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FIREARM EJECTOR

Original Filed Jan. 31, 1950

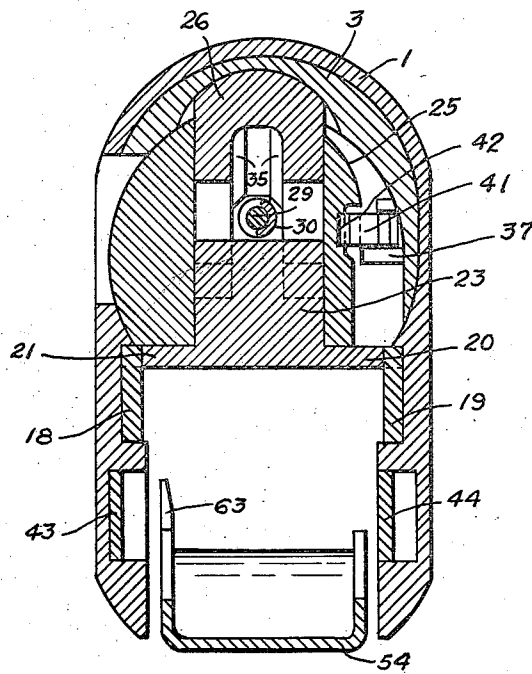


Fig. 1

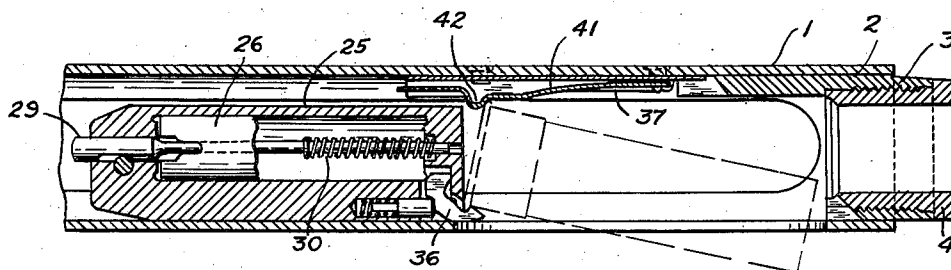


Fig. 2

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FIREARM EJECTOR

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Original application January 31, 1950, Serial No. 141,532. Divided and this application December 19, 1952, Serial No. 327,008

1 Claim. (Cl. 42—25)

This invention relates to an improved ejector for breech loading firearms, being particularly applicable to those in which the breech bolt, in the process of opening and closing the breech, is reciprocable along a line more or less in prolongation of the barrel.

This application is a division of our co-pending application Serial No. 141,532, filed January 31, 1950, now Patent No. 2,645,873.

The principal objects of our invention are the provision of an ejector which is certain and positive in its action but which functions with a minimum of shock to the extractor and other working parts.

We have found that we can accomplish these objects by utilizing as an ejector a relatively flexible leaf spring member formed to provide an abutment for intercepting an extracted shell.

The exact nature of our invention as well as other objects and advantages thereof will become apparent from consideration of the following specification referring to the attached drawing, in which:

Fig. 1 is a vertical cross-sectional view through the receiver of a firearm embodying our invention.

Fig. 2 is a partial horizontal sectional view through the receiver of the same firearm, the parts, however, being shown in breech open position.

Referring to the drawing by characters of reference, it will be seen that the breech bolt 25 is provided at the right hand edge of the breech face with the usual spring-loaded extractor 36 which engages the rim of a chambered shell, shown in dashed lines in Fig. 2, and withdraws it as the bolt is moved to the rear. An ejector support 37 of substantially U-shaped cross-section is riveted to the side wall of the receiver and provided with a tongue 38 engageable with a slot 39 in the rear end of the barrel extension to act as a locating key therefor and prevent rotational misalignment of the barrel. A secondary riveting operation on the head of the foremost ejector support rivet 40 secures the ejector 41 to the receiver. The ejector is unique in that it consists of a relatively light leaf spring member, free at its rear end and so formed as to normally project into the receiver at an angle to the wall thereof. Near the rear extremity of the ejector, a sharp bend therein defines an ejector abutment 42. As the shell is drawn rearwardly, the spring ejector presses against the head of the shell and holds it over in secure engagement with the extractor hook. When the shell head impinges on the abutment 42, the spring gives slightly and the shell then

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pivots about the extractor claw and flips to the side out of the ejection port.

It is desirable to position the abutment 42 in such a location that the open mouth of the shell undergoes a slight interference with the front edge of the ejection port. This interference produces a detent action, permitting more force to be stored in the spring ejector before complete release and otherwise assists in controlling ejection. Primarily, the spring action cushions the initial application of the ejecting force and the resilient follow through permitted by the free rear end provides a smoother and more consistent ejection.

Although we have described and shown only one specific example of our invention, we consider that our invention is limited only by the claims appended hereto.

We claim:

In a firearm having a barrel, a receiver, a breech bolt reciprocable therein, and a shell extractor mounted in said breech bolt and engageable with the rim of a chambered shell to extract the shell from the barrel; the improved ejector comprising an elongated, continuous, light, leaf spring member rigidly secured at its front end only to the wall of the receiver, said leaf spring member being bent to define a leaf spring portion tending to extend from the point of securement to said receiver rearwardly and inwardly toward the center of the receiver in position for resilient engagement with the outer circumference of the rim of a shell being extracted from the barrel, said leaf spring member being located in substantially diametric opposition across the breech bolt from said extractor whereby the resilient engagement of said rearwardly and inwardly extending portion of the leaf spring member with the rim of a shell tends to urge the diametrically opposed portion of the rim of a shell into closer engagement with the shell extractor, said leaf spring member being also sharply bent to define an abruptly inturred yieldable abutment arranged for engagement with the rear face of the head of a shell engaged by the extractor as the breech bolt is moved rearwardly to completely extract a shell from the barrel, thereby to yieldingly deflect an extracted shell from the receiver; and a longitudinal extension of said leaf spring member formed to define a tail extending from the abutment defining portion thereof outwardly toward the wall of the receiver and longitudinally to the rear to a position substantially behind the rearmost position reached by the shell engaging face of the breech bolt whereby the engagement of said tail between the receiver and the side of the breech bolt prevents said ejector from being deflected toward the center of the receiver an amount sufficient to interfere with forward movement of the breech bolt.

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