

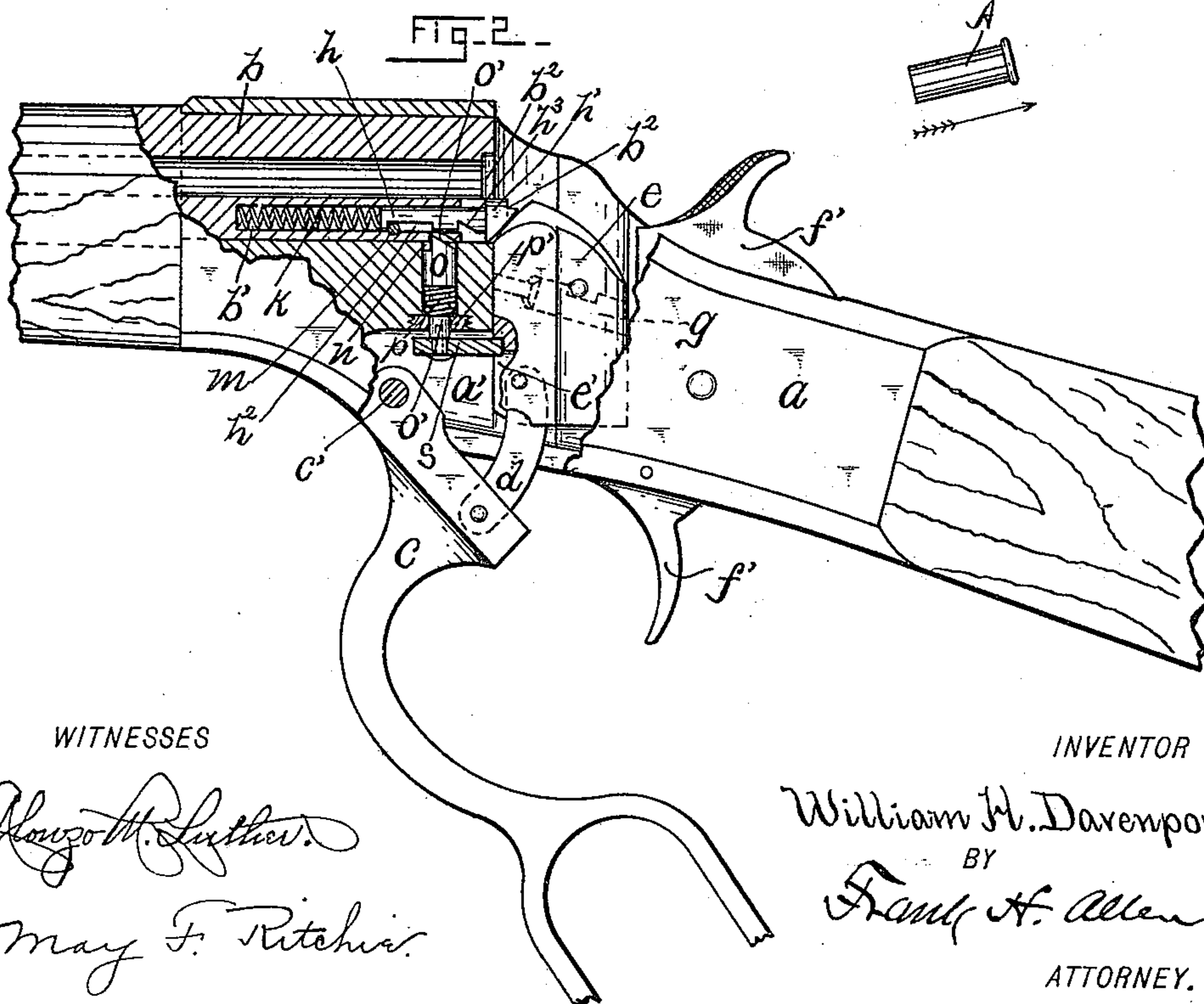
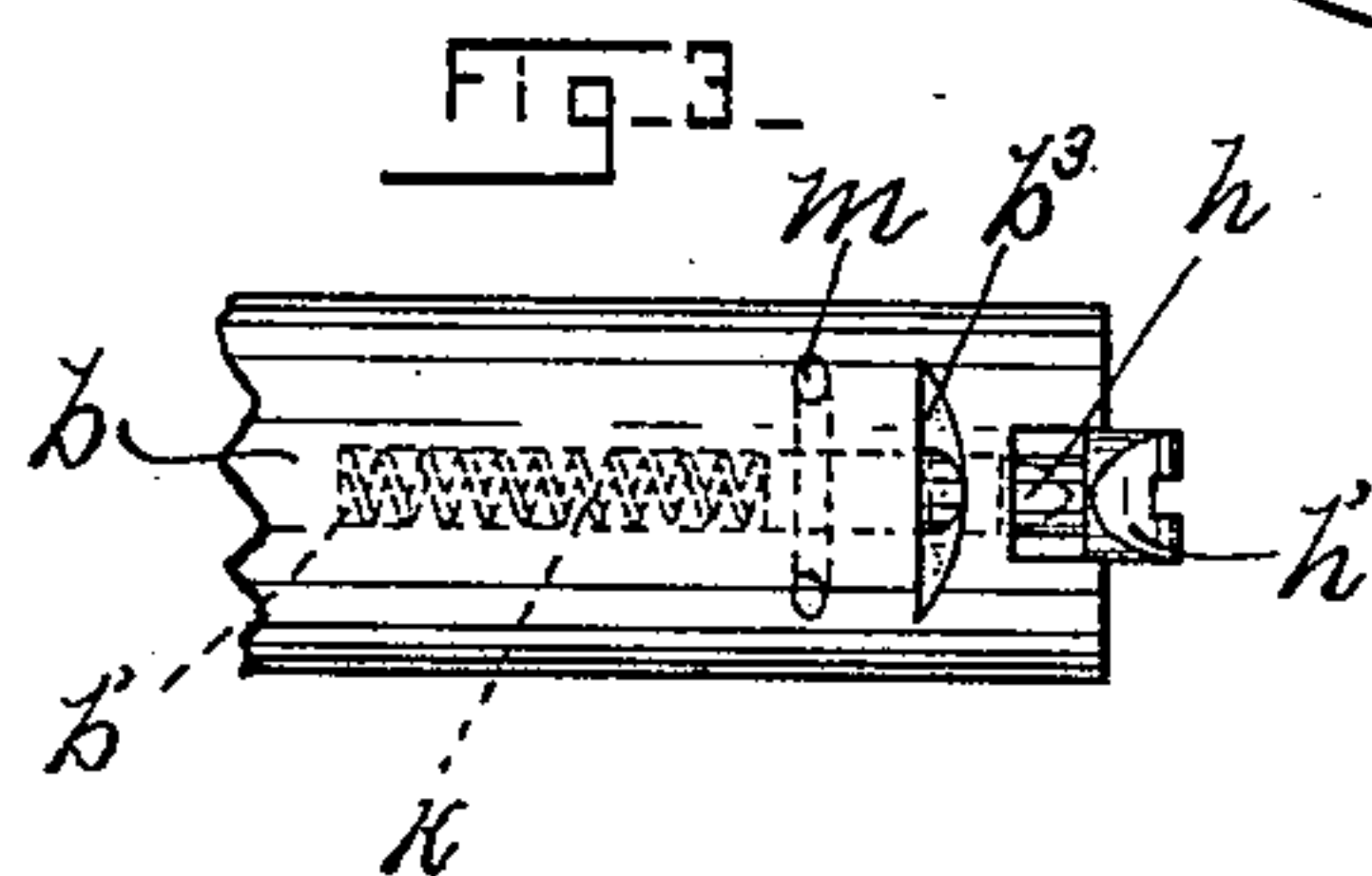
