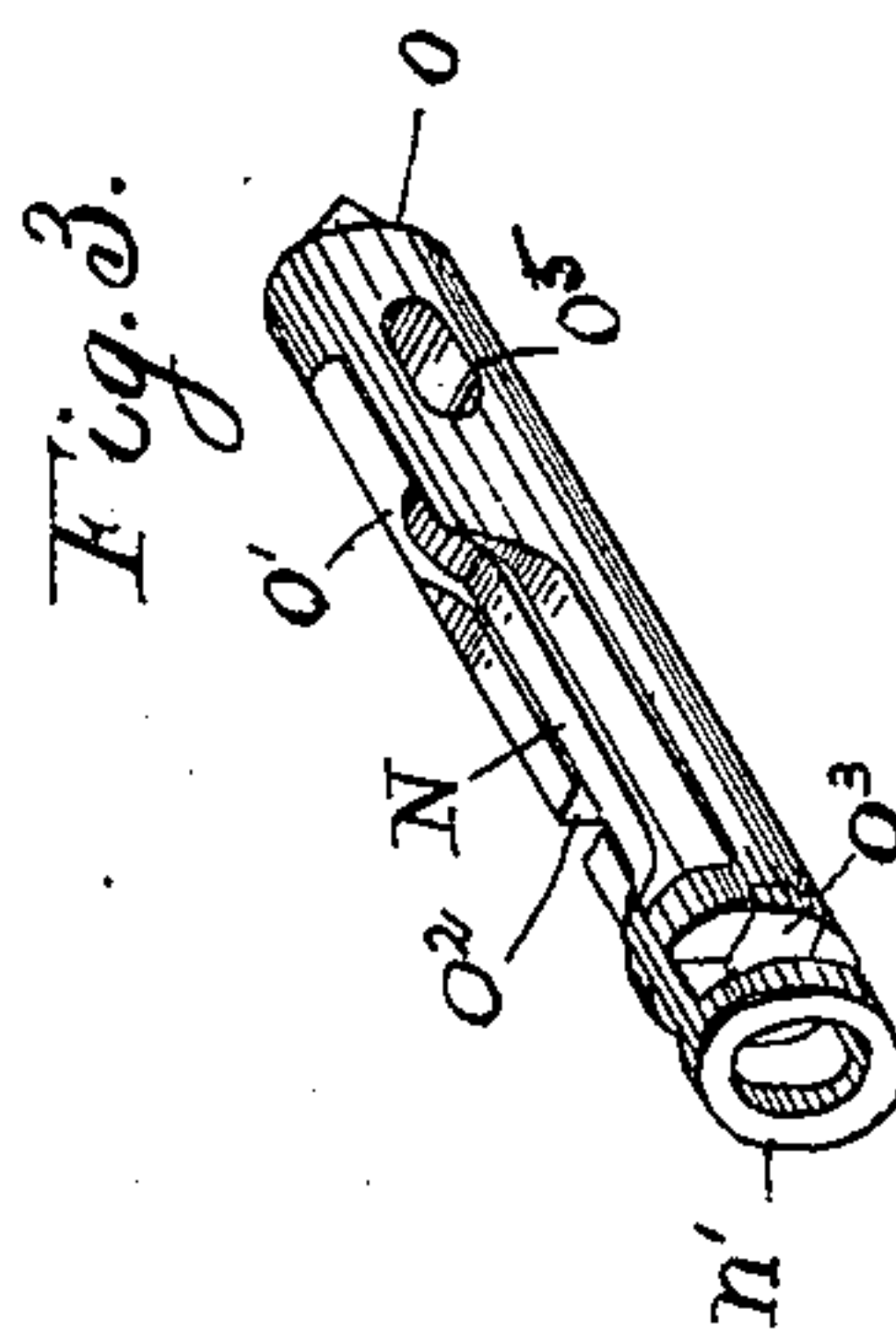


No. 629,770.

Patented Aug. 1, 1899.

L. H. COBB.
BREAKDOWN FIREARM.
(Application filed Apr. 25, 1899.)

(No Model.)



Witness:
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UNITED STATES PATENT OFFICE.

LYMAN H. COBB, OF SOUTH PORTLAND, MAINE.

