

No. 754,598.

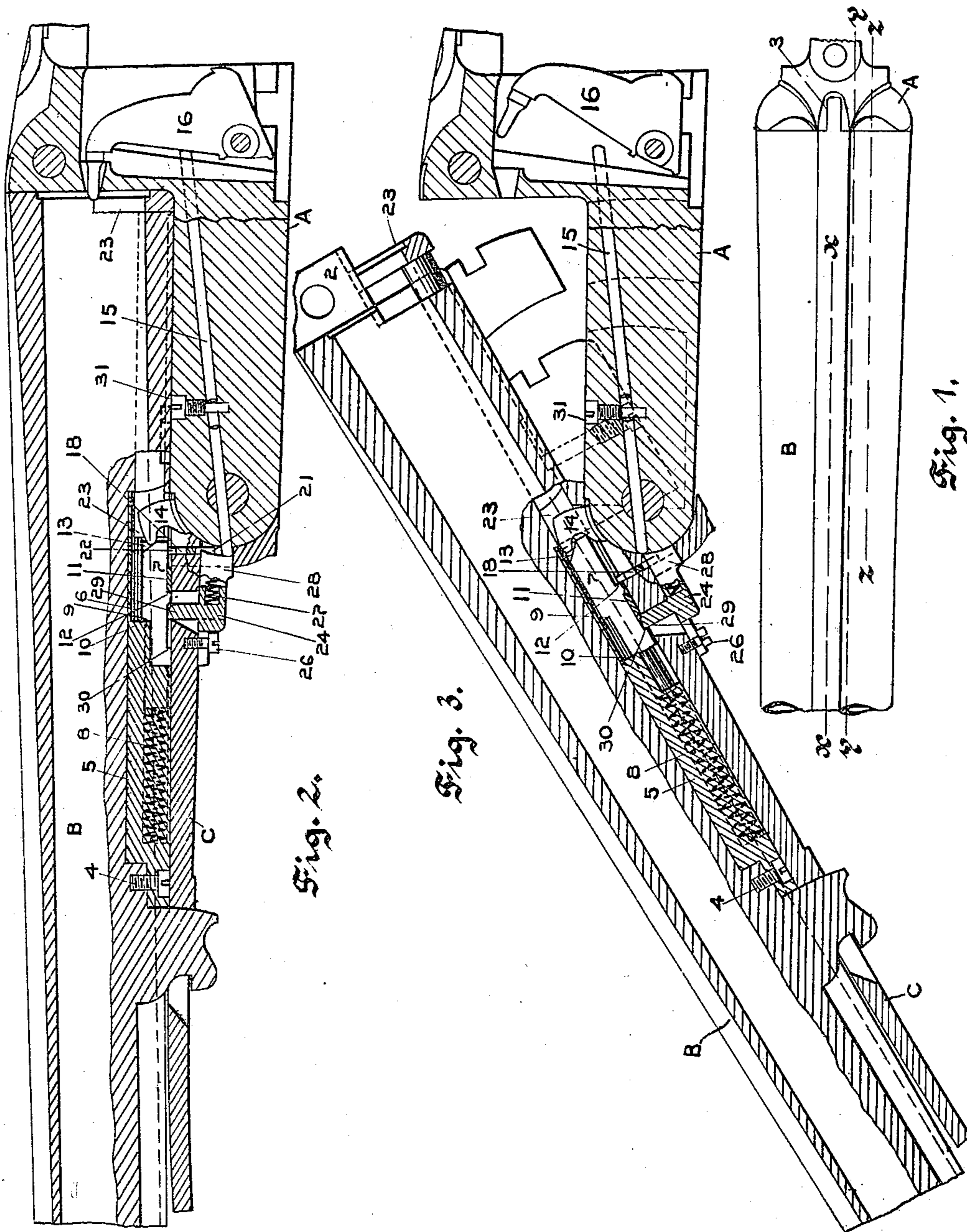
PATENTED MAR. 15, 1904.

F. NOVOTNY.
SHELL EJECTOR MECHANISM FOR GUNS.

APPLICATION FILED OCT. 20, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses,
W. H. Palmer.
Emily F. Otis

Inventor,
Frank Novotny.
by Athrop Johnson
his Attorneys.

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2 SHEETS—SHEET 2.

