(No Model.) 2 Sheets—Sheet 1.

F. C. STANLEY.

EJECTOR MECHANISM FOR BREAKDOWN GUNS.

No. 510,999. Patented Dec. 19, 1893.

Fig. 1.

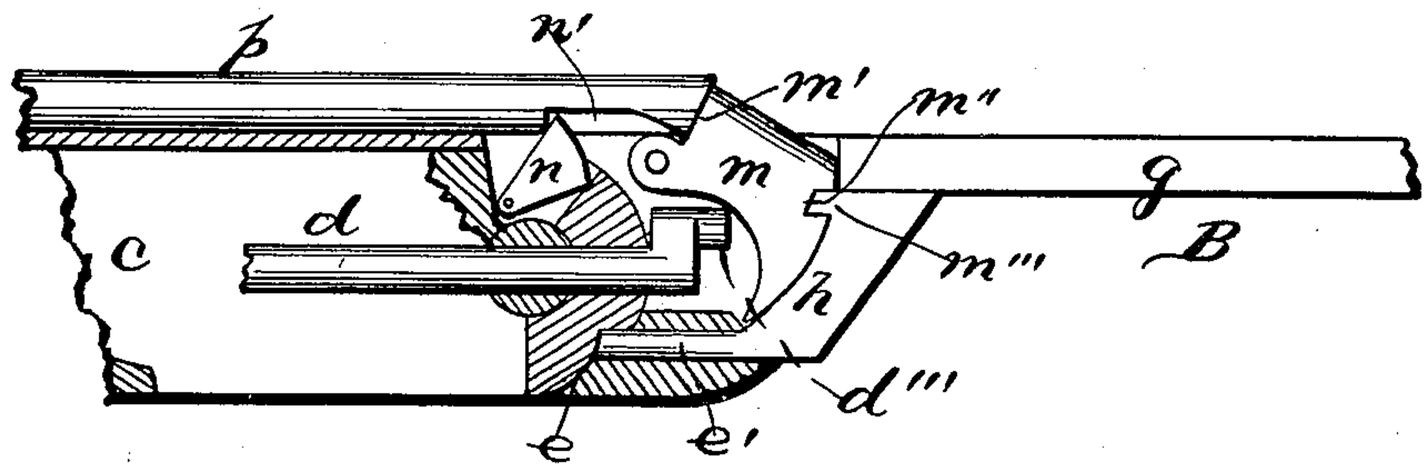


Fig. 2.

