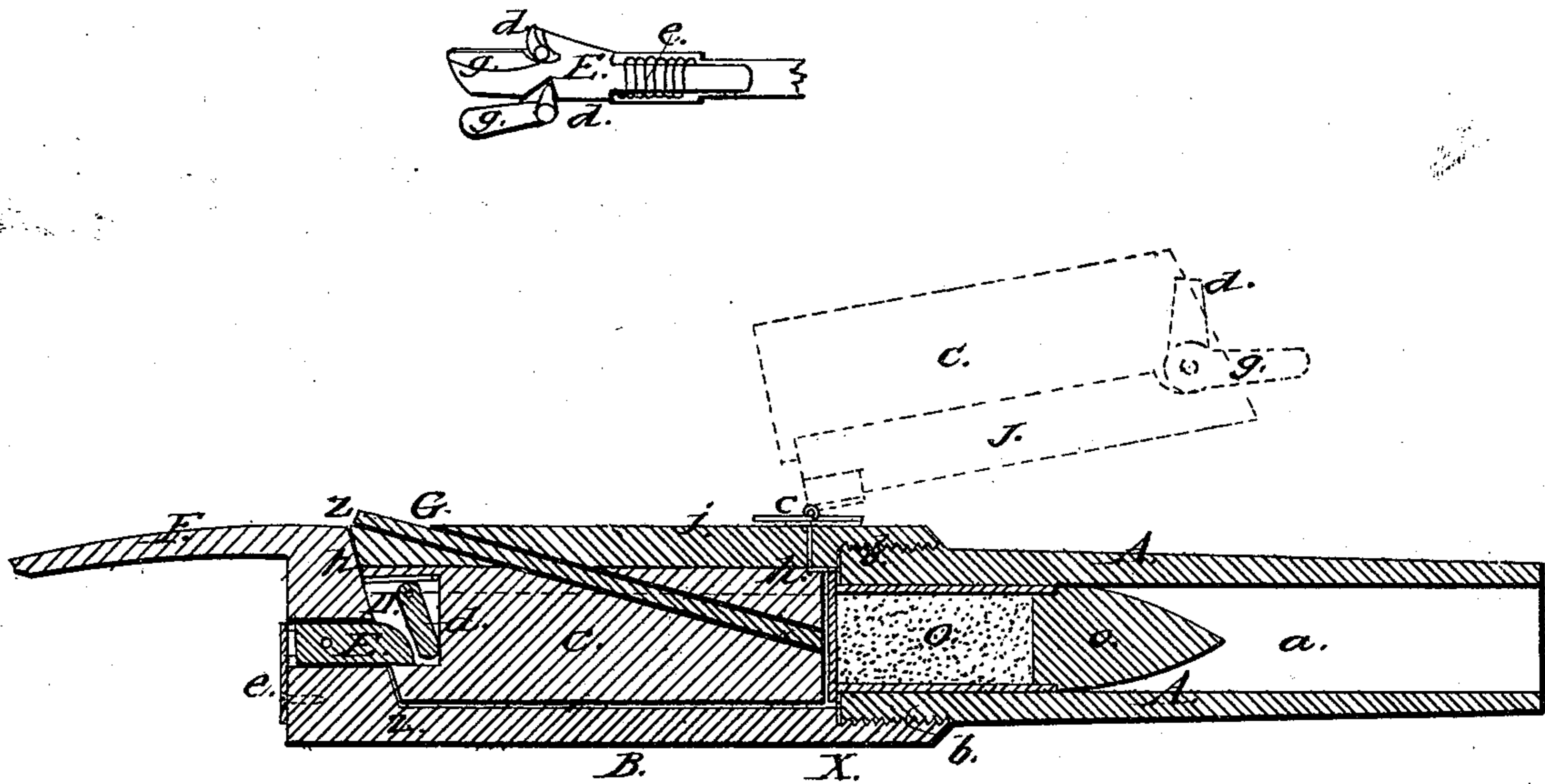


A. B. ELY & E. C. CLAY.
BREECH LOADING FIREARM.

No. 105,058.

Patented July 5, 1870.



Witnesses;
S. W. Pool
R. H. D. Phillip.

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United States Patent Office.

ALFRED B. ELY, OF NEWTON, AND EDWARD C. CLAY, OF MALDEN, MASSACHUSETTS; SAID EDWARD C. CLAY ASSIGNOR TO ALFRED B. ELY.

