

No. 659,928.

Patented Oct. 16, 1900.

T. C. JOHNSON.
EJECTOR FOR BREECH LOADING FIREARMS.

(Application filed July 30, 1900.)

(No Model.)

Fig. 1

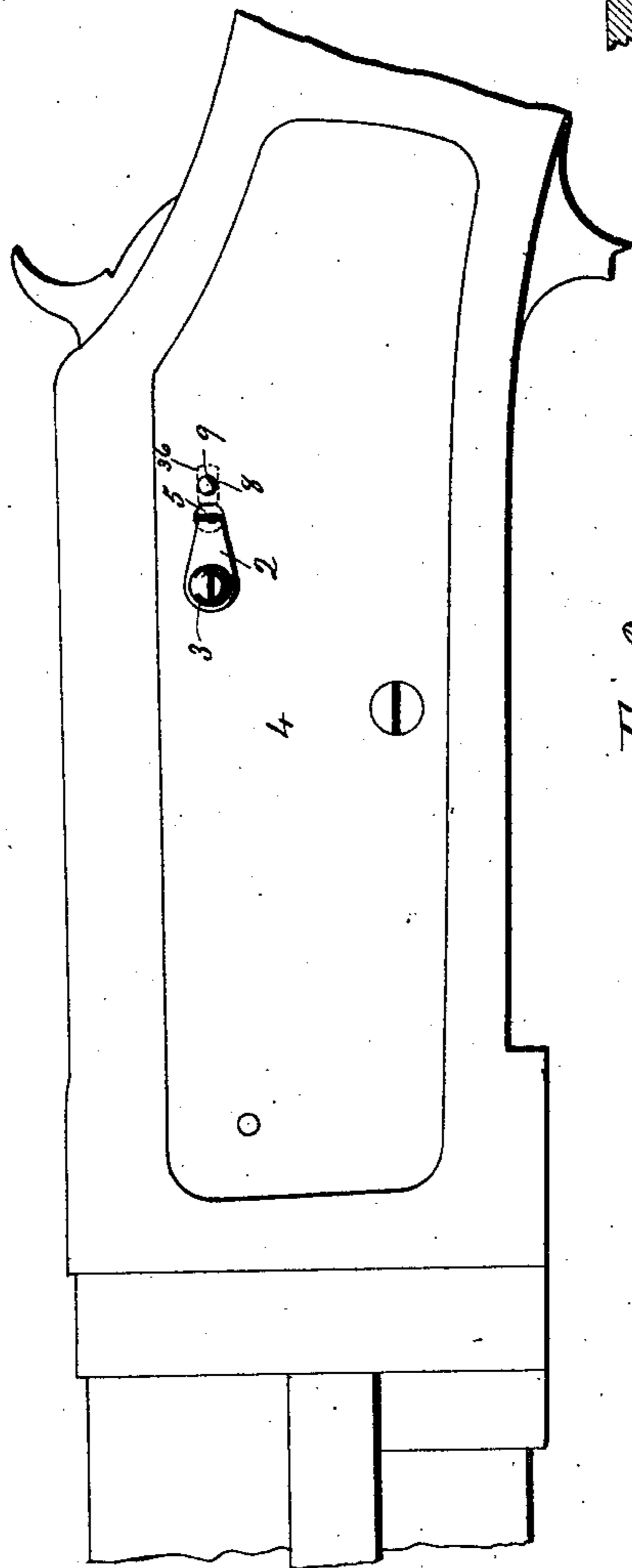


Fig. 2

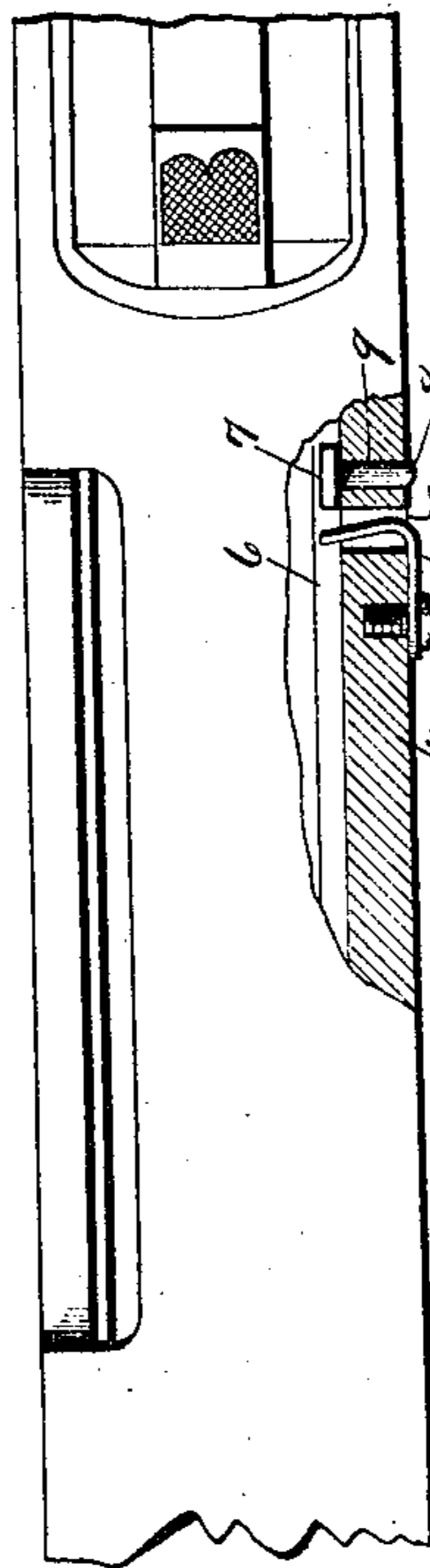


Fig. 3

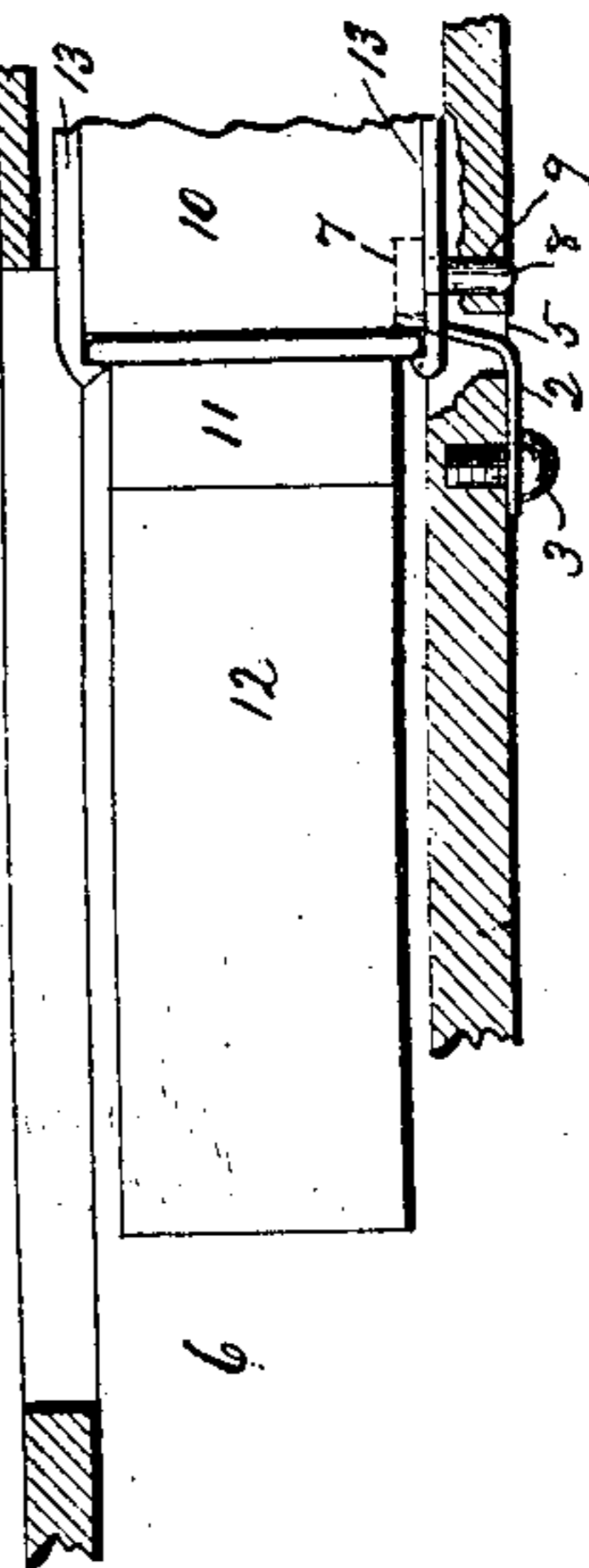


Fig. 4

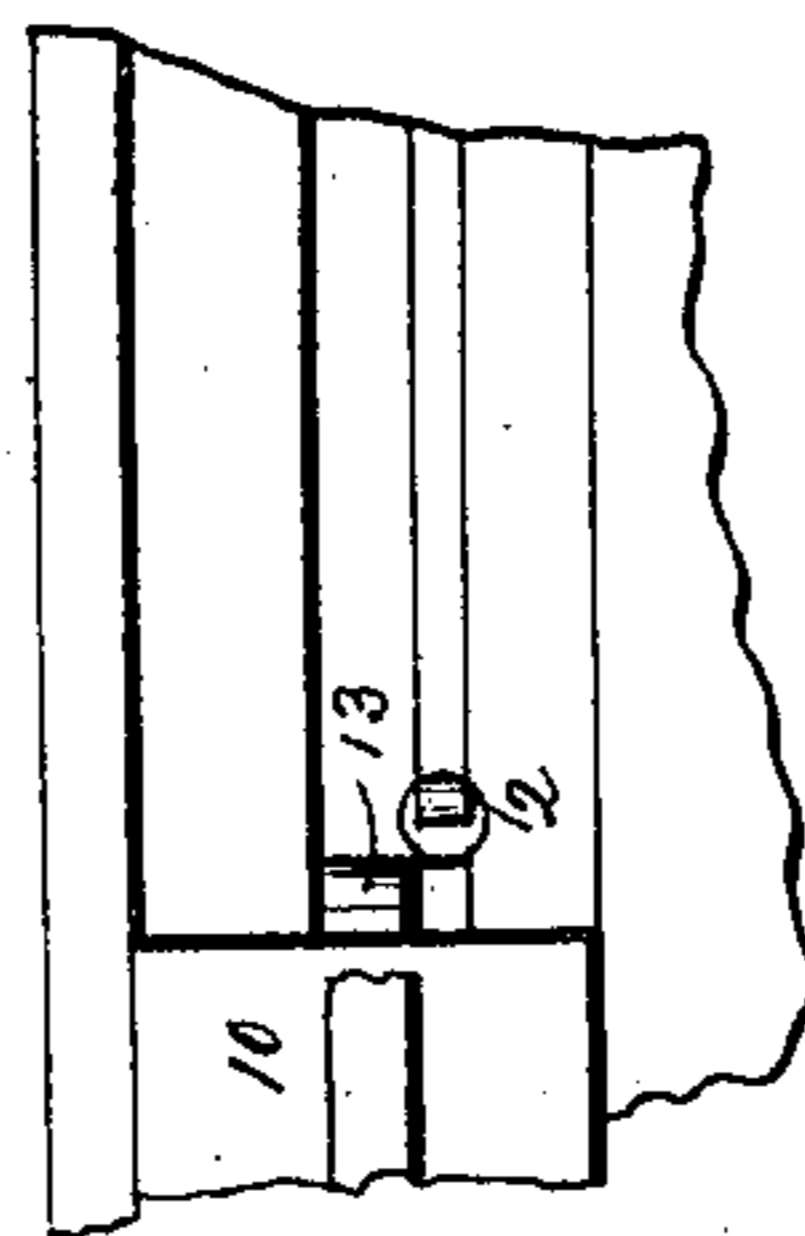


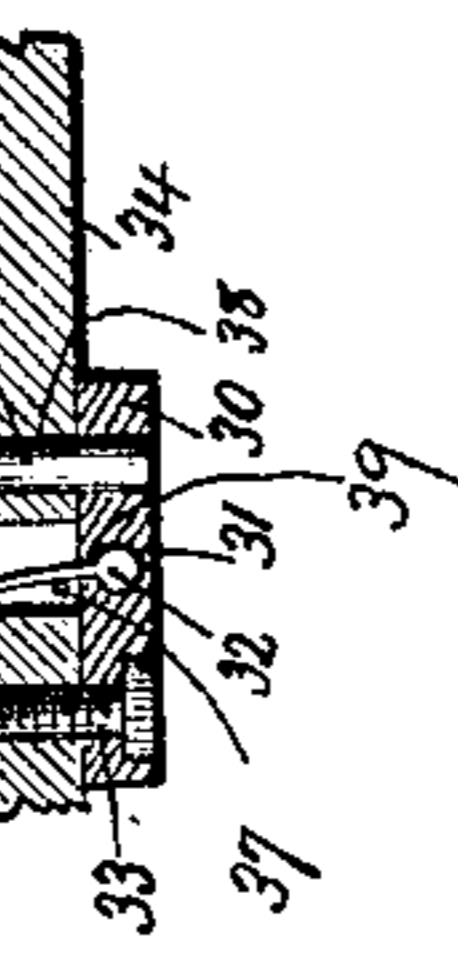
Fig. 5



Fig. 6



Fig. 7



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UNITED STATES PATENT OFFICE.

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EJECTOR FOR BREECH-LOADING FIREARMS.

SPECIFICATION forming part of Letters Patent No. 659,928, dated October 16, 1900.

Application filed July 30, 1900. Serial No. 25,220. (No model.)

To all whom it may concern:

Be it known that I, THOMAS C. JOHNSON, of New Haven, in the county of New Haven and State of Connecticut, have invented a new
5 Improvement in Ejectors for Breech-Loading Firearms; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and