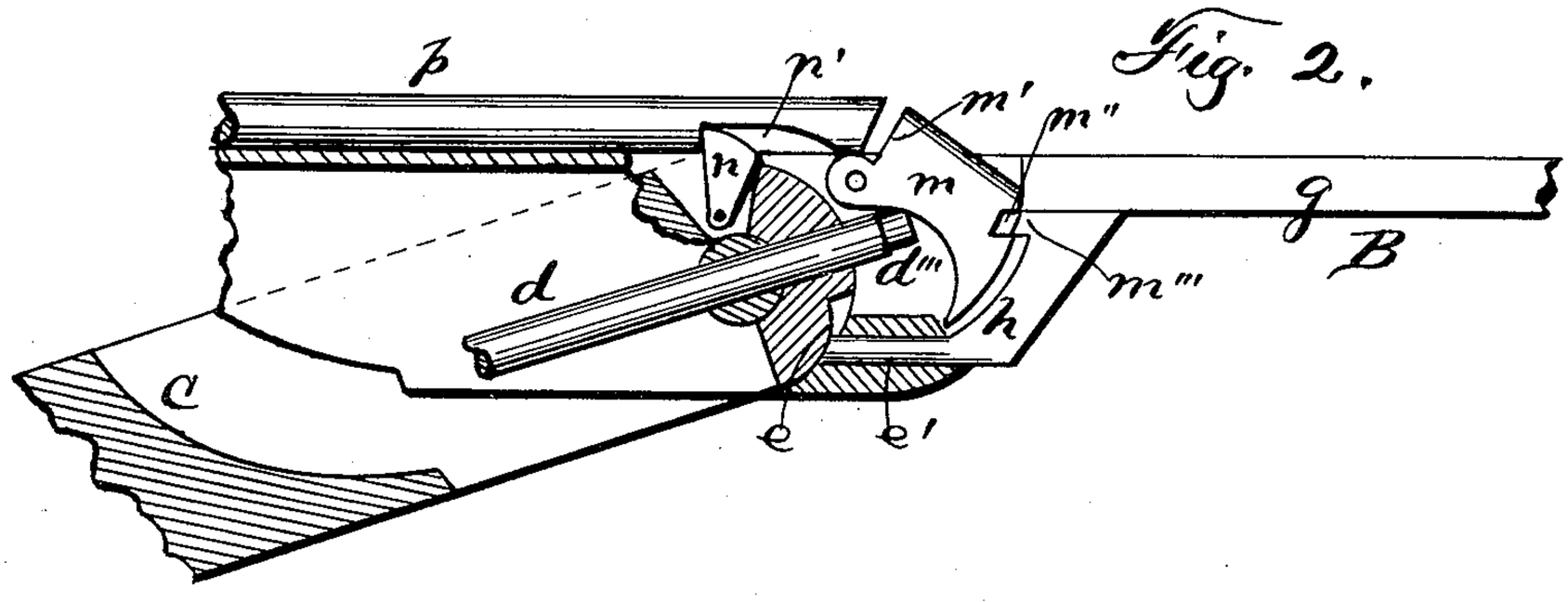
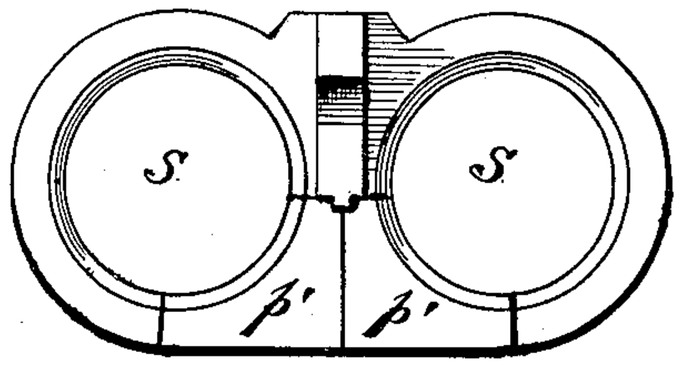


Fig. 5.



WITNESSES:
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(No Model.) 2 Sheets—Sheet 2.

F. C. STANLEY.

EJECTOR MECHANISM FOR BREAKDOWN GUNS.

No. 510,999. Patented Dec. 19, 1893.

Fig. 3.