Fig. 4

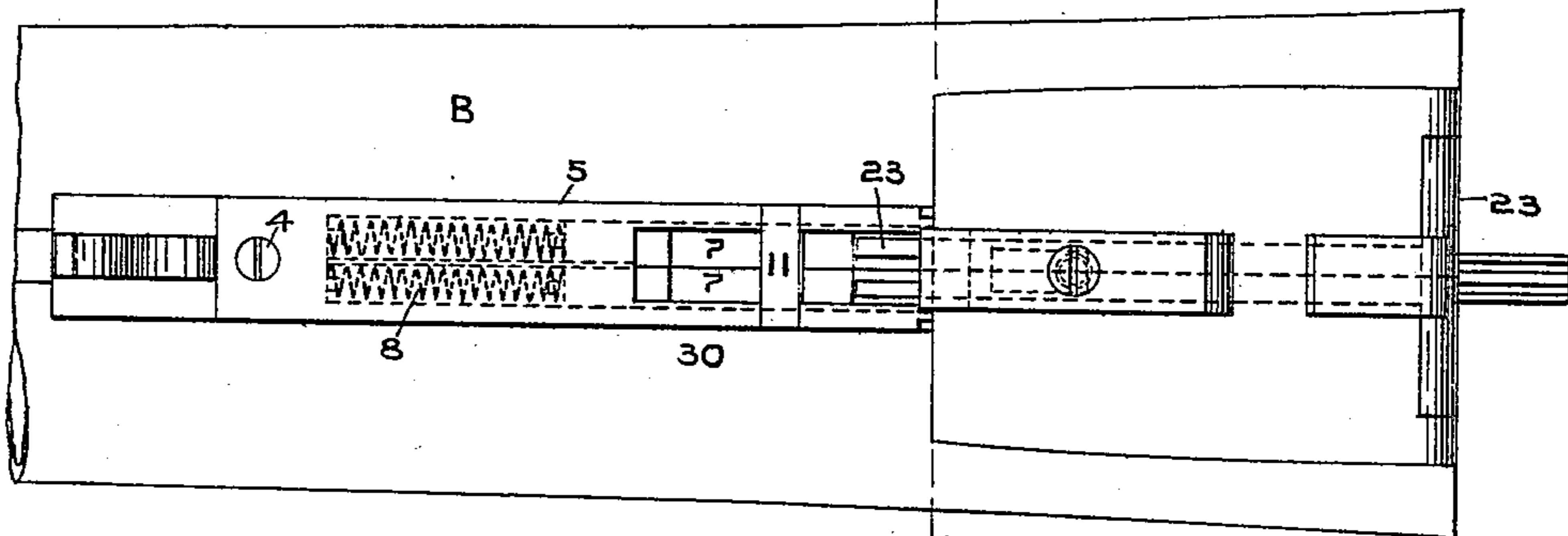


Fig. 5.

