

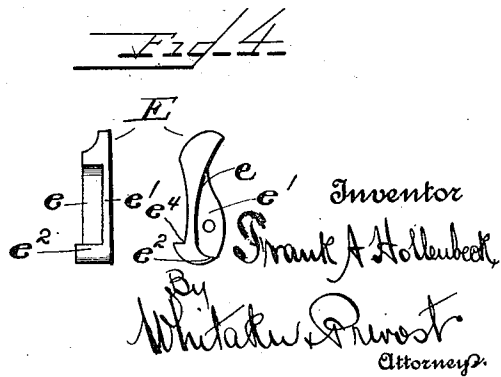
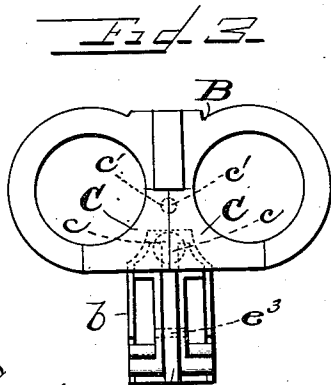
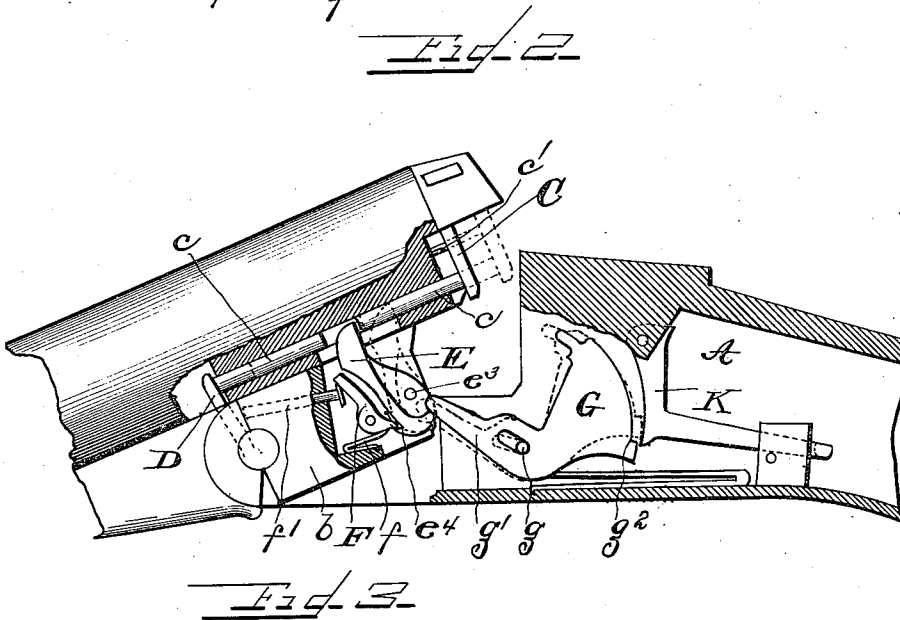
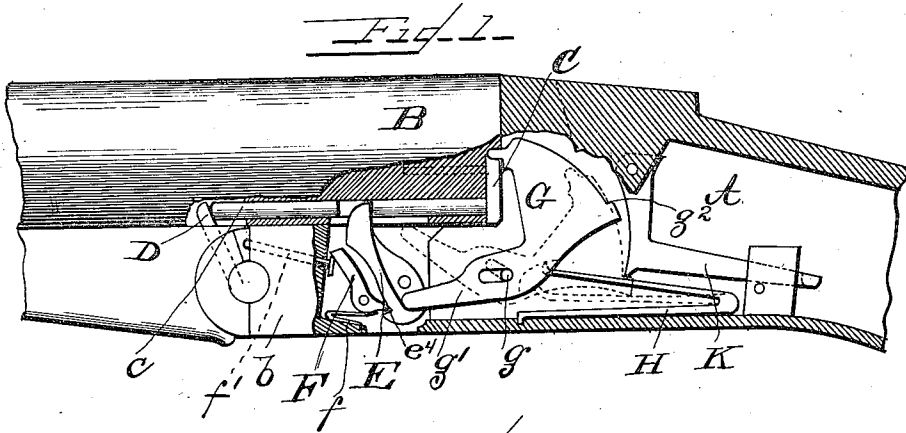
(No Model.)

