

W. C. DAVENPORT.
BREAKDOWN GUN.
APPLICATION FILED DEC. 1, 1911.

1,040,644.

Patented Oct. 8, 1912.

Fig. 1.

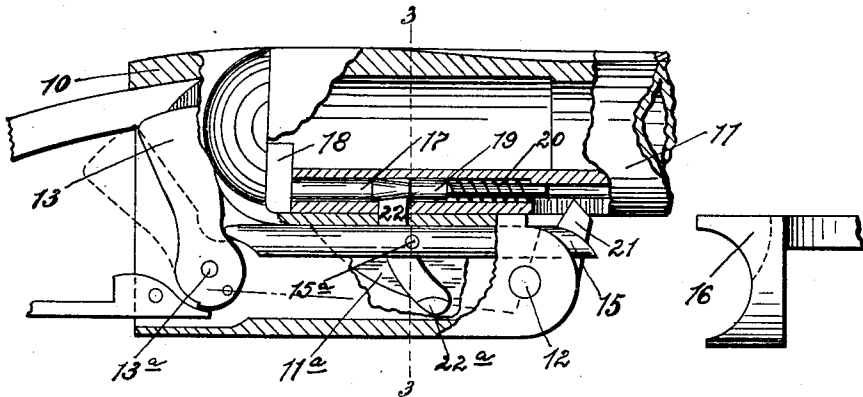


Fig. 2.

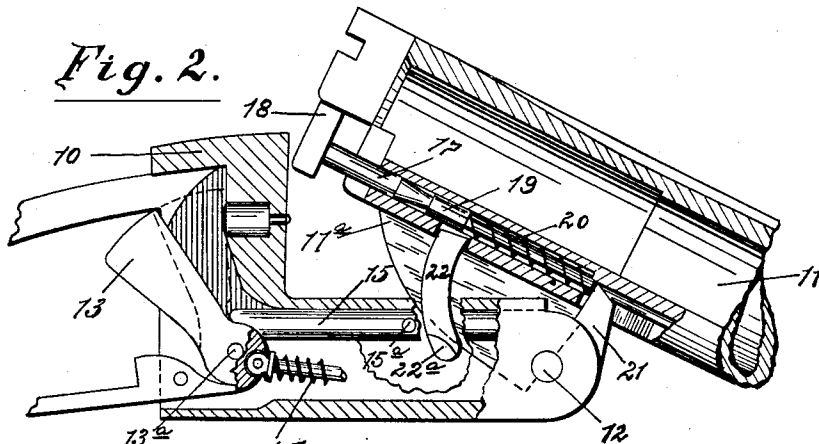


Fig. 3.

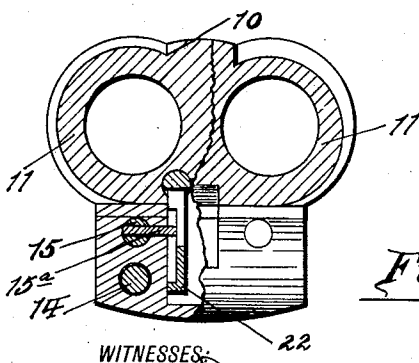


Fig. 4.

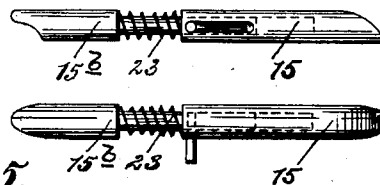
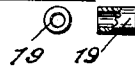


Fig. 5.



WITNESSES:
John B. Wilcox

Oliver P. Grunert

INVENTOR

Walton C. Davenport,

Frank H. Allen
BY
ATTORNEY,

UNITED STATES PATENT OFFICE.

WALTON C. DAVENPORT, OF NORWICH, CONNECTICUT.

BREAKDOWN GUN.

1,040,644.

Specification of Letters Patent.

Patented Oct. 8, 1912.

Application filed December 1, 1911. Serial No. 663,328.

To all whom it may concern:

Be it known that I, WALTON C. DAVENPORT, a citizen of the United States, residing at Norwich, in the county of New London, in the State of Connecticut, have invented certain new and useful Improvements in Breakdown Guns, of which the following is a specification.

This invention has for its object the provision of reasonably simple and serviceable means for controlling the operation of the ejector, which latter is of the type in which provision is made for, first, starting the spent cartridge shells positively and, then, forcibly ejecting said shells from the barrels.

My said invention is applicable to either so called "hammerless" guns or to those having outside hammers adapted to be cocked by hand, and said invention is clearly illustrated in the accompanying drawings, in which—

Figures 1 and 2 are side elevations (partly in section) of portions of the jointed barrels and frame of a hammerless arm embodying my present improvement and Fig. 3 is mainly a transverse sectional view taken on the line 3—3 of said Fig. 1. In Fig. 4 I have shown, detached, a modified form of the cocking rod which is specially designed for use with guns of the outside hammer type. Fig. 5 shows detached end and side views of the collar 19.

Referring to these drawings the numeral 10 indicates the frame of a breakdown gun and 11 the barrels, the latter being hinged to the frame at 12 in the customary manner.

13 denotes the right hand hammer and 14 the coöperating mainspring, which is of the spiral type.

15 indicates a longitudinally-movable cocking rod whose rear end abuts the hammer at a point above the hammer stud 13^a and whose front end extends somewhat beyond the frame, when the hammer is down, as seen in Fig. 1 of the drawings; said front end being beveled and adapted to be forced rearward by the metal fore-end 16, when the barrels are broken down (see Fig. 2).

