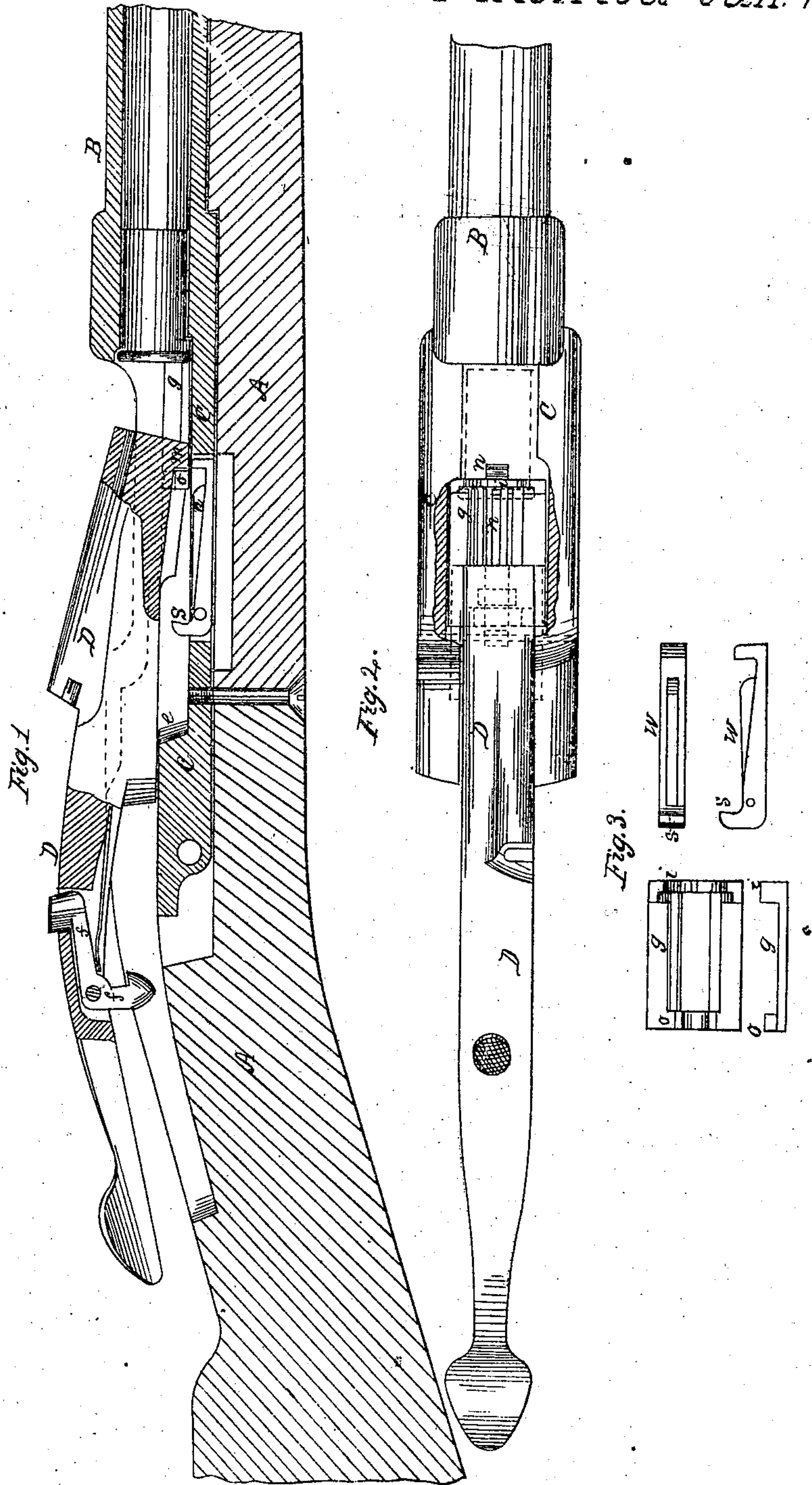


H. Lord.

Cartridge-Extractor.

N^o 73351

Patented Jan. 14, 1868.



Witnesses
Charles Spear
A. Smith

Inventor.
H. Lord
My atty J. H. [unclear]

United States Patent Office.

HORACE LORD, OF HARTFORD, CONNECTICUT.

Letters Patent No. 73,351, dated January 14, 1868.

IMPROVEMENT IN CARTRIDGE-EXTRACTOR.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HORACE LORD, of Hartford, of Hartford county, in the State of Connecticut, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this application.

Previous to my invention a great variety of devices have been suggested and applied to that class of breech-loading fire-arms in which the metallic cartridge is employed to effect the extraction of the empty cartridge-case from the chamber of the arm; and some of these cartridge-extractors have been made so as not only to withdraw the empty case from the chamber of the arm, but also to throw it (by a spring) entirely out of or away from the fire-arm.

My invention relates to a new and useful improvement in that class of extractors which are designed to withdraw the empty case from the chamber of the arm and throw it out, and has for its objects great simplicity, economy of construction, durability, and certainty of action; and to these ends my invention consists in the employment of a lifting-bar or lever, or other equivalent device, such as hereinafter described, so constructed and arranged as to strike the empty cartridge-case from below by a positive and sudden movement after the said case has been withdrawn or pulled out of the chamber of the gun, whereby the said empty case is with certainty thrown entirely clear of or away from the fire-arm.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation more fully, referring by letters to the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section of a breech-loading fire-arm embracing my invention.

