

UNITED STATES PATENT OFFICE.

CHARLES W. BARTHOLMES, OF ILION, NEW YORK, ASSIGNOR TO REMINGTON ARMS COMPANY, OF ILION, NEW YORK.

EJECTOR FOR FIREARMS.

SPECIFICATION forming part of Letters Patent No. 730,862, dated June 16, 1903.

Application filed April 10, 1903. Serial No. 151,988. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. BARTHOLMES, of Ilion, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Ejectors for Firearms; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 part of this specification.

The object of my invention is to provide an ejector mechanism for firearms which is simple in construction and effective and reliable in operation.

Figure 1 shows mostly in vertical section a firearm including the features of my invention, with the barrel and lug in closed position. Fig. 2 shows a horizontal section of a portion of the mechanism with the barrel in closed position. Fig. 3 shows a vertical section similar to Fig. 1, with the barrel in partially open position. Fig. 4 shows a view similar to Fig. 2, with the barrel in partially open or broken-down position. Fig. 5 shows similar to Figs. 1 and 2, the mechanism with the barrel entirely open or broken down. Fig. 6 shows similar to Figs. 2 and 4 the position of the parts with the barrel in its entirely open or broken-down position. Fig. 7 shows a cross-section taken on line A B of Figs. 1 and 2. Fig. 8 shows the ejector and slide from the under side.

Referring to the reference-figures in a more particular description, 1 indicates the frame, which includes the breech-up shoulder 2 and a forwardly-extending portion which carries the joint-pin 3. The barrel 4 is provided on the under side near its rear end with the barrel-lug 5, through the forward end of which the joint-pin 3 passes and hinges the barrel to the frame. In the barrel-lug 5 there is provided a longitudinal opening from the rear end forwardly, which receives the slide 6 of the ejector 7. The ejector-slide 6 is provided on the under side with a longitudinal cut-out or recess 6^a, which receives the transverse pin 8 in the lug and serves to secure the ejector and its slide

from displacement, while permitting a limited movement thereof. The slide 6 is also provided on the under side with a diagonal slot or cut-out, providing a camming-shoulder 6^b and a catch-shoulder 6^c.

In a transverse recess in the barrel-lug 5 there is mounted on the vertical pivot 9 the catch and tripping-lever 10. The lever 10 is provided with a projection 10^a, substantially fitting the diagonal slot in the under side of the ejector-slide and is also provided on the opposite end with the portion 10^b, which as to its outer side is adapted to engage with and cooperate with the cam 11 on the frame and as to its inner side engages with the resetting-spring 12. In the forward end of the opening which receives the ejector-slide 6 there is provided a spring 14 of considerable strength and operating to force the ejector toward the rear. Extending through the wall of the frame at the cam 11 and capable of being manipulated from the outside is a screw 15, the inner end of which in effect constitutes a portion of the cam-shoulder, and by adjusting this screw the time of the shell ejection can be regulated. The frame is provided with the usual catch 16 for engaging the notch in the barrel-lug and securing the barrel in closed position with reference to the frame, which catch is operated in the usual manner by the top lever 17. In closing the barrel after inserting a shell the ejector, with its slide, is cammed back or forced toward the front of the gun by sliding down along the breech-shoulder 2. When it has reached its forward position, it is caught and held by the catch trip-lever. The catch and trip-lever is forced to locking position by means of the spring 12. It will be noted by reference to Fig. 2 that the projection 10^a of the tripping-lever stands substantially on the farther side from which it enters the slot in the ejector-slide when the gun is closed. When the gun is open, if the shell starts comparatively easy the ejector, under the influence of the spring 14, will gradually withdraw the shell as the ejector slides up the breech-up shoulder 2, while the tripping-lever swings partially toward its unlocking position. At a certain point the projection 10^a engages in the catch-notch 6^c, and this grad-

ual extracting ceases for the time being. When the gun has reached nearly its open position, the part 10^b of the tripping-lever engages with the cam 11 on the frame, and the tripping-lever is further operated to disengage the projection 10^a from the shoulder 6^c. After becoming disengaged the ejector is instantly operated by the spring 14 to the full limit of its movement and ejects the shell from the barrel. In case the power of the spring 14 is insufficient to start the shell the ejector would not move until the cam 11 came into operation on the tripping-lever, and as the tripping-lever was forced in the further opening or breaking down of the gun the projection 10^a would cam against the shoulder 6^b on the ejector-slide and serve to force the ejector toward the open position with considerable power. After the shell is started the spring 14 is sufficient to expel it.

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

1. The combination with a firearm having a frame and a barrel and lug jointed to the frame to "breakdown" of the ejector mounted on a longitudinal slide in the barrel-lug and having a catch-shoulder and a forcing-spring of a catch and tripping-lever having a shoulder to engage the shoulder on the ejector-slide and mounted on a vertical pivot in the barrel-lug and a cam-surface on the side of the frame to engage and operate said lever, substantially as set forth.

2. The combination with a firearm having a frame and a barrel and lug jointed to the frame to "breakdown" of the ejector and slide mounted to slide longitudinally in the barrel-lug and having a shoulder thereon, a spring for forcing the ejector, a catch and tripping-lever having a shoulder to engage the ejector-slide mounted on a vertical pivot on the barrel-lug to swing transversely thereof, a spring for resetting the catch tripping-

lever and a cam on the frame at the side of the barrel-lug to engage and operate the catch tripping-lever when the arm is broken down, substantially as set forth.

3. The combination in a firearm of the frame having a breech-shoulder, a barrel and lug pivoted to the frame to "breakdown," an ejector, a slide on which the ejector is mounted, mounted to slide longitudinally in the barrel-lug having a diagonally-arranged slot affording the camming and catch shoulders, a catch and tripping-lever having a shoulder to engage the ejector-slide and mounted on the barrel-lug to swing transversely thereof, a resetting-spring for the catch tripping-lever and a cam-shoulder on the frame to engage the catch tripping-lever, substantially as set forth.

4. The combination in a firearm of the frame having a breech-shoulder, a barrel and lug pivoted to the frame to "breakdown," an ejector, a slide on which the ejector is mounted, mounted to slide longitudinally in the barrel-lug and having a diagonally-arranged slot affording camming and catch shoulders, a catch and tripping-lever having a shoulder to engage the ejector-slide and mounted on the barrel-lug to swing transversely thereof, a resetting-spring for the catch tripping-lever, a cam-shoulder on the frame at the side of the barrel-lug to engage the catch tripping-lever and an adjustable timing-screw extending through the said cam-shoulder and constituting a portion of the face of the same, substantially as set forth.

In witness whereof I have affixed my signature, in presence of two witnesses, this 4th day of April, 1903.

CHARLES W. BARTHOLMES.

Witnesses:

G. O. HUMPHREYS,
EDWARD BEACH.