this specification, and their novel features will be defined in the appended claims.

In the drawings, Figure 1 is a side elevation, partly in section, of a portion of a breech-loading breakdown gun embodying the invention. Fig. 2 is a top plan view of the same, showing parts in dotted lines. Fig. 3 is a detail elevation, on an enlarged scale, of the post which receives the impact of the barrel-lug in locking the barrels. Fig. 4 is a detail sectional plan view showing the position of parts of the locking mechanism when the barrels are unlocked. Fig. 5 is a detail view of one of the parts.

The reference-numeral 1 designates the breech-frame, and 2 the barrels, having the usual pivotal connection with the frame 1 at the point 3.

The rear end 4 of the breech-frame is formed with a recess to receive a post comprising a hollow cylinder 5, formed with a slightly-beveled shoulder 6, and a pin 6^a, projecting above the shoulder 6. Within the cylindrical post 5 is a cylindrical plug 8, bifurcated at its lower end to straddle a transverse pin 9, which extends into diametrically opposite openings formed in the post 5. A coil-spring 7 is interposed between the upper solid end of the plug 8 and the upper end wall of the cylinder 5, and a plate 7^a, suitably secured to the under side of the breech-frame, limits the downward movement of the plug 8.

10 designates a spindle supported in a rearwardly-inclined position in a bearing formed in the breech-frame and provided on its rear side with a groove 10^a, extending throughout the length of the spindle. Upon the lower end of the spindle 10 is secured by any suitable means a stop device comprising a ring 10^b, formed with an inwardly-projecting tongue 11, fitting the groove of the spindle, and a projecting lip 11^a, curved to conform to the cylindrical form of the post 5. Upon the spindle 10, at a point approximately the center thereof, is secured an oscillatory locking-bolt of segmental form having an opening through which the spindle extends and formed with a tongue 12^a to fit within the groove of the spindle to insure the turning of the bolt with the spindle.

The locking-bolt is formed with a radial slot 12^b, having a lateral extension 12^c, one wall of which is concentric with the spindle in the bolt and the other wall 12^d of which is beveled or only slightly curved, so that it is eccentric to the spindle. The advantages of this peculiar construction of the slot will be explained hereinafter.

The slotting of the bolt 12 provides a curved bolt end 13, which is adapted to enter an opening formed in the barrel-lug 14, as clearly shown in Fig. 2.

The spindle 10 is operated by the usual lever 15, preferably formed integral with the spindle, as shown, and adapted to rest upon the rear portion 16 of the breech-frame. This rear extension 16 of the frame is formed with an elongated slot 16^a to receive the safety-slide 16^b, adapted to be suitably connected

with the trigger, (not shown,) and said safety-slide has a connection with the oscillatory locking-bolt, consisting of a rod 17, supported below the rear extension 16 of the breech-frame by means of a depending eye 17^a. A coil-spring 18 surrounds the rod 17, one end bearing against the eye 17^a and the opposite end against a nut 18^a, the latter being adjustable upon the rod to regulate the tension of the spring. It will be seen that the rear end of the rod 17 bears against the safety-slide 16^b, while its forward end impinges against the locking-bolt, thus insuring the movement of the slide when the bolt is oscillated.

The utility, operation, and functions of the mechanism thus far described will now be explained.

When the gun is in locked position, the projecting portion 13 of the bolt 12 extends through the opening in the barrel-lug, as shown in Figs. 1 and 2, and by moving the lever 15 laterally the bolt is oscillated to release the barrels and permit the gun to be broken down. When the pressure upon the spring 7 is thus released, the post is projected upward, bringing the beveled shoulder 6 thereof in contact with the lip 11^a to lock the bolt in its unlocked position. To restore the gun to locked position, the barrels are tilted on the pivot 3, causing the lug 14 to strike the upper end of the pin 6^a, depressing said pin and the cylindrical post 5 and compressing the spring 7. The bolt 12 is thus released and is then oscillated by means of the spring-actuated rod 17 engaging the barrel-lug. The beveled surface of the shoulder 6 is held closely against the lip 11^a when the gun is in unlocked position, and the upward force of the spring insures this close contact, thus compensating for wear upon these cooperating elements.

A further important feature of my improved construction is the eccentric surface 12^a of the slot in the locking-bolt. If this surface were parallel with the opposite wall of the slot and concentric with the spindle, slight wear upon the surface 12^a would result in a loose locking connection. By inclining the surface 12^a, as shown and described, and having the spindle inclined rearward a downward and rearward locking strain is applied to the barrel-lug and wear upon the bolt is compensated

It will be obvious that the safety-slide will be operated simultaneously with the movement of the locking-bolt through the rod 17.

I claim—

1. In a breech-loading breakdown hammerless gun, the combination with the barrel-lug, of an oscillatory spindle supported in an inclined position within the breech-frame, a locking-bolt mounted on said spindle, a post to receive the impact of the barrel-lug, said post having an annular beveled shoulder, and a stop device carried by the spindle.

2. In a breech-loading breakdown hammerless gun, the combination with the barrel-lug, of an oscillatory spindle supported in an inclined position within the breech-frame, a locking-bolt mounted on the spindle, a post to receive the impact of the barrel comprising a hollow cylinder having a beveled shoulder, and a projecting pin, a bifurcated plug, within the cylinder, a spring within the cylinder, and a stop device carried by the spindle.

3. In a breech-loading breakdown hammerless gun, the combination with the barrel-lug, of an oscillatory spindle supported in an inclined position within the breech-frame, a locking-bolt mounted on the spindle, and constructed to engage the barrel-lug, a yielding post to receive the impact of the barrel-lug and formed with an annular beveled shoulder, a stop device carried by the spindle and adapted to engage the post, a safety-slide and a connection between said slide and the locking-bolt.

4. In a breech-loading breakdown gun, the combination with the stop-arm carried by the spindle of the locking-lever, of a spring-actuated stop-post which is formed with an annular beveled shoulder at its point of locking-contact with the said stop-arm, so as to compensate for wear.

5. In a breech-loading breakdown hammerless gun, the combination with the barrel-locking bolt, of a push-rod bearing at one end against said bolt, and connected at its opposite end to the safety-slide, and a spring for effecting the longitudinal movement of said rod.

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

ANSLEY H. FOX.

Witnesses:

C. A. HOPKINS,
CHARLES P. ULMER.