BREAKDOWN FIREARM.

SPECIFICATION forming part of Letters Patent No. 629,770, dated August 1, 1899.

Application filed April 25, 1899. Serial No. 714,382. (No model.)

To all whom it may concern:

Be it known that I, LYMAN H. COBB, a citizen of the United States of America, and a resident of South Portland, Cumberland county, State of Maine, have invented certain new and useful Improvements in Breakdown Firearms, of which the following is a specification.

My invention relates to a breakdown firearm, and it is particularly adapted to the manufacture of single-barrelled shotguns and rifles.

The object of the invention is to construct a shotgun or rifle which can be cheaply manufactured and easily repaired and which shall have all the advantages of high-priced guns.

The invention resides, chiefly, in the mechanism for locking the barrel in place and for applying the force of the mainspring to the hammer and in the construction which enables me to use a coiled spring for actuating a hammer of ordinary construction, all of which will be hereinafter set forth and claimed.

I illustrate my invention by means of the accompanying drawings, in which—

Figure 1 is a central longitudinal section with some of the parts shown in elevation. Fig. 2 is a top view of the frame, and Fig. 3 is a perspective view showing the locking-bolt and the hammer-brace in their relative positions.

A represents the barrel; C, the lug on its rear end; B, the stock. D is the frame in which the working parts are mounted, and *k* and *d* are the trigger-guard and tang, respectively. The barrel is here shown as pivoted to the forward end of the frame in the usual manner of breakdown guns. These parts are common to such guns and need no further description.

The barrel is locked in position by means of a locking-bolt O, which is slidably mounted in the frame and extends back into a rearwardly-projecting tubular extension *e*, which is formed in the frame. A plug *u*, having a flange portion *t*, is screwed into the rear end of the tubular extension, and the fastening-bolt *s* extends through from the rear end of the stock and screws into the plug *u* to fasten the frame and stock together. The sliding bolt has a central longitudinal slot or opening *o'*, Fig. 3, which extends nearly through-

out the entire length and forms a space, in the forward portion of which the hammer J is pivoted by means of the pivot *j*², pivoted in the side walls of the frame. A horizontal slot *o*⁵ is formed in the bolt to admit the passage of the pivot, so that the bolt may have a limited longitudinal motion without interfering with the pivot. The rear end of the slot *o*⁷ is closed by a cross-bar *o*³, which fits closely in suitable recesses on each side of the bolt. The cross-bar passes through the bifurcated end of the "hammer-brace" N, as I shall term it, the function of which is to transmit the force of the mainspring to the hammer. The body of the hammer-brace lies within the slot *o*⁷ and has a longitudinal motion therein. The rear end is bifurcated, as stated, to allow the passage of the cross-bar, and the extremities of the bifurcated ends are united back of the rear end of the locking-bolt by means of a ring or cylinder section *n*¹.

The forward end of the hammer-brace bears against the rear edge of the hammer at two points, one above and one below the pivot *j*², the brace being provided with two projections and the hammer with two corresponding recesses. These two bearing-points are so arranged that their pressure tends to hold the hammer just back of the firing-pin, so that after firing the hammer rebounds to that position and is safely held there by the sear-nose of the trigger *l*, which enters a suitably-located notch in the tumbler *j*. The trigger-spring *l'* tends to keep the sear in place.

In order to prevent the hammer from being cocked when the bolt is drawn entirely or partially back and to prevent the bolt being withdrawn when the hammer is cocked, I form a rearwardly-extending shoulder *o*⁴ on the bolt and a forwardly-extending projection on the tumbler adjacent to the shoulder and below the same. When the bolt is forward and the barrel locked down, the projection on the tumbler will just clear the shoulder, allowing the hammer to be freely cocked. When the bolt is withdrawn with the hammer down, the shoulder *o*⁴ slides over the tumbler, preventing the hammer from being raised, and when the hammer is raised with the bolt in its forward or locking position the tumbler rises into the path of the shoulder and prevents the bolt

from being retracted. Thus the barrel cannot be unlocked when the hammer is raised, and the hammer cannot be raised unless the bolt is in its locking position, and the gun cannot be fired with the barrel partially locked and until it is pressed down far enough to cause the bolt to snap into place.