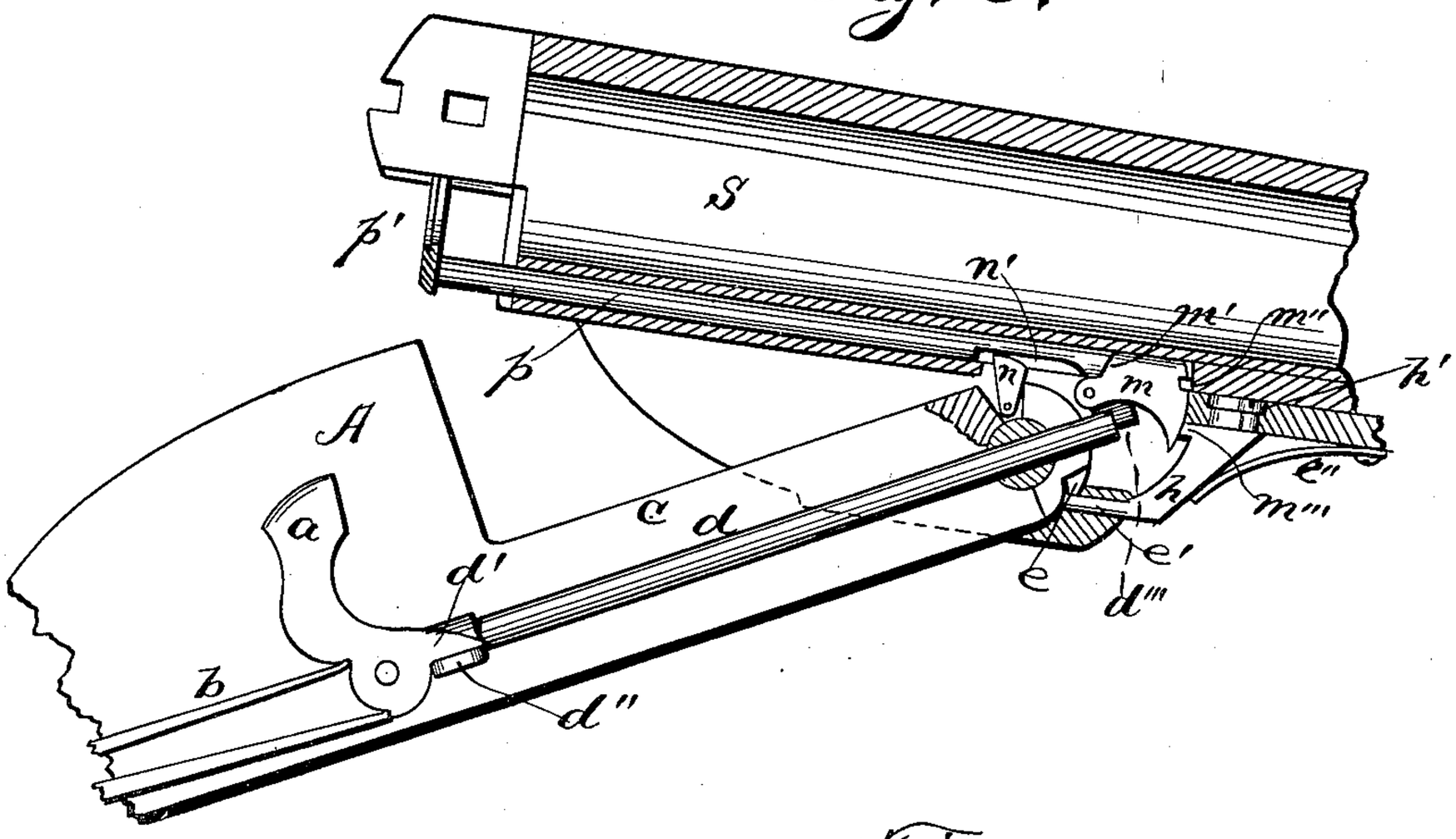


Fig. 4.