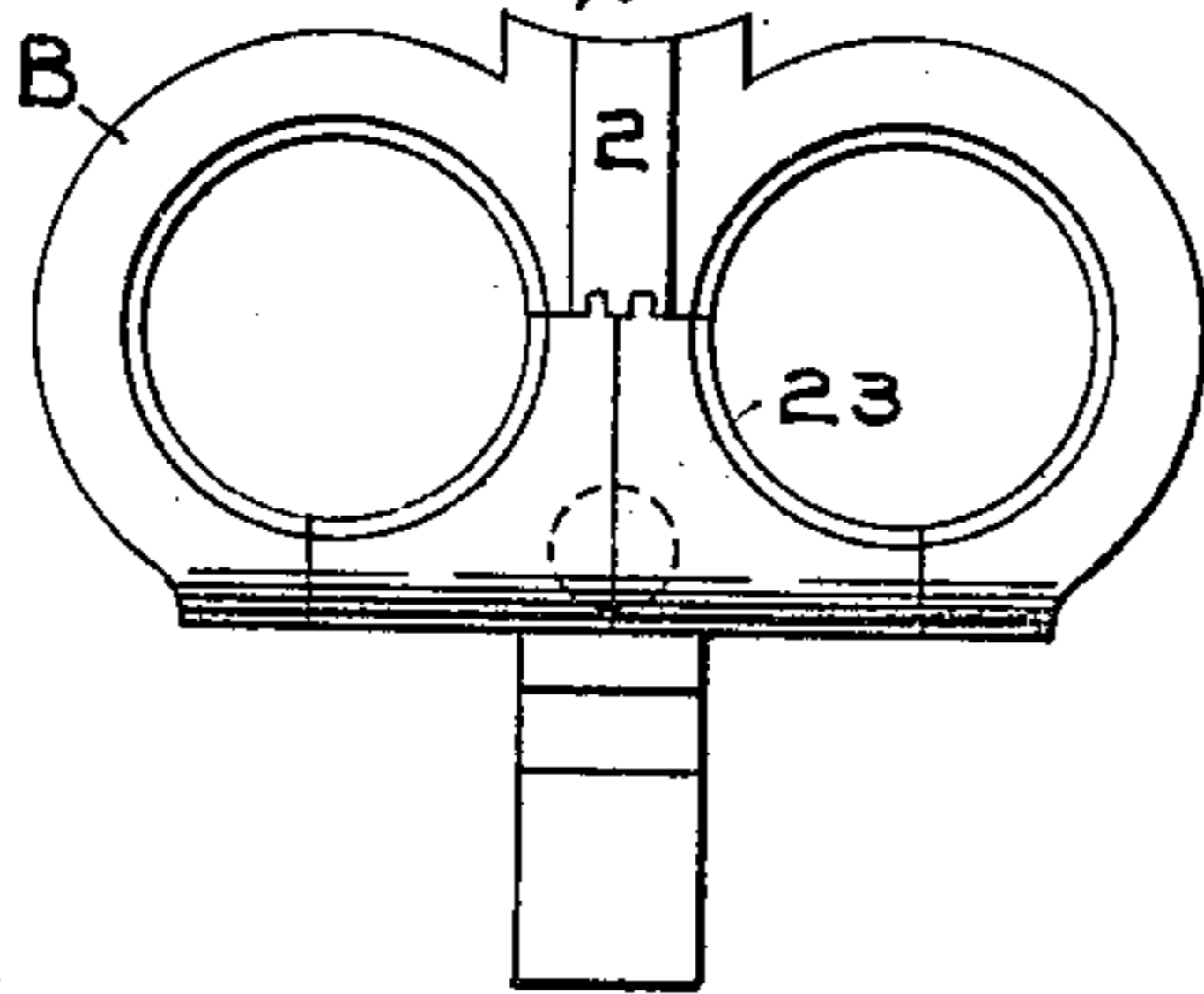


Fig. 6.

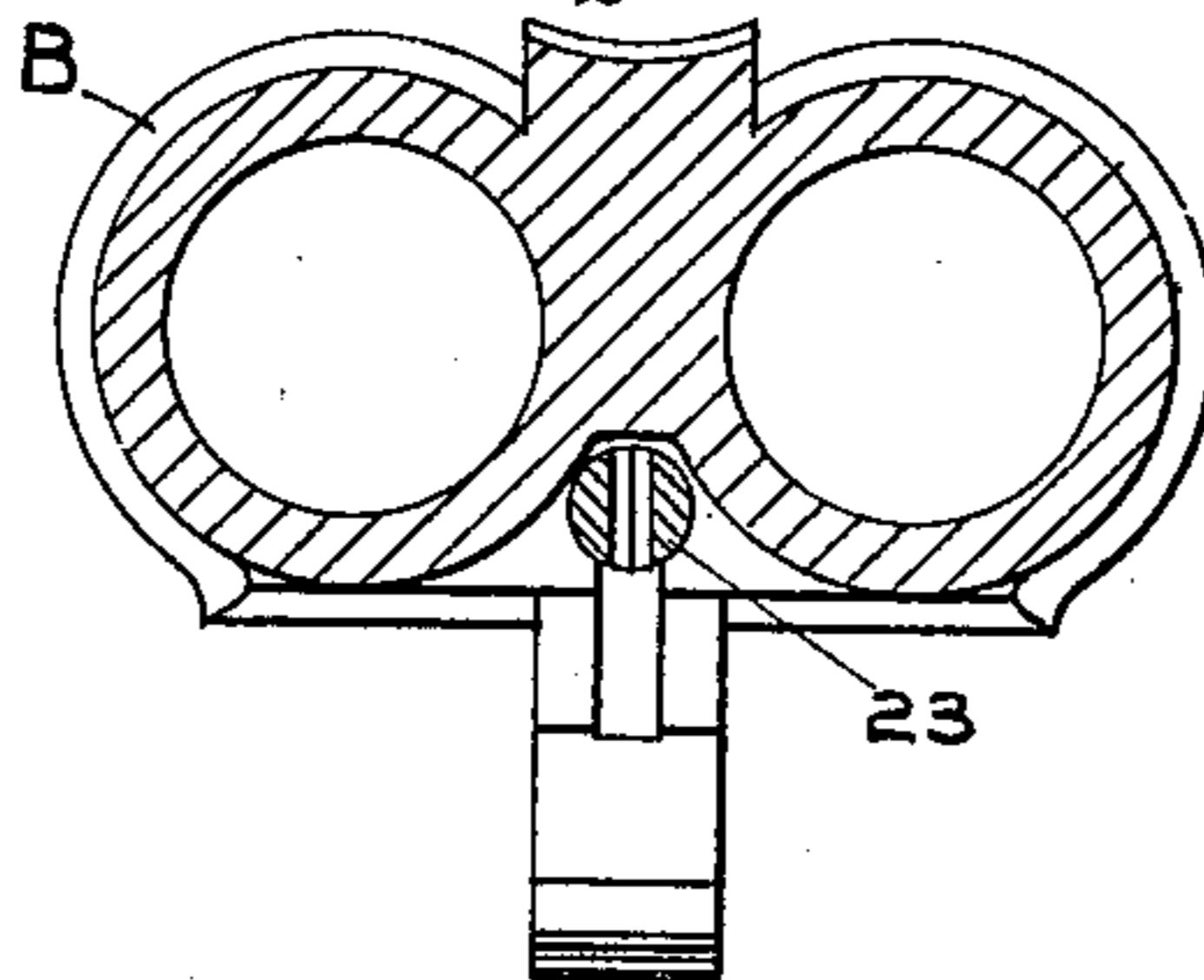


Fig. 7.

