No. 754,092. PATENTED MAR. 8, 1904.

O. W. RINGQVIST.

CARTRIDGE EJECTOR FOR BREAKDOWN GUNS.

APPLICATION FILED JULY 8, 1902.

NO MODEL.

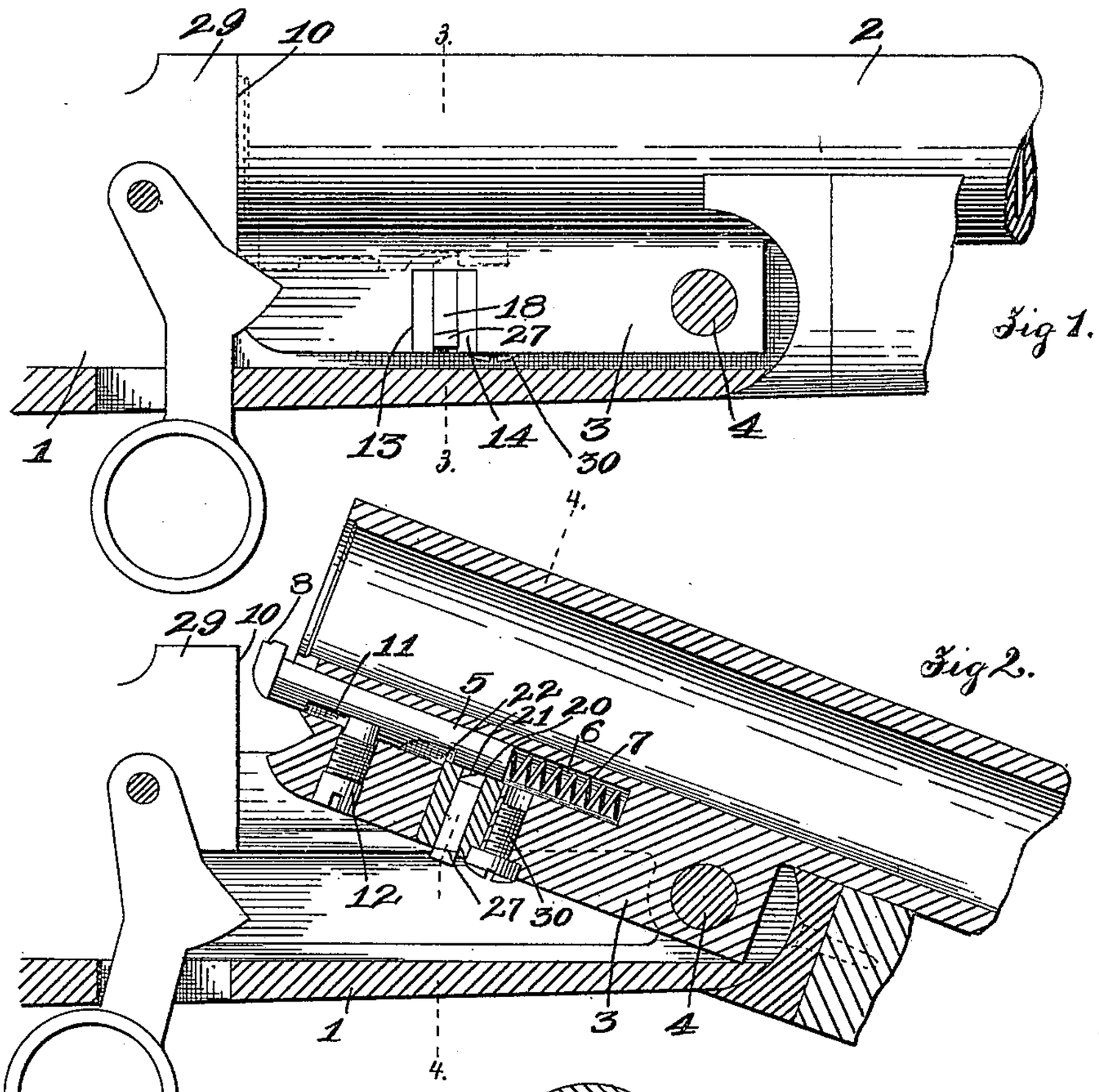

Fig 1.