Letters Patent No. 105,058, dated July 5, 1870; antedated January 5, 1870.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

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

Be it known that we, ALFRED B. ELY, of Newton, and EDWARD C. CLAY, of Malden, in the State of Massachusetts, have invented certain new and useful Improvements in Breech-loading Fire-Arms, of which the following, with the accompanying drawings, is a full description.

In 1861 an application was made by one James W. Preston for a patent, which was subsequently granted and issued to A. B. Ely, assignee of said Preston, for improvements in breech-loading fire-arms, in which a solid plug, so called, was inserted in an enlarged cavity of the barrel, at the rear end thereof, said plug being hinged, at its forward end, to the upper side of the barrel, so as to turn over upon the barrel when open, and being locked in place by a bolt inserted in its rear end when closed.

This invention is mainly intended to be applied to the barrel of a fire-arm in connection with a solid plug or solid swinging breech-block.

It is somewhat inconvenient and expensive to remove the breech-pin of a gun-barrel and enlarge the rear part of its cavity, as well as to adapt to the cavity so in and belonging to the barrel, the adjunctive parts necessary for the proper action of a solid plug or movable breech-block.

Besides this, it not unfrequently happens that the rear part of a barrel becomes marred, split, or broken, so that it cannot be used, and the conversion cannot take place.

A principal object of this invention is to obviate these difficulties by cutting off the barrel and preparing and fitting to it what may be called a receiver or housing for containing the enlarged cavity or bore and receiving the solid plug or movable breech-block, with their accessories.

In the sectional drawings—

A represents the barrel of a fire-arm cut off at right angles to its bore *a* at *x*.

B represents the receiver, which may be likened to the rear part of another fire-arm barrel of a larger caliber or bore than that of A, into the forward end of which the rear end of A is screwed, or otherwise secured at B.

In this case the bore of B is as much larger than that of A as the flange of a metallic cartridge is larger than its body.

The upper part of the receiver-barrel is cut off on the lines *z h h' c*, and to the shell *j* thus formed is fitted a solid plug, C, of the size of the cavity of the receiver, and the whole is hinged, at its forward end, to the upper side of the barrel at *c*, the plug, when thrown up and over, being represented by red lines.

The receiver may be made, in the first instance, open at the top, for the reception of the plug, and the plug C, with its cap *j*, may be made in one piece.

The recoil-plate or front part of the rear end of the receiver and the rear end of the plug are slanted, as at *z z*.

F represents the tang, and

G, a firing-pin or vent passing through the plug.

In the rear end of the block C is a cavity or bolt-hole, D, for receiving a locking-bolt, E, which passes through the breech or recoil-plate of the receiver, and is pressed forward into the bolt-hole D by a spring, *e*.

d is a small arm of a lever, hanging in front of the bolt E, in the bolt-hole D, upon and attached to a rod, which passes through it to the outside of the block, and to which is attached the other arm of the lever or thumb-piece *g*.

When the plug or block is down and the cavity of the receiver closed, the bolt E enters the bolt-hole D and locks the plug in place.

When the arm or thumb-piece *g* is turned or pressed upward, the arm *d* turns also, and presses back the bolt E, and disengages it from the plug, while the continuous pressure of the thumb against *g* throws the plug up and over and opens the cavity of the receiver.

This being done, the cartridge O o is inserted and the block shut down and bolted, the front end of the plug pressing against the rear end of the cartridge.

The method of locking is similar to that of Preston, but the method of unlocking is different.

Instead of the locking-bolt being contained in and passing through the recoil-plate and locking into a recess in the plug, the recess may be in the recoil-plate, and the locking-bolt be contained in the breech-plug, the same being fitted with a spring to throw it backward, and a lever with a thumb-piece to throw it forward out of the notch and to throw up the breech-plug, (see the smaller figure of drawings.)

Such ejecting devices may be applied for ejecting the empty cartridge-case as are in familiar use.

Having thus described our invention,

What we claim, and desire to secure by Letters Patent, is—

1. The receiver, constructed and arranged substantially in the manner described, in combination with the solid plug or breech-block arranged and operating within the receiver, substantially as set forth.

2. The combination above claimed, in connection with the barrel of a gun, substantially as described.

3. The plug C, spring-bolt E, and lever *d g*, in combination, when constructed and arranged substantially as and for the purposes described.

In testimony whereof we have hereunto subscribed our names.

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