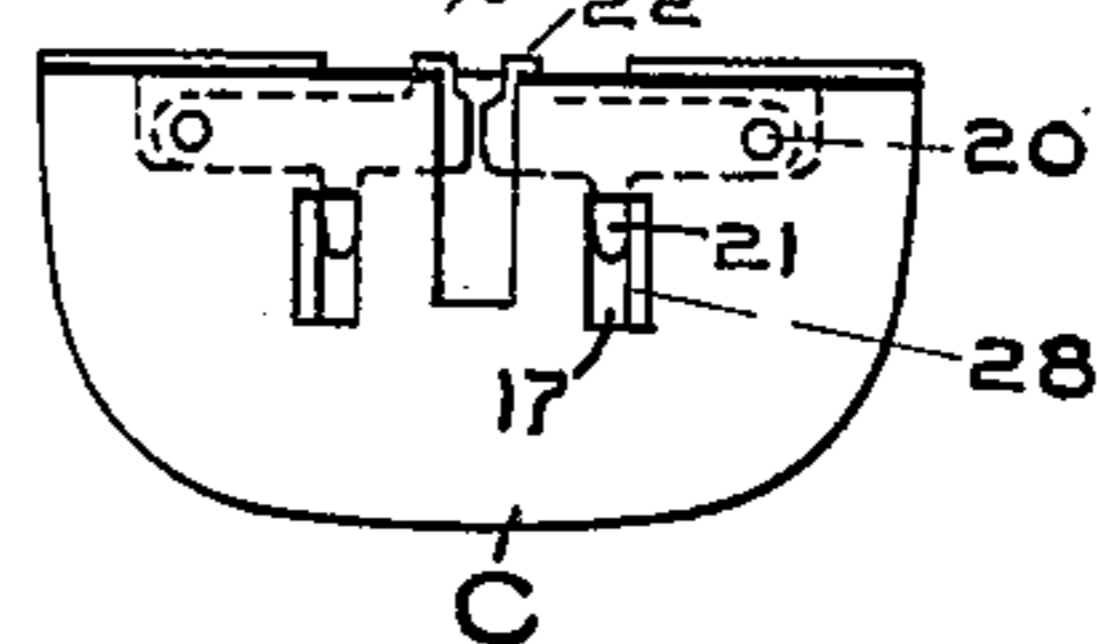


Fig. 8.