10 exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a broken view, in side elevation, of a gun provided with my improved ejector;
15 Fig. 2, a broken plan view of the gun, partly in horizontal section, showing the spring-ejector in its normal position; Fig. 3, a broken view of the gun in horizontal section, showing the ejector-spring as placed under tension by the engagement with it of a cartridge
20 at the time the same reaches the limit of its rearward excursion with the breech-bolt; Fig. 4, a broken view, in inside elevation, of the left-hand wall of the receiver of the gun, showing the breech-bolt of the gun, one of the extractors carried thereby, and the abutment-head and the ejector-spring of my improved ejector. Figs. 5, 6, and 7 are sectional views
25 showing modified forms which my invention may assume.

My invention relates to an improvement in ejectors for breech-loading firearms, the object being to produce an ejector of superior
35 simplicity and effectiveness of construction, composed of few parts, and not liable to derangement.

With this end in view my invention consists in an ejector having certain details of construction, as will be hereinafter described,
40 and pointed out in the claims.

In carrying out my invention, as shown in Figs. 1 to 4, inclusive, of the drawings, I employ an ejector-spring 2, consisting of a flat piece of resilient metal tapering from its outer
45 to its inner end and bent about midway of its length, so that its inner end stands at a slightly-acute angle to its outer end, which is perforated for the passage of a screw 3, by means of which the spring is fastened to the
50 outer face of the left-hand wall of the gun frame or receiver 4, which is formed with a

transverse opening 5, through which the bent inner end of the spring extends, so as to project for a short distance into the receiver-chamber 6 of the gun. Directly to the rear
55 of the projecting inner end of the said spring I locate a small abutment-head 7, formed upon the inner end of a pin or stem 8, which enters the inner end of a small transverse hole 9 provided for it in the left-hand wall of the
60 gun-frame at a point directly to the rear of the opening 5 before mentioned. The said spring and abutment-head are located so that just before the breech-bolt 10 reaches the limit of its rearward excursion the rear face
65 of the flanged head 11 of the cartridge 12 will engage with the projecting inner end of the spring 2, whereby the same will be placed under tension and bent backward into engagement with the head 7, as shown in Fig. 70
3, the cartridge being drawn backward out of the gun-barrel by means of extractors 13 13, carried by the breech-bolt 10 and of any approved construction. The shock of stopping
75 the rearward excursion of the bolt does not fall upon the spring, which, if it did, would be broken, but upon the abutment-head 7. When this shock has spent itself, the bent inner end of the spring recovers and in recovering ejects the shell from left to right
80 out of the gun. The yielding inner end of the spring, it will be observed, stands at substantially a right angle to the path of the cartridge.

