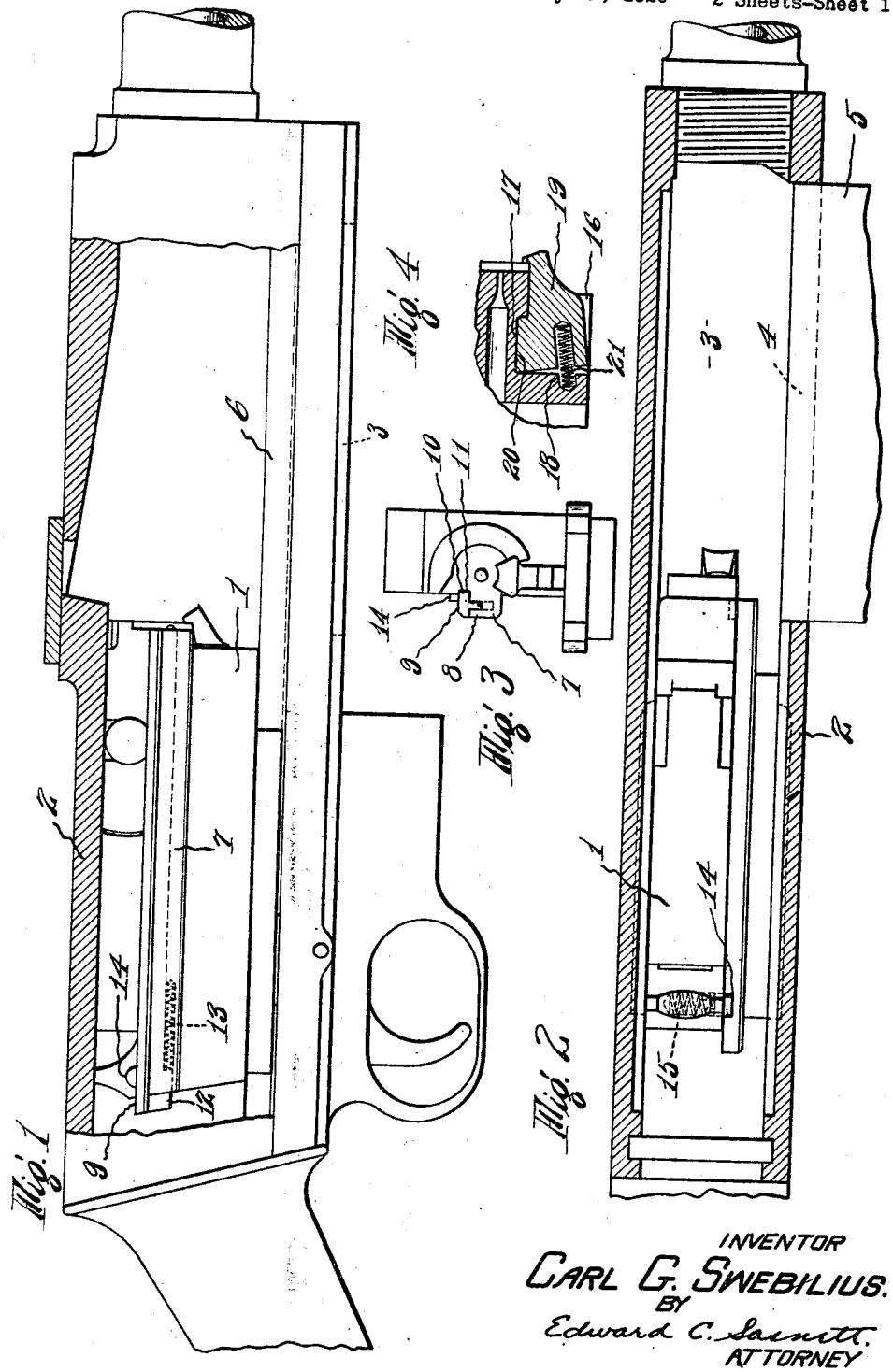
Feb. 9, 1926.