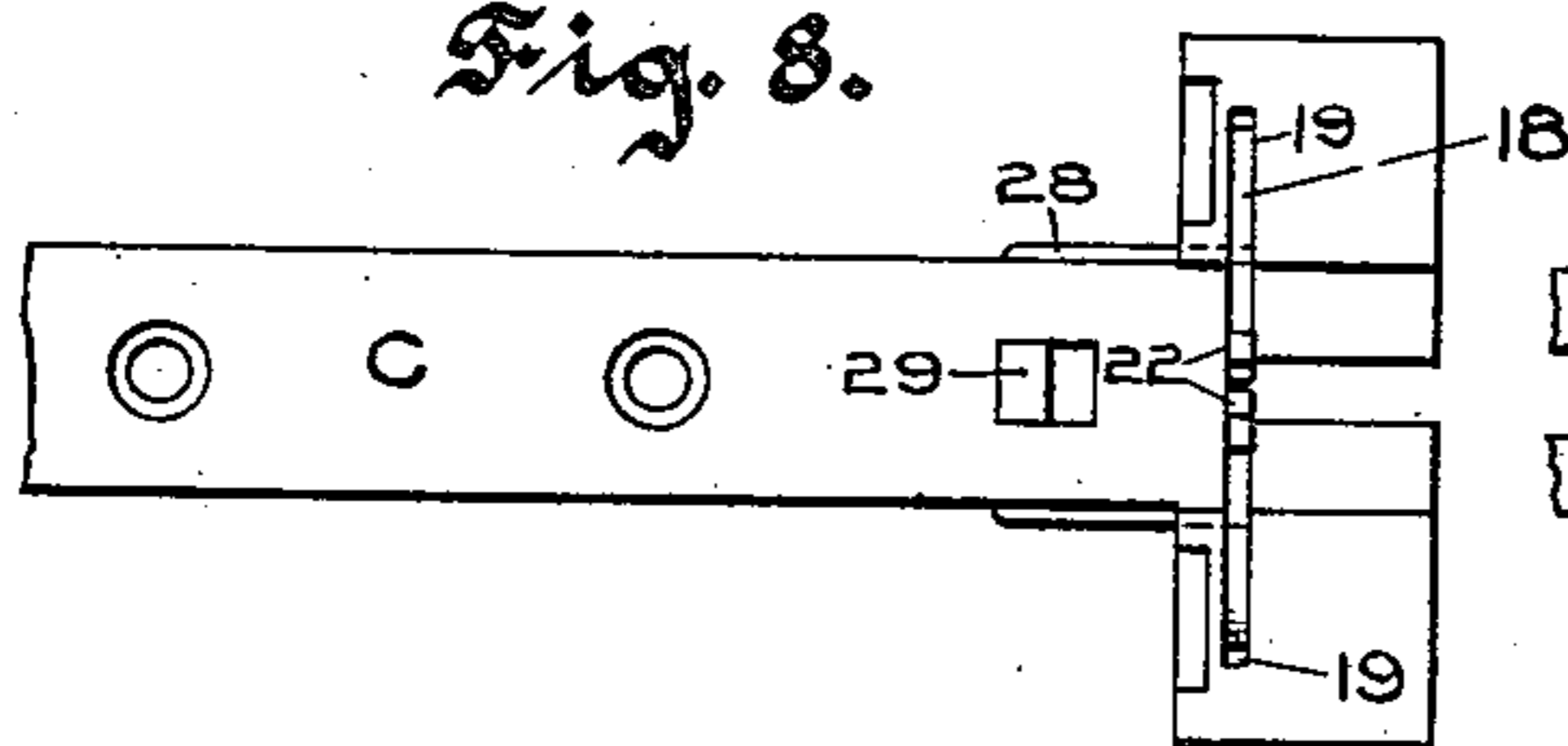


Fig. 9.

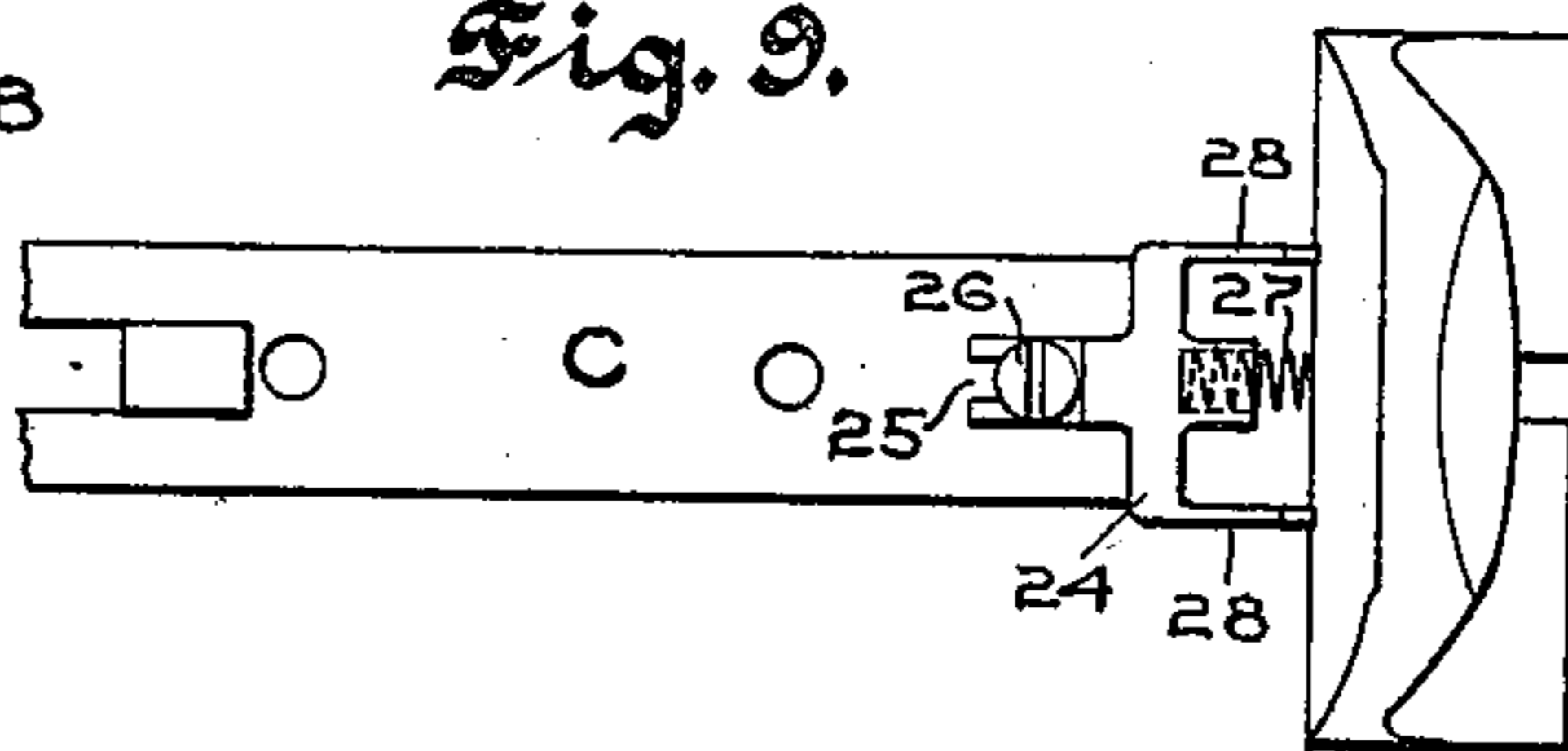


Fig. 10.