Figure 2 is a top view of the same, and

Figure 3 shows in detail the devices of the extractor.

In figs. 1 and 2, I have illustrated the gun as it would appear during the operation of the extractor, that is, with the breech-piece partially drawn back. I have shown my invention as applied to a certain kind of breech-loading gun and cartridge-extractor, known as the Root-gun, and which is the subject-matter of another application for Letters Patent.

In the several figures the same parts of the gun are designated by the same letter of reference.

A represents the stock, B (portion of) the barrel, C the frame, and D the sliding breech-piece of the gun. The breech-piece D has a motion, first, upward (at its rear end) to release it from its recoil bearing at *e*, and then backward to admit of the withdrawal of the empty case and the insertion of a fresh cartridge, (as clearly illustrated,) and is locked in position, when closed, by a spring-catch, *f*. *g* is the device for pulling out or withdrawing from the chamber of the gun the empty cartridge-case. This extractor *g* is a sort of sliding-shoe which is arranged to slide in a seat cut or formed in the frame, as clearly shown, and is made with a flanch or rim, *i*, at its forward end, back of which rests the flanch of the cartridge-case, and which (rim) takes hold of the flanch of the cartridge-case to pull it back and out of the chamber of the gun. This extractor *g* is free to move longitudinally in its seat, and is moved forward by the flanch of the cartridge pressing on its rim *i* (as the cartridge is forced into the chamber of the gun by the forward stroke of the breech-block or piece D) and backward by the shoulder *m* of the breech-block striking the projection *o* as said breech is drawn backward.

The construction of the parts so far alluded to will be clearly seen from the drawing, and as they form no part of my invention and are fully described in the specification for Letters Patent by E. K. Root, I need not explain them any further here.

w is a lever, or what I have given the appellation of "flipper" to, which is formed as shown in the drawing, and is arranged in a cavity or depression in the frame, as clearly shown, so as to rest below the level or plane of motion of the extractor *g*, which passes back and forth over said flipper, and which has a slot cut through it longitudinally to allow said flipper to vibrate up through it, as will be presently explained. The flipper *w* may be either simply placed loosely in its seat, or it may be pivoted near its rear end, so that when the shoulder *o* of the piece *g*, in passing backward, strikes the said flipper at *s*, its front end will be thrown upward and through the slotted extractor *g*.

The operation of all the parts together may be thus briefly explained: Supposing the breech-piece to be

drawn clear back, the cartridge is dropped or placed in the cavity in the frame, (or receptacle,) back of the charge-chamber, or rear end of the barrel, and with its flanch in the rear of the rim *i* of the sliding-shoe *g*. The breech-piece is now forced forward, carrying or driving the cartridge before it, and the sliding-shoe *g* being carried forward by the flanch of the cartridge, the said shoe and the cartridge are forced into the position requisite for the discharge of the cartridge in the chamber of the barrel, when the breech is locked in position, and the cartridge may be exploded in the usual manner. When it is desired to remove the empty case of the metallic cartridge, the breech-piece *D* is drawn back suddenly, whereupon, when the projection *m* comes in contact with the shoulder *o* of the sliding-shoe or extractor *g*, the latter is caused to withdraw the empty shell from the chamber of the gun until the front end of said empty shell is about clear of the back end of the charge-chamber, and the said shoe *g* has nearly completed its stroke, when the shoulder *o* strikes the rear end *s* of the flipper *w*, and moving or vibrating the forward end of said flipper upward against the cartridge-case, causes the latter to be suddenly and effectually thrown or flipped out of the gun. It will be understood that since the breech-piece, in its backward stroke, comes suddenly against the swinging or lifting-lever or bar *w*, the latter is struck a blow which must throw its forward end upward with a positive and quick motion, thereby insuring the certain, complete removal or discharge of the empty shell from the gun.

I have shown the flipper in connection with that kind of breech-piece and extracting or withdrawing-device with which I have successfully used it in a working gun, but it will be understood, of course, that my invention, which rests in the idea of the flipper or hammer for striking the empty case after it has been withdrawn from the barrel or charge-chamber, and thereby knocking it clear out of the gun, may be applied in a variety of forms, and in connection with any device or means of drawing out the empty case, and so placing it in the gun that it can be flipped or thrown out, as described.

It will be understood that my invention is not limited in its application to any particular device for drawing out the empty case, and relates particularly to the discharging or throwing out of the gun of the empty case after it has been extricated from the chamber in which the cartridge was exploded, though I may find it practicable and expedient to so construct and arrange the flipper as to make it perform, in addition to the function of knocking out the empty case, the office of withdrawing the empty case from the charge-chamber of the gun.

Having explained my invention so that one skilled in the art can make and use a breech-loading gun involving my improvement, what I claim as new, and desire to secure by Letters Patent, is—

Discharging or throwing out the empty cartridge (after it has been extricated from the charge-chamber) by means of a vibratory or lifting-lever or hammer arranged to strike the case, substantially as described.

In testimony whereof, I have hereunto set my hand and seal, this day of , 1867.

HORACE LORD. [L. s.]

Witnesses:

C. B. RICHARDS,
LEWIS SHELDON.