C. G. SWEBILIUS

1,571,975

FIREARM

Original Filed May 29, 1920 2 Sheets-Sheet 1



INVENTOR
CARL G. SWEBILIUS.
BY
Edward C. Sawtell.
ATTORNEY

Feb. 9, 1926.

1,571,975

C. G. SWEBILIUS

FIREARM

Original Filed May 29, 1920 2 Sheets-Sheet 2

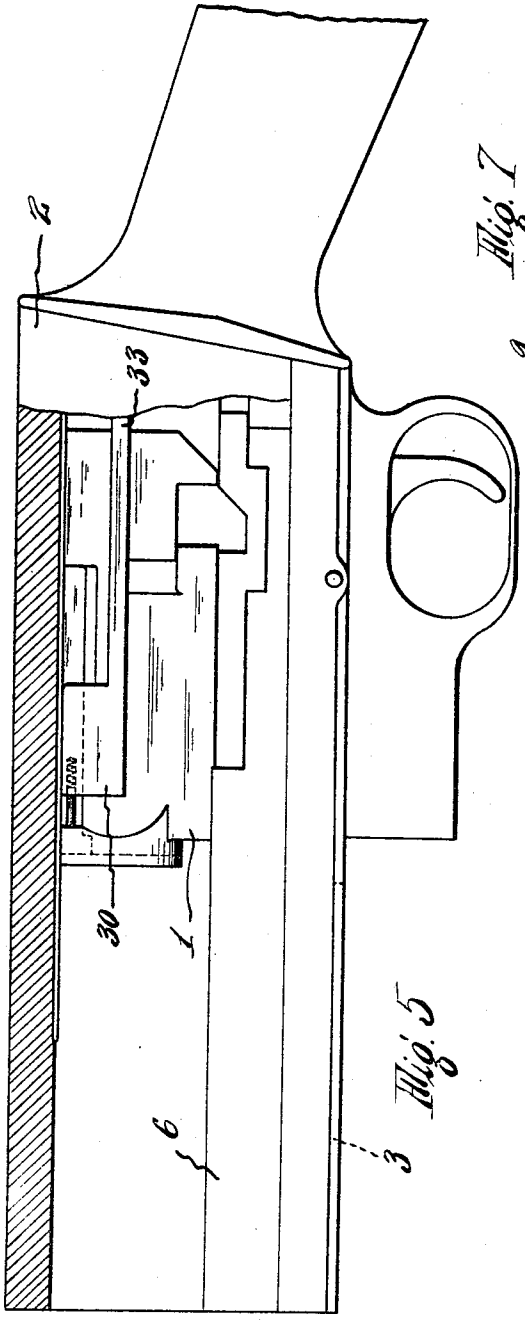


Fig. 5

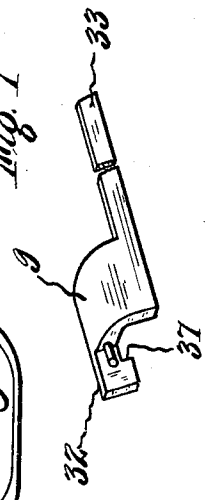


Fig. 7

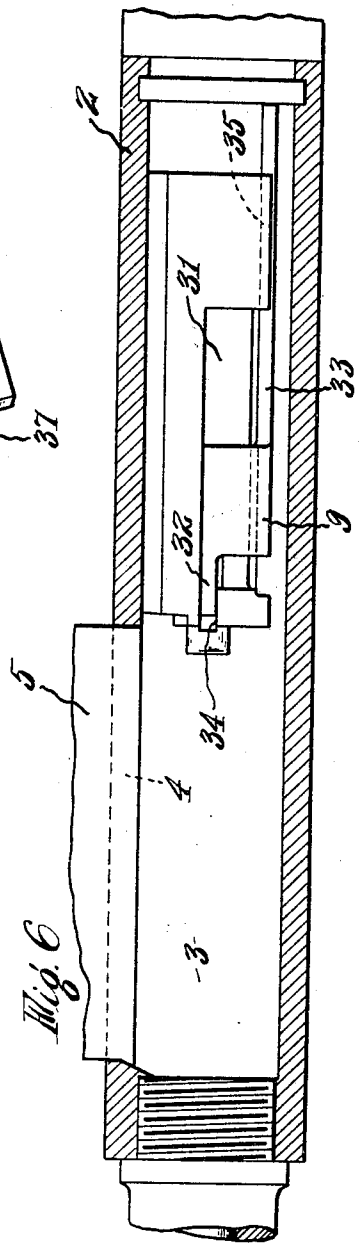


Fig. 6

INVENTOR
CARL G. SWEBILIUS.
BY
Edward C. Sammett.
ATTORNEY

Patented Feb. 9, 1926. 1,571,975

UNITED STATES PATENT OFFICE.

CARL GUSTAF SWEBILIUS, OF NEW HAVEN, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE MARLIN FIREARMS CORPORATION, OF NEW HAVEN, CONNECTICUT, A CORPORATION OF DELAWARE.

FIREARM.

Application filed May 29, 1920, Serial No. 385,210. Renewed November 17, 1925.

To all whom it may concern:

Be it known that I, CARL GUSTAF SWEBILIUS, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Firearms, of which the following is a specification.

This invention relates to firearms and is directed more especially to means for extracting a shell from the barrel of the gun and ejecting it from the gun.

The object of this invention is the provision of a device of this character which is simple in construction and efficient in operation.

The subject matter of this application is disclosed partly in my application filed January 24, 1919, Serial No. 272,846, and partly in my application filed May 15, 1919, Serial No. 297,201, but claimed in neither.

Referring now to the drawings,

Fig. 1 is a longitudinal section through the receiver of a gun with the breech bolt in elevation;

Fig. 2 is a plan view of same with the top of the receiver removed;

Fig. 3 is a front elevation of the breech bolt;

Fig. 4 is a fragmentary sectional view of the forward end of the bolt;

Fig. 5 is a view similar to Fig. 1 of a modification;

Fig. 6 is a plan view thereof;

Fig. 7 is a perspective of the modified ejector.

The breech bolt 1 is slidably mounted in the receiver 2, in the bottom of which is the ejecting opening 3, and in one side wall thereof is the aperture 4 through which cartridges are fed into the gun from a magazine 5. The breech bolt is operatively connected with the action slide 6.