Fig 2.

Fig 3.

Fig 4.

Fig 5.

Witnesses:
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No. 754,092. Patented March 8, 1904.

UNITED STATES PATENT OFFICE.

OTTO W. RINGQVIST, OF FITCHBURG, MASSACHUSETTS, ASSIGNOR TO MARY ELIZABETH JOHNSON, OF FITCHBURG, MASSACHUSETTS.

CARTRIDGE-EJECTOR FOR BREAKDOWN GUNS.

SPECIFICATION forming part of Letters Patent No. 754,092, dated March 8, 1904.

Application filed July 8, 1902. Serial No. 114,737. (No model.)

To all whom it may concern:

Be it known that I, OTTO W. RINGQVIST, a citizen of the United States, residing at Fitchburg, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Cartridge-Ejectors for Breakdown Guns, of which the following is a specification, accompanied by drawings forming a part of the same, in which—

Figure 1 is a view in side elevation of a portion of a breakdown gun, showing it in its normal position, a portion of the frame being broken away to display the interior mechanism. Fig. 2 is a longitudinal sectional view of the same portion of the gun, showing it broken down. Fig. 3 is a transverse vertical section on the line 3 3, Fig. 1, looking toward the gun-stock. Fig. 4 is a transverse vertical section on the line 4 4, Fig. 2, looking toward the muzzle of the gun; and Fig. 5 is a detached view in perspective of the block in which the catch is pivoted.

Similar reference characters refer to certain parts in the different views.

The object of this invention is to provide means for automatically locking and releasing the cartridge-ejector, the locking being effected simultaneously with the closing of the gun and the release when it has been opened a predetermined distance; and the invention consists, mainly, in a spring-actuated catch disposed transversely of the gun and barrel, in proximity to the ejector, in position to engage the ejector when the latter is forced forwardly, and provided with a toe in position to strike a shoulder on the gun-frame, whereby the catch is withdrawn from the ejector and the latter is given freedom to slide rearward in response to its spring actuation, thus causing the forcible ejection of the cartridge from the gun-barrel.

In the accompanying drawings, 1 represents the gun-frame of the gun; 2, the barrel; 3, a rib on its lower side, and 4 is the usual hinge-pin for connecting the frame and barrel.

The numeral 5 indicates the ejector, which is fitted to a bore 6, formed at the junction of the barrel and barrel-rib, and a moderately-stiff spiral spring 7 in the inner end of the bore 6 expands against the ejector to throw the latter forcibly rearward when not otherwise hindered by other parts of my invention. The extreme rear end of the ejector is provided with a notch 8, in which the flange of the cartridge is seated, and the rounded portion 9 of the ejector is constructed and adapted to sweep against the upright face 10 of the frame inclosing the gun, whereby the ejector is forced forward, with its cartridge, to the position shown in Fig. 1 of the drawings. The longitudinal movement of the ejector is limited to the length of a notch 11 in its lower side, and the end of a screw 12, protruding therein, affords a stop.

The ejector is automatically locked and released by the following mechanism: An opening 13 is cut transversely through the rib at a point at or near its center, and in this opening 13 a block 14 is fitted. This block is recessed across the top and down one side, thereby subdividing it into two parts, which parts are connected by the solid portion 16. Confined between the vertical walls 17 17 thus formed is a catch 18, which is pivoted by means of a pin 19, located at one side. As this catch just fits between the vertical walls 17 17 lateral play is prevented, while it is given freedom of motion up and down upon its pivot 19. It is important that lateral play be thus resisted, because the catch must operate in opposition to the expansive force of the spring 7. The catch 18 is provided at its top with a lip 20, the rear edge 21 of which is slightly beveled, and this lip is adapted to enter a notch 22 in the lower side of the ejector when the latter is pushed forward against the action of the spring 7, and to insure this action a spring 23 is interposed between the solid portion 16 of the block and the lower side of the catch. From the foregoing it will be seen that when the forward edge of the notch 22 shall have cleared the lip 21 said lip will spring into the notch and lock the ejector in position.