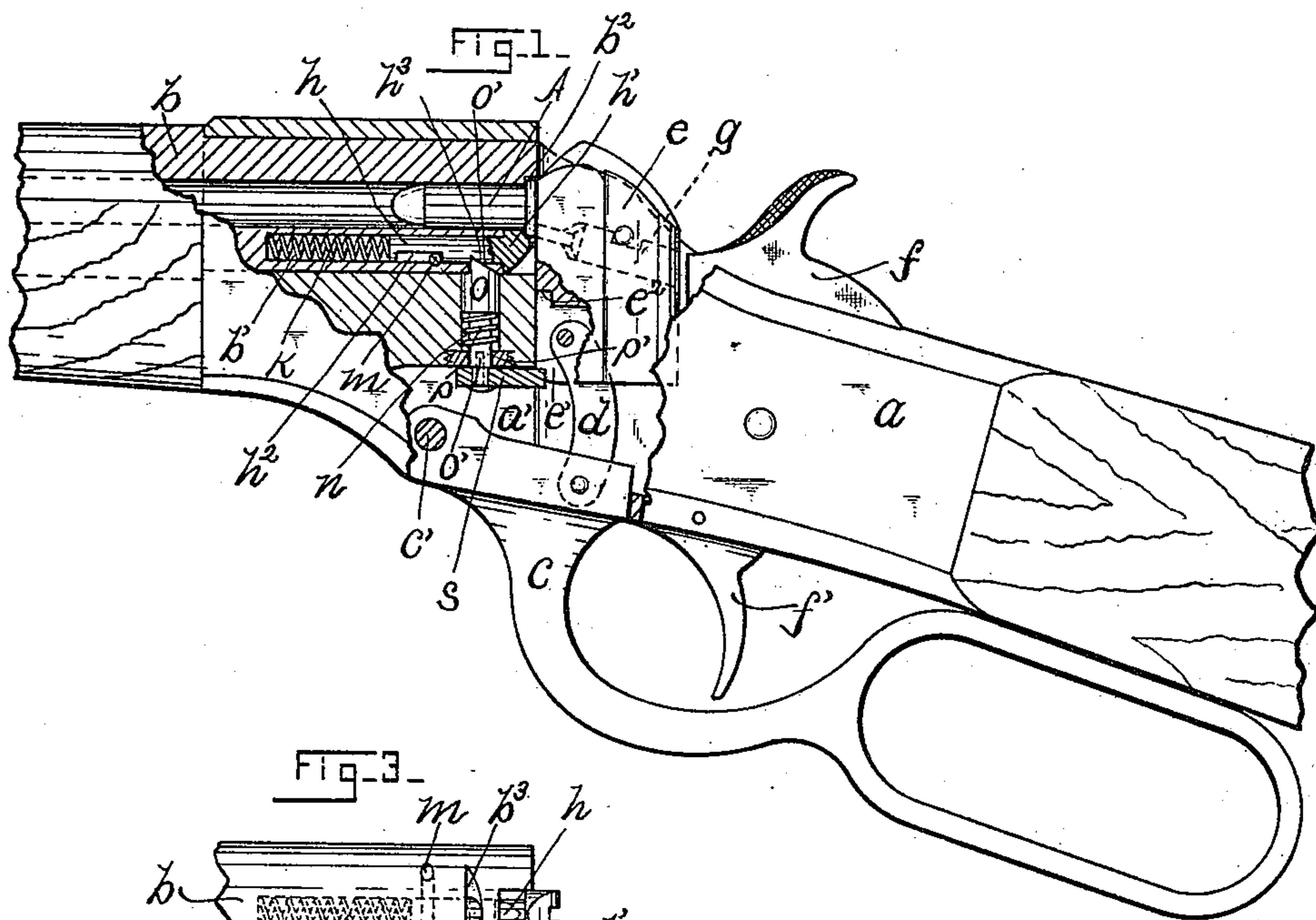
No. 624,187.