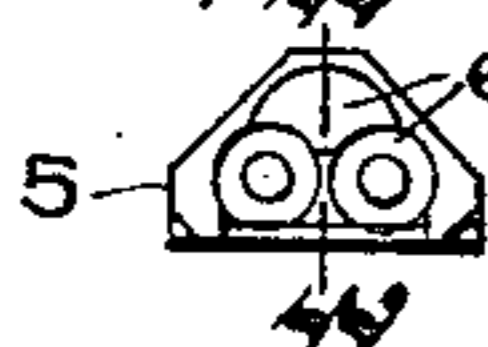


Fig. 11.



Fig. 12. Fig. 13.

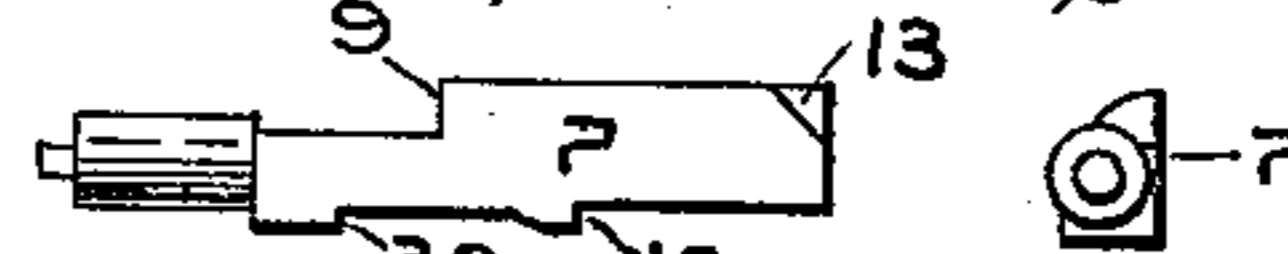


Fig. 15.

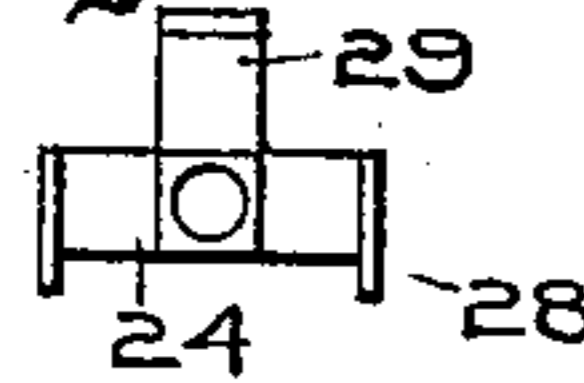


Fig. 16.

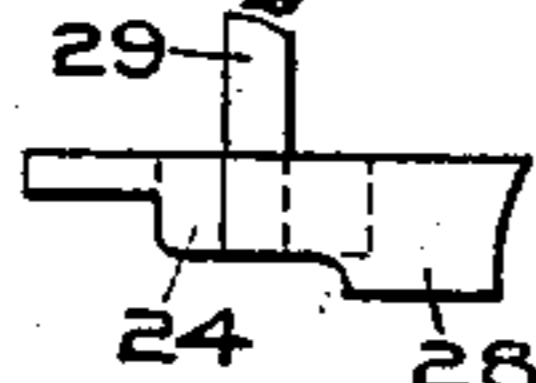


Fig. 17.

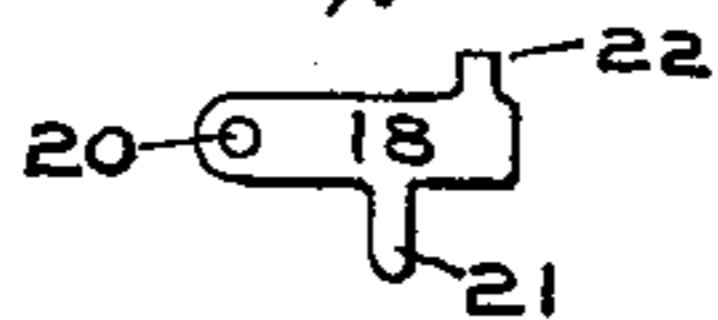
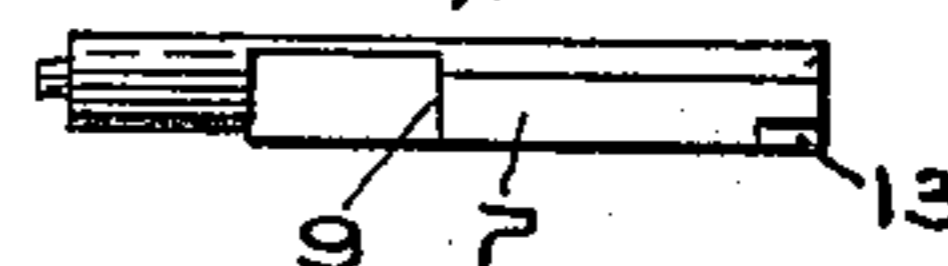


Fig. 14.