F. A. HOLLENBECK.

COCKING AND EJECTING MECHANISM FOR BREAKDOWN GUNS.

No. 537,203.

Patented Apr. 9, 1895.



Witnesses  
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# UNITED STATES PATENT OFFICE.

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## COCKING AND EJECTING MECHANISM FOR BREAKDOWN GUNS.

SPECIFICATION forming part of Letters Patent No. 537,203, dated April 9, 1895.

Application filed June 25, 1894. Serial No. 515,648. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK A. HOLLENBECK, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Breech-Loading Firearms; and I do hereby 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.

My invention is an improvement in cartridge ejectors for breech loading guns and it consists in the novel features of construction and combination of parts hereinafter fully described, reference being had to the accompanying drawings which illustrate one form in which I have contemplated embodying my invention, and said invention is fully disclosed in the following description and claims.

Referring to the said drawings, Figure 1 represents portions of the stock and barrels of a breech loading gun having my invention embodied therein. Fig. 2 is a similar view showing the breech open. Fig. 3 is a rear view of the barrels and the barrel lug. Fig. 4 represents a front elevation and a side view of the ejector hammer.

In the said drawings A represents the stock portion of the gun and B the barrels. The extractor plate is of the usual form but is made in two parts C C (see Fig. 3) so that only one cartridge may be ejected if only one ejector plate is provided with a slide or rod c semi-circular in cross section the said rods c c engaging a tubular recess in the barrel portion of the gun. Each part C of the extractor plate is also provided with a guide pin c' and the said guide pins are formed like the slides c c and engage a tubular recess in the barrel portion of the gun to prevent the plates C C from twisting. The two rods c c are both engaged by an extractor pin or lug D secured to the stock portion of the gun just forward of the barrel lug and the plates C C are positively moved out a certain distance by the said pin or lug D.

E represents one of the ejector hammers shown in detail in Fig. 4, there being one for

each plate C. These hammers are constructed preferably as shown in Fig. 4 and are provided with a central recessed portion e, along one side of which is a web e', the said recess terminating at the bottom in a shoulder e<sup>2</sup> which forms one of the cocking shoulders of the gun. The barrel lug b is provided with a recess on each side of a central web b' and in each of these recesses is located one of the ejector hammers E as shown, said hammers being pivoted in position by a pin e<sup>3</sup> passing through apertures in the webs e' of said hammers and the central web b' of the barrel lug. The outer walls of the barrel lug are cut away near the bottom and the shoulders e<sup>2</sup> of the ejector hammers are off-set to the right and left respectively as shown in Fig. 3, so as to give broader bearing surfaces to be engaged by the cocking arms. The upper end of each ejector hammer is preferably narrowed and made to engage a recess or cut away portion of one of the slides c c as clearly shown in Figs. 1, 2 and 3, and the front edge of each ejector hammer is provided with a notch e<sup>4</sup> which is engaged by a sear F pivoted in the recessed portion of the barrel lug and operated by a spring f.

The sears F F are tripped by means of sliding trip pins f' f' passing through apertures in the barrel lug and projecting slightly beyond the front face of said lug. These pins are preferably provided within said recess with slightly enlarged heads for engaging the sear and also for preventing said pins from becoming displaced accidentally when the gun is taken apart, and said pins are of such length that their forward ends will engage a portion of the forward end of the frame as shown in Fig. 2 and trip the sears F F when the breech has been opened far enough to allow a cartridge shell to be freely ejected without striking the stock.

The hammers G G (only one being shown) have slotted portions for engaging their supporting journals g and each hammer has a forwardly extending cocking arm g' which, when the parts of the gun are assembled, has its forward end lying just above the cocking shoulder e<sup>2</sup> of the ejector hammer E.

H H represent the main springs, which en-

gage a curved or inclined portion of the hammer as shown in dotted lines so as to force the rear ends of the slots against the pivotal bolt *g*, while also operating to fire the hammer.

5 Each of the hammers *G G* is provided with a notch *g*<sup>2</sup> and is engaged by a suitable sear *K* which is adapted to be tripped by a trigger in the usual manner to release the hammer and discharge the gun.