A rib 7 extends along one side of the breech bolt 1 and is provided with a groove 8. In this groove there is mounted, for limited reciprocation, an ejector 9, the front end of which is oblique, and the rear end of which normally projects beyond the rear end of the breech bolt. At its forward end the ejector 9 has a lateral lug 10 which seats in the socket 11 at the front end of the groove 8 and limits the rearward movement of the ejector. At the rear end of the ejector is another lug 12 which is engaged by one end of the spring 13, located in a depression in the bottom of the groove 8. This spring serves to limit the forward movement of the ejector and also serves to normally hold the ejector in its rear position. The ejector is positively held in the groove by the engagement of the lug 10 in the socket 11 and by the overhanging dog 14 located in the rear portion of the breech bolt, which may be pressed in against the action of its spring 15 to allow the removal of the ejector.

In the front end of the breech bolt is cut a recess 16 having a depression 17 in its upper rear end and a socket 18 in its rear wall. An extractor 19, having a lug 20 adapted to fit into said depression is located in the recess. The extractor is provided with a socket in its rear portion in which is mounted the spring 21 which is adapted to seat in the socket 18 and maintain the extractor in position. To remove the extractor it is pushed back against the action of the spring and then rotated to disengage the lug 20 from the depression 17, after which it may be lifted out.

In operation, the breech bolt chambers a cartridge, and during such operation the extractor engages the cannelure of the cartridge. As the breech bolt moves rearwardly the extractor carries back the shell. When the breech bolt reaches nearly the limit of its rearward travel, the rear end of the ejector engages the rear wall of the receiver and causes a movement of the ejector relative to the breech bolt. This relative movement projects the front end of the ejector against the shell and forces the latter out of the grip of the extractor. The cartridge then falls down through the aperture 3.