Witnesses,
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Emily F. Otis

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UNITED STATES PATENT OFFICE.

FRANK NOVOTNY, OF ST. PAUL, MINNESOTA.

SHELL-EJECTOR MECHANISM FOR GUNS.

SPECIFICATION forming part of Letters Patent No. 754,598, dated March 15, 1904.

Application filed October 20, 1902. Serial No. 127,930. (No model.)

To all whom it may concern:

Be it known that I, FRANK NOVOTNY, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Shell-Ejector Mechanism for Guns, of which the following is a specification.

My invention relates to improvements in shell-ejector mechanism for guns; and it consists in the construction and combination hereinafter particularly described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a top view of a portion of the barrels and frame. Fig. 2 is a section on lines *xx*, *yy*, and *zz* of Fig. 1 with the parts in closed position. Fig. 3 is a similar view with the gun broken. Fig. 4 is a bottom view of the breech end of the barrels. Fig. 5 is a rear end view of the barrels. Fig. 6 is a section on line *vv* of Fig. 4. Fig. 7 is a rear end view of the fore-end iron. Figs. 8 and 9 are top and bottom views, respectively, of the fore-end iron. Fig. 10 is an end view of a supporting-plate for the ejector mechanism. Fig. 11 is a longitudinal section on line *ww* of Fig. 10. Fig. 12 is a side elevation of one of the ejector-plungers. Figs. 13 and 14 are rear end and top views, respectively, of the same. Figs. 15 and 16 are details of a slidable block forming part of my invention, and Fig. 17 is a detail of a hinged dog forming part of my invention.

In the accompanying drawings, A represents the gun-frame, and B the barrels provided with a lug 2, which fits in a socket 3 in the frame when the parts are in closed position. To the under side of the barrels is detachably secured in any desired manner the fore-end iron C, to the rear end of which the forward extension of the gun-frame has ordinary hinge-support.

Secured underneath the barrels B in suitable manner, as by means of the screw 4, is a plate or bar 5, which forms a support and guide for the ejector-plungers, as hereinafter pointed out. Slidable in a longitudinal opening 6 in the plate 5 are similar ejector-plungers 7, a coil-spring 8 being interposed between the forward end of each of said plungers and the end wall of the plate 5. Each of said plungers

is formed with a shoulder 9, adapted to engage with a shoulder 10 upon the plate to limit the forward movement of the plunger. The under side of the rear end of the opening 6 is open, as shown in Figs. 4 and 11 and is centrally crossed by a bar 11. Each of the ejector-plungers is formed with a shoulder 12, which engages with the cross-bar 11 when the ejector-plungers are in forward position, as shown in Fig. 2. The ejector-plungers are loosely fitted in the opening 6 to permit their being lifted out of engagement with the cross-bar 11, as hereinafter described. The rear upper corners of the ejector-plungers are formed with cut-away portions 13, against which the upwardly-projecting finger or lug 14, upon the forward end of the frame, engages when the gun is closed to hold the ejector-plungers in engagement with the cross-bar 11, as shown in Fig. 2.

Extending through the forward extension of the frame are the rods 15. As shown in Fig. 2, the rods 15 are engaged by the hammers 16 when the gun is fired to carry the forward ends of said rods 15 into the openings 17, which openings are formed through the rear end of the fore-end iron. In order to raise the ejector-plungers out of engagement with the cross-bar 11 to allow said plungers to be actuated by the coil-springs 8 to eject the shells, I provide the dogs 18, pivoted in the transverse slot 19 in the upper portion of the rear end of the fore-end iron. The dogs 18 each have pivotal support 20 and are each provided with a teat 21, extending downwardly into the adjacent opening 17 in the fore-end iron, and with an upwardly-projecting teat 22, engaging with the under side of the rear end of the adjacent ejector-plunger. When the gun is broken, the forward ends of the rods 15 will turn the hinged dogs 18 upward, lifting the rear ends of the ejector-plungers out of engagement with the cross-bar 11, so that the coil-springs 8 may force the ejector-plungers into contact with the shell-ejectors 23, ejecting the shells.

Slidably supported underneath the rear end of the fore-end iron is a block 24, provided with a slot 25, through which passes a securing-screw 26. A coil-spring 27, interposed

between the block 24 and the rear end of the fore-end iron, normally holds said block in forward position. The block 24 is formed with arms 28, projecting into the openings 17 in the end of the fore-end iron. The block 24 is formed with an upwardly-projecting finger 29, the free end of which stands in position to be engaged by the shoulders 30 upon the under side of the ejector-plungers when said plungers are actuated by their springs.