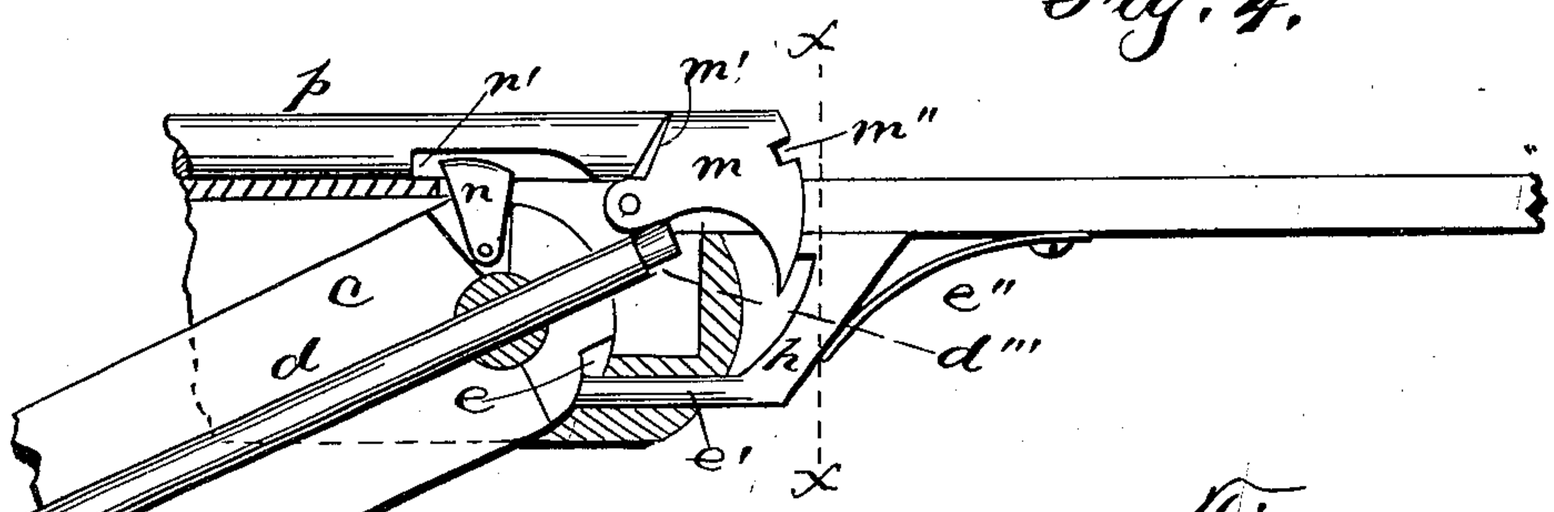


Fig. 6.

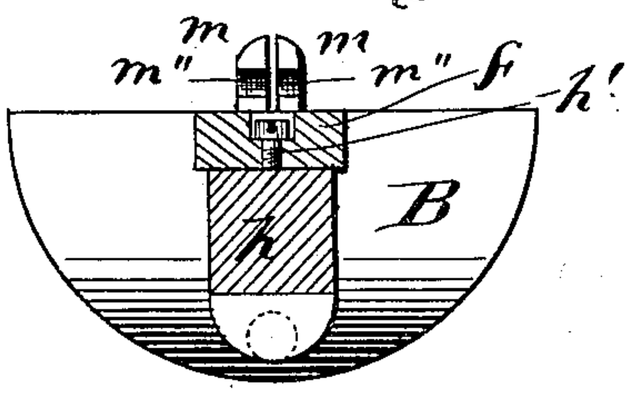
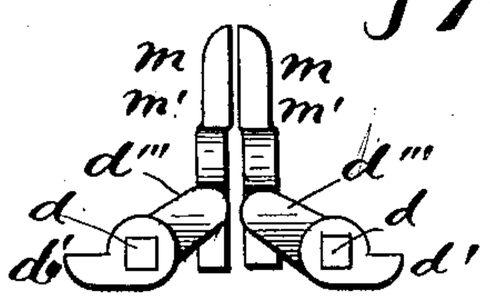


Fig. 7.



WITNESSES:
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UNITED STATES PATENT OFFICE.

FRANK C. STANLEY, OF FULTON, NEW YORK.

EJECTOR MECHANISM FOR BREAKDOWN GUNS.

SPECIFICATION forming part of Letters Patent No. 510,999, dated December 19, 1893.

Application filed April 6, 1892. Serial No. 428,032. (No model.)

To all whom it may concern:

Be it known that I, FRANK C. STANLEY, of Fulton, in the county of Oswego, in the State of New York, have invented new and useful Improvements in Breech-Loading Firearms, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

My invention relates to spring shell ejectors for breech loading guns, and particularly to that class which is actuated by the main spring.

My object is to produce an ejecting mechanism in which the ejector is actuated by the main spring, the tension on said main spring being produced by the breaking down, or opening of the gun; such tension being transmitted to the ejector hammer, and exerting its force against it, and the ejector after the shell has been started loose, when the hammer is released from its lock by the downward swing of the fore-end.

My invention consists in the several novel features of construction and operation hereinafter described and which are specifically set forth in the claims hereunto annexed. It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1, is a sectional elevation, showing the parts in their natural positions, in the frame and fore-end when the gun is closed. Fig. 2, shows the same parts in their relative positions when the gun is partly open. Fig. 3, shows the gun opened, the extractor thrown out and the shell ejected. Fig. 4, is an enlarged detail of Fig. 3. Fig. 5, is an elevation of the rear end of the barrels. Fig. 6, is a vertical transverse section on line *x x*, in Fig. 4. Fig. 7, is a rear elevation of the extractor hammers and their actuating rock-shafts in engagement therewith.

A—, is part of the stock, with the breech-block secured thereto, and the hammer —*a*— and main spring —*b*— are mounted therein in the usual manner. In the breech-block frame —*c*— the longitudinal rock-shaft —*d*— is mounted, provided on its rear end with the side lip —*d'*— which is adapted to engage with the horn —*d''*— upon the hammer, and upon its front end with a crank —*d'''*—.