10 Fig. 1 represents in full lines the position of the parts after the gun has been discharged. Upon opening the breech the extractor pin *D* will engage the front ends of the extractor slides *c c* and force the extractor plates *C C* backward into the position shown in full lines in Fig. 2. As the breech is opened the cocking arms *g' g'* will be raised by the cocking shoulders of the ejector hammers and the main springs will exert a strong pressure upon the ejector hammers through the cocking arms *g' g'* which pressure is resisted by the sears *F F*. The breech is opened until the hammers are moved almost into the cocking position, as shown in Fig. 2 when the trip pins *f f* will release the sears *F F* and the pressure of the main springs causes the ejector hammers to strike a quick blow backward as shown in dotted lines Fig. 2, thus throwing the slides *c c* and extractor plates *C C* quickly backward and ejecting the shells with considerable force. The ejector hammers will be arrested by striking a portion of the barrels at the end of their movement and the hammers will be cocked by a further downward movement of the barrels when they will be held in cocked position by their sears.

It is to be noted that by my improved construction only the exploded shell will be ejected in case one shell has been fired and the other has not. If one of the hammers has not been fired, it will remain in the position indicated in dotted lines in Fig. 1 being retained in that position by its sear *K* and the cocking arm *g'* will be held out of engagement with the ejector hammer. It will thus be seen that when the breech is opened both shells will be moved backward slightly by the extractor through the intervention of the extractor pin *D*, but the ejector hammer for the extractor plate engaging the unfired shell, will not be operated as the cocking arm through which the force of the main spring is imparted to it to operate said ejector hammer, is held out of engagement with it by its sear. Hence only the empty shell will be ejected and the unfired shell will be returned to firing position when the breech is closed.

It will be seen that the cocking arms and hammers have a movement longitudinally of the gun by reason of the slots in said hammers. In assembling the parts of the gun the cocking arms being in their lowest positions, the cocking shoulders *e<sup>2</sup> e<sup>2</sup>* of the ejector hammers will engage the cocking arms *g' g'* as the breech is closed, and one of said parts is beveled or curved so as to act as a cam and

force said cocking arms rearwardly thus permitting the cocking shoulders to pass beneath and into operative position with the cocking arms.

What I claim, and desire to secure by Letters Patent, is—

1. In a fire arm the combination with the barrel lug and an ejector hammer pivoted thereto having a shoulder upon the same, of the firing hammer and its cocking arm, said cocking arm extending above the shoulder of the ejector hammer and in constant engagement therewith during the operation of cocking the firing hammer and ejecting the shell, substantially as described.

2. In a fire arm the combination with the barrel lug and an ejector hammer pivoted thereto having a shoulder upon the same, of the firing hammer and its cocking arm, the said cocking arm extending above the said shoulder and in constant engagement therewith during the operation of cocking the firing hammer, means for retaining the ejector hammer in its normal position when the gun is closed and means for releasing it before the completion of the movement of the barrel in breaking the gun, substantially as described.

3. In a fire arm the combination with the ejector hammer, a sear for holding said ejector hammer against operation and a trip for releasing said sear, of the main spring of the lock and connections between said main spring and said ejector hammer for operating the same, substantially as described.

4. In a fire arm the combination with the firing hammer, its cocking arm and the main spring, of the barrel lug, an ejector hammer pivoted thereto having a shoulder adapted to engage the said cocking arm to cock the hammer for operating said ejector hammer, a sear for holding said ejector hammer against operation and a trip for releasing said sear, substantially as described.

5. In a fire arm, the combination with the cocking arm movable longitudinally of the gun upon its pivot, of the barrels and barrel lug, an ejector hammer pivoted to said barrel lug and provided with a cocking shoulder for engaging the cocking arm, the said ejector hammer and cocking arm having the one a cam surface for engaging the other to move the cocking arm rearwardly in assembling the parts of the gun, substantially as described.

6. In a fire arm the combination with the two barrels of a double barreled fire arm, of a separate extractor for each barrel, the firing hammers, each provided with a main spring and cocking arm, independent ejector hammers for said extractors, each provided with a cocking shoulder for engaging one of the cocking arms to cock its firing hammer and operate said ejector hammer, a sear for each ejector hammer for holding it out of operation and trips for releasing said sears before the firing hammers are moved into cocked position, substantially as described.

7. In a fire arm the combination with the  
ejector hammer, its operating spring, a sear  
for holding said ejector hammer against op-  
eration and a trip rod for releasing said sear,  
5 having a part engaging a portion of the frame  
of the gun when the breech is opened, to op-  
erate said trip rod, substantially as described.

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

FRANK A. HOLLENBECK.

Witnesses:

F. S. WICKS,

KATHARINE TOOLE.