As a simple means for disengaging or releasing the ejector when the gun is broken down the following mechanism is employed:

formed in the inner face of the
n, and in it the toe 25 of the
said toe normally being at the
the cavity in position to be
shoulder 26 at the top of the
the gun shall have been com-
n down. The upper edge of
htly beveled, as at 27, so as to
nately flat upon this shoulder
is opened. To afford clearance
assembling the parts of the gun,
formed vertically from the cav-
ıpper surface of the gun-frame,
iting the barrel with the gun-
is swung downward through
and thence forced rearward
avity 24 until the holes in the
l barrel which receive the hinge-
to alinement with each other.
this cavity 24 is such that the
strike it until the rear end of the
ung above the top of the breech-
when this position is reached
tripped by the toe 25, striking
26, and the ejector is released and
forcibly expelled. The block
the opening 13 by means of a
the head of which is seated in a
ormed for it partly in the barrel-
y in the block.

im as my invention, and desire
Letters Patent, is—

eakdown gun, the combination
rame and a barrel hinged to the
on thereof, and having a barrel-
with a transverse opening, of a
ıg-actuated cartridge-ejector, a
ably held in said transverse open-
g-actuated catch pivoted at one
block and transversely to said
ıid catch having a lip adapted to
cartridge-ejector and a toe pro-
nd said barrel-rib, and a shoulder
rame arranged in the path of said
ın is broken down, whereby said
ıdrawn and the ejector released,
as described.

reakdown gun, the combination
frame and a barrel hinged to the
ion thereof, and having a barrel-
with a transverse opening, of a
ated sliding cartridge-ejector, a
ıably held in said opening, a catch
ne end in said block and trans-
id barrel-rib, a spring held in said
cting against said catch to carry
gement with the cartridge-ejector,
for withdrawing said catch from
the ejector as the gun is broken down, substantially as described.

3. In a breakdown gun, the combination with a gun-frame and a barrel hinged to the front extension thereof, and having a rib on its lower side provided with a transversely-formed opening, of a sliding spring-actuated cartridge-ejector fitted to a bore formed in said barrel-rib, a block detachably held in said transverse opening and recessed through its center to form parallel opposing walls, a pivoted spring-actuated catch fitted between said parallel walls and adapted to normally engage the cartridge-ejector, and means for disengaging the catch from the cartridge-ejector when the gun is broken down, substantially as described.

4. In a breakdown gun, the combination with a gun-frame and a barrel hinged to the front extension thereof, and having a rib on its lower side provided with a transversely-formed opening, of a sliding spring-actuated cartridge-ejector fitted to a bore formed in said barrel-rib, a block detachably held in said opening and recessed through its center to form parallel opposing walls, a spring-actuated catch pivoted at one end in said block and fitted between said parallel walls, said catch being adapted to normally engage the cartridge-ejector, a toe projecting from the opposite end of said catch beyond said barrel-rib, a cavity in the front extension of the gun-frame to receive said toe and permit a limited swinging motion to the barrel, and a shoulder in said front extension of the frame in the path of said toe when the gun is broken down, whereby the catch is withdrawn and the ejector released, substantially as described.

5. In a breakdown gun, the combination with a gun-frame and a barrel hinged to the front extension thereof, said barrel having a rib on its lower side provided with a transversely-formed opening, of a sliding spring-actuated cartridge-ejector, a block fitted to the transverse opening in the barrel-rib, means for detachably holding said block in said opening, and a spring-actuated catch wholly contained in said block adapted to normally engage the cartridge-ejector, and means for withdrawing said catch and releasing the cartridge-ejector when the gun is broken down, substantially as described.

Dated this 27th day of June, 1902.

OTTO W. RINGQVIST.

Witnesses:
M. M. SCHUERMANN,
RUFUS B. FOWLER.