The coiled mainspring p is applied to the rear end of the hammer-brace and is confined in the tubular extension e , its rear end impinging on the plug U . Inside of the coiled mainspring is the coiled bolt-spring r , which extends through the ring n' in the rear end of the brace and abuts against the cross-bar o^3 . The locking-bolt is drawn back by a retractor f , which is a short vertical shaft journaled in the frame over the bolt and having a crank-pin i on its lower end out of line with its center and fitting loosely in a lateral slot o^2 , formed in one of the side bars of the bolt. A screw f' enters an annular slot in the journal to hold it in place, and a thumb-lever g is provided to operate the retractor.

The operation of my gun will be readily understood from what has been said regarding its construction, and the advantages of the construction will be evident. By means of the tubular extension the main operating parts are put in and taken out through a cylindrical opening, easily bored out, and the gun can thus be readily assembled and repaired. It has all the motions and safeguards of high-priced guns; but it is so constructed that it can be made at a low price. The mainspring, being a coiled spring, can be readily slipped into the tubular extension, and any desired tension is put on it by screwing the plug U more or less into the tubular extension.

I claim—

1. In a breakdown firearm the combination of a frame having a barrel pivoted thereto, a locking-bolt having a longitudinal slot therein slidably mounted in said frame and adapted to engage the end of the barrel, a hammer pivoted in said slot, the pivot of said hammer passing through a horizontal slot in said locking-bolt, a forwardly-projecting tumbler formed on said hammer and a rearwardly-projecting shoulder formed on said bolt, said tumbler being normally below and rearward of said shoulder but so located as to engage therewith when the hammer is raised and the bolt is withdrawn, substantially as described.

2. In a breakdown firearm, the combination of a frame having a barrel pivoted thereto, a spring-actuated locking-bolt having a longitudinal slot therein slidably mounted in said frame and adapted to engage the end of the barrel, a hammer pivoted in said slot, the pivot of said hammer passing through a horizontal slot formed in said locking-bolt, a lon-

gitudinally-movable hammer-brace in said slot impinging against said hammer and a coiled mainspring acting against said brace, substantially as described.

3. In a breakdown firearm, the combination of a frame having a barrel pivoted thereto, and a rearward tubular extension thereon, a spring-actuated locking-bolt having a horizontal slot therein slidably mounted in said tubular extension and adapted to engage the end of the barrel, a hammer pivoted in said slot, the pivot of said hammer passing through a horizontal slot formed in said locking-bolt, a longitudinally-movable hammer-brace in said slot impinging against said hammer and a coiled mainspring acting against said brace, substantially as described.

4. In a breakdown firearm, the combination of a frame having a barrel pivoted thereto, a rearward tubular extension thereon, a locking-bolt having a longitudinal slot therein slidably mounted in said tubular extension and adapted to engage the end of said barrel, a hammer pivoted in said slot, the pivot of said hammer passing through a horizontal slot formed in said locking-bolt, a longitudinally-movable hammer-brace in said slot, the forward end of said brace impinging against said hammer, the rear end of said brace being bifurcated with a ring or cylinder section uniting the rear ends of the bifurcations, a cross-bar extending across said longitudinal slot at the rear end of said locking-bolt and passing through the bifurcation of said hammer-brace, a coiled mainspring acting against said ring and a coiled bolt-spring within said mainspring acting against said cross-bar, substantially as described.

5. In a breakdown firearm, the combination of a frame having a barrel pivoted thereto, a rearward tubular extension thereon, a locking-bolt having a longitudinal slot therein slidably mounted in said tubular extension and adapted to engage the end of said barrel, a hammer pivoted in said slot, the pivot of said hammer passing through a horizontal slot formed in said locking-bolt, a longitudinally-movable hammer-brace in said slot, the forward end of said brace impinging against said hammer at two points of contact, one above and one below said pivot, a coiled mainspring acting against the rear end of said hammer-brace and a coiled bolt-spring acting against the rear end of said bolt, substantially as described.

Signed by me, at Portland, Maine, this 14th day of April, 1899.

LYMAN H. COBB.

Witnesses:

S. W. BATES,

L. M. GODFREY.