When the gun is closed, the ejector mechanism will stand in the position shown in Fig. 2, the ejector-plungers being held in retracted position by the cross-bar 11, in engagement with which the plungers will be held by the finger 14 upon the end of the forwardly-extending portion of the frame. When the gun is broken, the finger 14 will be carried out of engagement with the ejector-plungers, and the forward ends of the rods 15 will turn the hinged dogs 18 upwardly, as hereinbefore described, lifting the plungers out of engagement with the cross-bar 11, so that the coil-springs 8 can force said plungers rearwardly to actuate the shell-ejectors 23 and force the shells from the barrels. As the ejector-plungers are actuated by their springs 8 the shoulders 30 upon the plungers will engage with the finger 29 of the block 24, sliding said block rearwardly. This will cause the arms 28 of the block 24, which normally stand immediately in front of the ends of the rods 15, to engage with said rods and carry said rods rearwardly into the position shown in Fig. 3. The movement of the rods 15 is limited by a screw 31. When the gun is again used, the hammers in their forward movement will engage with the rear ends of the rods 15 and carry said rods into the forward position. (Shown in Fig. 2.)

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

1. In a gun of the class described, the combination with the frame, the fore-end iron, barrels, and shell-ejectors slidably arranged in connection with said barrels, of a plate fixedly secured underneath said barrels, ejector-plungers slidably supported upon said plate, actuating-springs for said plungers, a stop for said plungers, means carried by the frame to engage with said plungers to hold them in retracted position and in engagement with said stop when the gun is closed, dogs pivotally supported in said fore-end iron, and rods extending through the forward extension of said frame and adapted to engage said dogs to carry them into engagement with said plungers to release the same when the gun is broken.

2. In a gun of the class described, the combination with the frame, the fore-end iron, barrels, and shell-ejectors slidably arranged in connection with said barrels, of a plate fixedly secured underneath said barrels, ejector-plungers supported upon said plate, actuating-springs for said plungers, a stop carried

by said plate, a fixed lug carried by the frame to engage with said plungers when the gun is closed to hold the same in retracted position and in engagement with said stop, dogs pivotally supported adjacent to said plungers, and rods extending through the forward extension of the frame in position to engage with said dogs when the gun is broken to carry said plungers out of engagement with said stop to permit their being actuated by their springs.

3. In a gun of the class described, the combination with the frame, the fore-end iron, barrels, and shell-ejectors slidably arranged in connection with said barrels, of ejector-plungers for said ejectors supported underneath the barrels, actuating-springs for said plungers, means carried by the frame to engage with said plungers to hold them in retracted position when the gun is closed, dogs pivotally supported in said fore-end iron, rods extending through the forward extension of said frame and adapted to engage with said dogs to carry them into engagement with said plungers to release the same when the gun is broken, and means actuated by said plungers to return said rods to rear position.

4. In a gun of the class described, the combination with the frame, the fore-end iron, barrels, and shell-ejectors slidably arranged in connection with said barrels, of a plate supported underneath said barrels, ejector-plungers slidably supported on said plate, actuating-springs for said plungers, a fixed cross-bar carried by said plate, means carried by the frame of the gun to engage with said plungers when the gun is closed to hold the same in retracted position and against said cross-bar, dogs pivotally supported in the rear end of the fore-end iron, rods extending through the forward extension of the frame in position to engage with said dogs when the gun is broken to release said plungers and permit their being actuated by their springs, and means actuated by said plungers to return said rods to rear position.

5. In a gun of the class described, the combination with the frame, the fore-end iron, barrels, and shell-ejectors slidably arranged in connection with said barrels, of spring-actuated ejector-plungers supported underneath the barrels, a fixed cross-bar, means carried by the frame to engage with said plungers to hold them in retracted position and in engagement with said cross-bar when the gun is closed, dogs pivotally supported in the fore-end iron, slidable rods extending through the forward extension of the frame, said rods being carried forward when the gun is fired into position to engage with said dogs when the gun is broken to release said plungers to allow their being forced by their springs into engagement with the shell-ejectors, and means actuated by said plungers to return said rods to rear position.

6. In a gun of the class described, the combination with the frame, the fore-end iron, barrels, and shell-ejectors slidably arranged in connection with said barrels, of ejector-plungers for said ejectors supported underneath the barrels, actuating-springs for said plungers, a fixed cross-bar, means carried by said frame to engage with said plungers to hold them in retracted position and in engagement with said cross-bar when the gun is closed, dogs pivotally supported in said fore-end iron, slidable rods extending through the forward extension of the frame, said rods being carried forward by the hammers when

the gun is fired into position to engage with said dogs when the gun is broken to turn said dogs into engagement with said plungers and release the same from said cross-bar, a slidable block supported in said fore-end iron to be actuated by said ejector-plungers to return said rods to rear position, and a controlling-spring for said block. 15 20

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

FRANK NOVOTNY.

Witnesses:

H. S. JOHNSON,
EMILY F. OTIS.