Patented May 2, 1899.

W. H. DAVENPORT.
FIREARM.

(Application filed Dec. 30, 1898.)

(No Model.)



WITNESSES

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WILLIAM H. DAVENPORT, OF NORWICH, CONNECTICUT.

FIREARM.

SPECIFICATION forming part of Letters Patent No. 624,187, dated May 2, 1899.

Application filed December 30, 1898. Serial No. 700,745. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DAVENPORT, a citizen of the United States, residing at Norwich, in the county of New London, State of Connecticut, have invented certain new and useful Improvements in Firearms, of which the following is a full, clear, and exact description.

This invention is in firearms, and relates particularly to the extractor mechanism thereof, my purpose being to provide simple and automatically-acting mechanism applicable particularly to rifles having a vertically-movable breech-block.

The essential feature of my invention consists in certain locking and releasing mechanism for the so-called "extractor-rod," which locking mechanism when the breech-block is slid downward to a point below the bore of the barrel is released and said ejector-rod then shoots rearward and discharges the shell from the arm with considerable force. The return or upward movement of the breech-block (caused by the upward rocking of the guard-lever) causes the several elements just referred to to return automatically to their normal positions.

To assist in explaining my invention, I have provided the accompanying sheet of drawings, which serves to illustrate the same and portions of the arm immediately related thereto, as follows:

Figure 1 shows, partly in elevation and partly in section, a portion of an arm fitted up with my newly-invented improvements. Fig. 2 is a view similar to Fig. 1, illustrating the operation of my said invention. Fig. 3 is an under side view of the breech end portion of the barrel of the arm shown in Figs. 1 and 2.

Referring to the drawings, the letter *a* denotes the frame of the arm, and *b* the barrel, said frame and barrel being assembled in the usual manner.

Letter *c* denotes the guard-lever, hung on the pin *c'*, located in frame *a* and connected by a link *d* with the breech-block *e*, which latter is caused to travel with a vertically-reciprocating motion in the frame *e* upon the rocking of the guard-lever *c*.