It will be seen from the foregoing that my
85 improved ejector, consisting, as it does, of the spring 2 and abutment-head 7, is extremely simple to construct and apply, and that as it comprises only two parts it is not liable to derangement. It is, moreover, very effective.
90

In the modified construction shown by Fig. 5 the ejector-spring 14 is secured in place by having its outer end perforated for the passage through it of the stem 15 of the abutment-head 16, which holds the said end of the
95 spring against the inner face of the left-hand wall 17 of the gun-frame, which is formed at a point directly ahead of the stem 15 with a transverse opening 18, receiving the resilient or yielding end of the spring, which stands
100 at a right angle to the path of the cartridge-shell and projects into the receiver-chamber

sufficiently far to be engaged by the left-hand edge of the head of the cartridge-shell as the same is drawn backward in being extracted. The end of the spring is forced backward upon the abutment-head 16 and in recovering ejects the cartridge from left to right.

In the modified construction shown by Fig. 6 the loop-shaped ejector-spring 19 is secured by a pin 20 in a shallow recess 21, formed in the inner face of a block 22, secured to the outer face of the left-hand wall 23 of the gun-frame by means of a screw 24, which passes through the forward end of the block into the frame. The said spring 19 projects forward from the recess 21 into a transverse passage 25, formed in the gun-frame 23 at a point directly forward of a hole 26, formed in the frame for the reception of the stem 27 of the abutment-head 28, which is located directly to the rear of the longer inwardly-projecting forward end of the spring 19, the shorter rear end of which bears upon the rear wall of the recess 25. The stem 26 aforesaid enters the rear end of the block 22 and prevents the same from turning upon the screw 24 as upon a swivel. In this construction the forward end of the spring 19 is engaged by the left-hand edge of the head of the cartridge-shell and forced rearward into engagement with the abutment 28, after which the spring recovers and ejects the shell.

In the modified construction shown in Fig. 7 the ejector-spring 29 consists of a leaf, terminating at its outer end in a rib 32, which is received in a transverse hole 31, formed in the inner face of a block 30, secured by means of a screw 33 to the left-hand wall 34 of the gun-frame, the screw 33 passing through the forward end of the block 30, which is prevented from turning upon the screw as upon a swivel by the entrance into its rear end of the stem 35 of the abutment-head 36, which is located directly to the rear of the inwardly-projecting end of the spring, which is free to be moved back and forth in a horizontal plane in a passage 37, formed in the gun-frame at a point directly in front of the hole 38, formed for the reception of the stem 35. The spring 29 is prevented from turning upon the rib 32 by the confinement of the extreme outer end of the spring between the walls of a slot 39, opening out of the hole 31, formed in the block 30. This spring 29 is placed under tension by the cartridge-shell just before the same reaches the limit of its rearward excursion, the end of the spring being then forced against the abutment-head 36, after which the spring is allowed to recover and eject the cartridge.

It will be observed that in the form of my invention shown in Figs. 1 to 4, inclusive, and in the modified forms shown by Figs. 5 to 7, inclusive, the ejector-spring in every case is

connected with the left-hand wall of the gun-frame and arranged to stand at or substantially at a right angle to the path in which the cartridge-shells are extracted. All of these springs are brought to bear upon the abutment-head which the shell is brought up against when it reaches the limit of its rearward excursion, and all of these springs when they recover eject the cartridges from left to right. I would therefore have it understood that I do not limit myself to the constructions herein shown and described, but hold myself at liberty to make such changes in and alterations from the same as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a gun-frame, of an ejector-spring fixed thereto and standing at a right angle to the path in which the cartridge-shell is extracted, and in position to be engaged and placed under tension by the said shell which it ejects in its recovery, and means located to the rear of the spring for limiting the rearward excursion of the cartridge, and preventing the excessive bending of the spring.

2. The combination with a gun-frame, of an ejector-spring secured to the gun-frame and having one end passed through an opening formed in the gun-frame into position to be engaged by the head of a cartridge-shell when the same is being extracted from the gun-barrel, and a fixed abutment-head located directly to the rear of the projecting end of the said spring which is forced against the head when the gun is opened and the cartridge extracted, but which recovers to eject the cartridge.

3. In a breech-loading magazine-gun, the combination with the gun-frame, of a breech-bolt provided with extractors, an ejector-spring bent between its ends, secured by its outer end to the outer face of the left-hand wall of the gun-frame, and having its inner end passed through an opening in the said wall so as to project into the receiver-chamber thereof, an abutment-head mounted upon a stem entered into an opening in the gun-frame and located to the rear of the projecting inner end of the said spring, which is forced against the abutment-head when the gun is opened and the cartridge extracted, but which recovers to eject the cartridge.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

THOS. C. JOHNSON.

Witnesses:

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