The barrel lug 11^a is drilled to receive a rod 17 whose rear end carries the extractor 18 and whose front end portion is reduced in diameter to receive a loose collar 19 and a spiral spring 20 which abuts the said collar and operates to force the collar and the

extractor rod rearward when the barrels are swung to their open position.

I have already stated that, my cartridge ejecting mechanism is of the type that, first, starts the spent shell positively and then shoots the said shell forcibly from the barrel. In order to attain these desirable results I make the reduced, front end, portion of the ejector rod 17 long enough so it will extend slightly beyond the barrel lug and so that it will be engaged by a fixed horn 21 on the frame, when the barrel begins to break down, and will thereby be forced rearward, positively a distance sufficient to start the shell an eighth of an inch or thereabout. Meanwhile the collar 19 is held against endwise movement by means of a latch 22 which has a limited vertical sliding movement in dovetail ways in the barrel lug. During the described starting of the ejector rod, said rod slides within the said collar and the collar holds the spring 20 in its compressed, and strained, position but when the barrels have nearly reached their open position, an offset 22^a on the latch 22 engages a pin 15^a projecting radially from the cocking rod 15 and the latch is thereby held against further upward movement. The barrel however, continues to swing on the joint pin until the latch is fully withdrawn from engagement with the collar 19, when the spring 20 shoots the collar and ejector rod rearward, thus ejecting the shell from the barrel. When the barrels are again returning to their closed position, the ejector 18 engages the frame and is forced forward in the ordinary manner, and when the barrels are nearly seated in the frame, the lower end of the latch 22 abuts the frame and the said latch is forced upward into the position seen in Fig. 1 and then serves to restrain the spring from moving the ejector rearward until such time as the barrels are broken down again.

It should be noted that when the cocking rod is in its forward position, as seen in Fig. 1, the radial pin 15^a is out of register with the offset 22^a of the latch, also that the said pin and offset are out of register with each other when the cocking rod is in its rearmost position; that is to say, when the hammer is at full cock; thus rendering it easy to disengage the barrels completely from the frame if desired but, during the operation of breaking down the barrels the pin 15^a is

brought, just at the right instant, into the path of the upwardly moving offset 22^a, and the pin and offset remain in coöperative engagement just long enough to release the latch 22 from engagement with the collar 19.

For use with outside hammer guns I make the longitudinally movable rod 15 with a movable rear end portion 15^b and an interposed spring 23, the construction being such that the portion 15^b (which preferably abuts a tumbler on the hammer stud) will yield when the rod is forced rearward during the operation of breaking down the barrels. When, however, the barrels are closed the spring 23 will force the rod 15 forward to its normal position.

My described ejector-operating mechanism is extremely simple, it may be cheaply produced and assembled, and it operates positively.

Having thus described my invention, I claim as new and wish to secure by Letters Patent:

1. In a break-down gun, in combination a spring-actuated ejector rod and means vertically slidable in the barrel lug for normally restraining the same, a longitudinally-movable cocking rod, and means coöperating with said restraining means and operated by said cocking rod for releasing the said restraining means upon the breaking down of the barrels.

2. In a break-down gun, the combination of a spring actuated ejector rod having its front end reduced in diameter, a collar in which said reduced end is received, a spring abutting said collar to force the collar and extractor rod rearward, means engaging said collar for restraining such movement of the ejector rod, and a longitudinally movable cocking rod coöperating with said restraining means.

3. In a break-down gun, the combination of a spring actuated ejector rod having its front end reduced in diameter, a collar in which said reduced end is received, a spring abutting said collar to force the collar and extractor rod rearward, means engaging said collar for restraining such movement of the ejector rod, said restraining means having an offset portion, and a longitudinally

movable cocking rod having a radial projection for coöperation therewith.

4. In a break-down gun, the combination of a spring actuated ejector rod having its front end reduced in diameter, a collar in which said reduced end is received, a spring abutting said collar to force the collar and extractor rod rearward, means engaging said collar for restraining such movement of the ejector rod, said restraining means having an offset portion, and a longitudinally movable cocking rod having a radial projection for coöperation therewith, said restraining means being mounted for vertical sliding movement in ways on the barrel lug.

5. In a break-down gun, the combination of a spring actuated ejector rod having its front end reduced in diameter, a collar in which said reduced end is received, a spring abutting said collar to force the collar and extractor rod rearward, means engaging said collar for restraining such movement of the ejector rod, said restraining means having an offset portion, a longitudinally movable cocking rod having a radial projection for coöperation therewith, the frame, and a fixed horn thereon, said ejector rod projecting forwardly beyond the barrel lug to engage said horn.

6. In a break-down gun, the combination of a spring actuated ejector rod having its front end reduced in diameter, a collar in which said reduced end is received, a spring abutting said collar to force the collar and extractor rod rearward, means engaging said collar for restraining such movement of the ejector rod, said restraining means having an offset portion, a longitudinally movable cocking rod having a radial projection for coöperation therewith, the frame, and a fixed horn thereon, said ejector rod projecting forwardly beyond the barrel lug to engage said horn, said cocking rod extended at the front end beyond the frame for contact with the fore-end when the barrels are broken down.

WALTON C. DAVENPORT.

Witnesses:

FRANK H. ALLEN,
FRANK C. PALMER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."