The modification disclosed in Figs. 5 and 6 includes a plate 30, slidably mounted in a cut-out 31 on the breech bolt, which plate is provided with the arms 32 and 33 fitting in the grooves 34 and 35 in the bolt. At the forward end of the plate is the spring-pressed pin which engages a shoulder 36 on the breech bolt and serves to normally hold the ejector in its inoperative position. The rearward movement of the ejector under the influence of the spring-pressed pin is limited by the engagement

of the shoulder 37 on the arm 32 of the ejector with the inner end of the groove 34. The ejector may be removed from the bolt by moving it forward against the action of the spring-pressed pin and then springing the rear arm out of its groove, after which the ejector may be lifted off the breech bolt.

The operation of this type of extractor is similar to that of the first type and need not be described in detail.

It is understood, of course, that the particular device shown and described in the present application illustrates merely a preferred form of construction and an arrangement of parts, which, it has been found, will successfully carry out the principles of my invention, and that various changes and modifications of details may easily be made without departing from the spirit of my invention as defined in the appended claims.

What I claim is:

1. In a firearm, a breech bolt having a slot therein, an extractor located in said slot, the opposing wall and face of said slot and extractor being plane surfaces, a plane faced lug on said extractor seated in a plane walled depression in another wall of said slot, one face of said lug being coincident with said extractor face, and a helical spring having its ends projecting into sockets in the opposed wall and face of said slot and extractor.

2. In a firearm, a breech bolt having a slot therein, an extractor located in said slot, the opposed wall and face of said slot and extractor being plane surfaces, a lug on said extractor seated in a depression in another wall of said slot, one face of said lug being coincident with said extractor face, and a spring interposed between said slot wall and said extractor face to hold said extractor in place, said opposed slot wall and extractor face being divergent whereby movement of said face into contact with said wall permits the removal of said extractor from said slot.

3. In a firearm, a breech bolt having a pair of grooves, an ejector reciprocatively mounted in one of said grooves, resilient means acting in the direction of its path of reciprocation to normally hold said ejector in its inoperative position, a lug on said ejector arranged in the other of said grooves to prevent removal of said ejector from said first groove when in normal position.

4. In a firearm, a breech bolt having a pair of grooves facing in different directions, an ejector slidably mounted in one of said grooves, resilient means to normally hold said ejector in inoperative position, a lug arranged in the other of said grooves to limit the movement of said ejector under the influence of said resilient means and to prevent removal of said ejector from said groove, said lug being entirely free of said second grove when said resilient means is fully compressed whereby said ejector may be removed from said groove.

5. In a firearm, a breech bolt having a pair of differently facing grooves, an ejector slidably mounted in one of said grooves, resilient means to normally hold said ejector in one position, and a lug carried by said ejector, said lug being adapted to be received in said second groove except when said resilient means is substantially fully compressed whereby the removal of said ejector from said groove is prevented except when said lug is exterior of said second groove.

6. In a firearm, a breech bolt having a groove, an ejector lying in said groove, said groove having a socket in one side wall, a lug on said ejector arranged in said socket, and a spring pressed stud overlying the opposite end of said ejector.

7. In a firearm, a breech bolt, a groove extending longitudinally thereof, an ejector mounted in said groove, a socket in one wall of the groove at its forward end, a depression in the bottom of the rear end, a lateral lug on the forward end and a depending lug on the rear end of the ejector adapted to seat in the socket and depression, respectively, a spring interposed between the forward end of the depending lug and the forward wall of the depression, and a spring-pressed stud engaging the upper surface of the rear end of the ejector.

8. In a firearm, a breech bolt, an ejector slidably mounted on said breech bolt, resilient means acting in the direction of the path of reciprocation of said ejector to normally maintain it in inoperative position, and means for preventing the removal of said ejector from said breech bolt, said means being inoperative when said ejector is actuated to substantially fully compress said resilient means.

9. In a firearm, a breech bolt having a groove, an ejector slidably mounted in said groove, and a spring pressed stud overlying said ejector.

CARL G SWEBILIUS.