B—, is the fore-end provided with a slot —*f*— in its frame-bar —*g*—, and —*h*— is a slide connected to this bar by a screw —*h'*—.

The front of the breech-block frame is cut out, creating the cam recess —*e*—, with which the stud —*e'*— on the slide engages; and —*e''*— is a spring engaging with the front of this slide.

In the rear end of the fore-end, in a slot therefor, I pivot the extractor hammer —*m*— provided with an inclined rear face —*m'*—, a front notch —*m''*— adapted to receive the stud —*m'''*— on the rear face of the slide —*h*—, and having its lower face curved substantially as shown.

In the fore-end, adjacent to its hinge connection to the breech-block frame, I pivot the extractor starter —*n*—, which is adapted to engage with the notch —*n'*—, in the extractor rod —*p*— which carries the extractor head —*p'*—, said rod and head being mounted in and beneath the barrels —*s*— in the usual manner. Forward of this notch —*n'*— the end of the extractor rod is beveled off, substantially as shown, and the face —*m'*— of the extractor hammer engages therewith, as hereinafter described.

There are an extractor hammer and rock-shaft for each side of the gun, or each section of the extractor.

When the gun is closed the parts are in the position shown in Fig. 1. The lip —*d'*— is disengaged from the horn —*d''*— of the firing hammer —*a*—, so that it will not interfere with the operation of the hammer in firing. Then when the gun is opened, or "broken down," as it starts, the cam —*e*— will force the slide —*h*— forward, drawing the stud —*m'''*— out of the notch —*m''*—. At the same time, and so long as the said stud —*m'''*— is engaged with said notch —*m''*—, the downward swing of the fore-end will, through the extractor hammer, exert a force upon the crank, and cause the rock-shaft to rotate raising the lip —*d'*— and through the horn —*d''*— of the hammer —*a*— will produce a torsion upon the main spring —*b*—. At the same time the starter —*n*— will start the extractor —*p*—, and the shell, rearward and push it away from the face —*m'*— of the hammer —*m*— as shown in Fig. 2. Then when the stud —*m'''*— and notch —*m''*— are disengaged,

the extractor hammer is released and the main spring exerting its force, rotates the shaft —*d*— the other way, and through the crank will throw the hammer so that it will strike a sharp blow upon the front end of the extractor rod, and drive it back into the position shown in Fig. 3, and the shell is thereby forcibly ejected from the barrel.

When the gun is closed, the upward swing of the fore-end and resulting pressure of the extractor head upon the face of the breech-block, will force the extractor hammer over forward and downward until the notch —*m''*— is opposite the stud —*m'''*—, when the spring —*e''*— will force the slide back and bring the stud into the notch again, and thus lock the extractor hammer, and bring all of the parts into the position shown in Fig. 1.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with the extractor, of a starter pivoted in the fore-end, of lugs on barrels and engaging with the extractor rod, a hammer pivoted in the fore-end, a main-spring, a crank shaft engaging with the extractor and firing hammers, and means to hold said extractor hammer and then release it, as set forth.

2. The combination with an extractor, of an extractor hammer adapted to engage with it, a crank-shaft engaging at one end directly with said hammer, and at the other end with the main-spring, and the main-spring.

3. The combination with an extractor, of an extractor hammer adapted to engage therewith, a slide engaging with said hammer and with the front end of the frame to release said hammer when the gun is broken down, a crank shaft in direct engagement with the hammer, and engaging with the main-spring, to actuate the extractor hammer, and an auxiliary spring engaging with said slide.

4. In a breech-loading gun, an extractor, an extractor hammer pivoted in the fore-end, a slide mounted in the fore-end and engaging with said hammer to lock it, a sear spring in the fore-end engaging with said slide, a crank-shaft in direct engagement with said hammer, a main spring compressed by the crank-shaft, and actuating the extractor hammer when released by the breaking down of the gun, and a starter engaging with the extractor rod to partially eject the shell, in combination.

In witness whereof I have hereunto set my hand this 1st day of April, 1892.

FRANK C. STANLEY.

In presence of—
HOWARD P. DENISON,
C. W. SMITH.