Letters *f* and *f'* denote, respectively, the hammer and trigger of the arm, and *g* the firing-pin thereof, located in the breech-block

e, the said several elements just referred to being assembled and operating in the usual manner.

The ejector-rod of the arm is denoted by the reference-letter *h* and is located in a chamber *b'*, provided in the breech end of the barrel *b* beneath and parallel with the bore thereof. The head *h'* of the rod *h* forms, when the said rod is in its inner position, a portion of the end of the barrel and is adapted to engage the rim of the cartridge-shell *A*, the said rim being received in a circular recess *b²*, formed by counterboring the said barrel end and the rod-head *h'*, seated therein.

The reference-letter *k* denotes a spring located in the chamber *b'* between the inner end wall of said chamber and the adjacent end of the rod *h*, which spring serves under proper conditions to force outward the rod *h*, the latter carrying with it and ejecting from the rifle the cartridge-shell, if there be a shell in the barrel.

To limit the travel of the rod *h* and to prevent the same from being forced entirely from the chamber *b'* by spring *k*, a pin *m* is provided, crossing at right angles the chamber *b'* and a notch *h²* of the rod *h*, said pin being adapted to engage the end walls of the notch to limit the travel of rod *h* in either direction.

Somewhat in advance of the breech-block *e* the frame *a* is provided with a vertically-extending hole *n*, connecting the frame-opening in which the barrel *b* is located and the open space *a'*, adjacent to the hinge-pin *c'* of the lever *c*. Located in the hole *n* is a bolt *o*, having a shouldered-down portion *o'* to receive a spring *p*, whose opposite ends abut, respectively, the main portion of the bolt *o* and a nut *p'*, screwed into the frame *a* and serving to close the lower end of the hole *n*. Said nut also provides a substantial bearing for the shouldered-down portion of the bolt *o*, which latter projects therethrough and bears on its lower end an arm *s*, that extends toward the breech-block *e* and enters an opening *e'* therein, within which opening the upper end of the link *d* is pivoted. The upper end of bolt *o* is beveled, as at *o'*, and to receive said beveled end a notch *b³* is provided in the under side of barrel *b*, registering with the said upper end of the bolt. Located in the ejector-rod *h*, adjacent to the head *h'* thereof, is a

notch h^3 , that registers with and receives the upper end of bolt o when the the said rod h is in its inner position. Bolt o is held normally in the said upward position by the spring p .

5 It will be seen by reference to Fig. 1 of the drawings that when the various elements are in the positions just described should lever c be manipulated to cause the block e to travel downward until clear of the ex-
 10 tractor-head h' the extractor-rod h would still be retained in its inner position by the bolt o , whose upper end engages the notch h^3 in the said rod h , were it not for the arm s , which just before block e reaches the point just men-
 15 tioned is engaged by the upper wall e^2 of the opening e' in the block e , after which further downward movement of said block carries with it the bolt o to withdraw its upper end from the notch h^3 of the rod h at the time the
 20 block e , which has been engaging the head h' of the rod h , passes from contact therewith. Spring k is now free to expand and force outward the rod h , the latter carrying with it the cartridge-shell A , which is ejected with such
 25 force as to throw it entirely clear from the arm. The lever c has now been rocked to its lowest position, and upon its return to its normal position the block is correspondingly carried upward, the beveled face e^4 thereof en-
 30 engaging the rod h and forcing it into its former normal or closed position. During the last-mentioned inward travel of extractor-

rod h the said rod engages and rides upon the upper end of bolt o until its notch h^3 registers with the said upper end, when the bolt 35
 o is forced thereinto by the spring p , and the locking of rod h is again effected.

My described invention improves materially the ejector mechanism without complicating the same, and firearms may be fitted 40
 up therewith at a very small cost.

Having thus described my invention, I claim—

1. In combination, in an arm, a barrel, a frame, a sliding breech-block as set forth, a 45
 spring-pressed ejector and mechanism for retaining said ejector in its normal, closed position; said retaining mechanism being adapted to be engaged by the breech-block on the downward movement of the latter, substan- 50
 tially as and for the purpose specified.

2. In an arm of the class referred to, in combination, a barrel, a spring-pressed ejector having a notch h^3 as set forth, a bolt adapted to engage said notch, and a sliding breech- 55
 block adapted to engage said bolt, substantially as specified.

Signed at Norwich, Connecticut, this 17th day of December, 1898.

WILLIAM H. DAVENPORT.

Witnesses:

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 FRANK H. ALLEN.