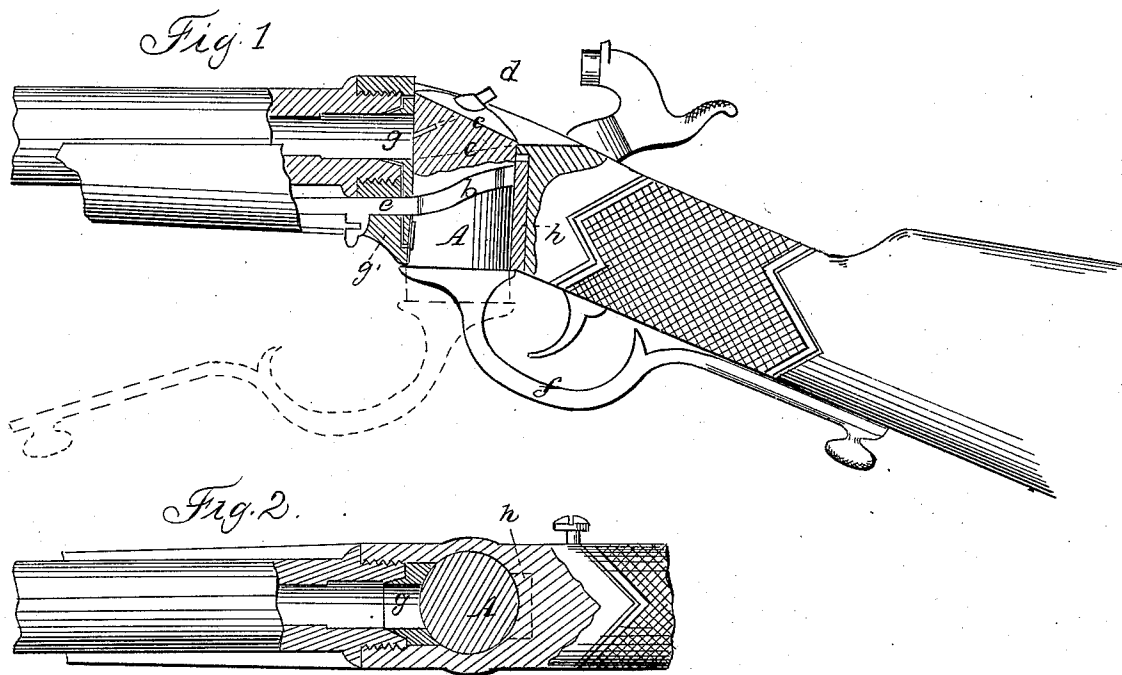


G. W. WHITE.

Breech-Loading Fire-Arm.

No. 34,325.

Patented Feb. 4, 1862.



Geo W White
by his attorney
J. P. Fulton
Witnesses
J. H. Maynard,
A. F. Britton

UNITED STATES PATENT OFFICE.

GEORGE W. WHITE, OF NEW YORK, N. Y.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 34,325, dated February 4, 1862.

To all whom it may concern:

Be it known that I, GEORGE W. WHITE, of the city, county, and State of New York, have invented certain new and useful Improvements in Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being made to the annexed drawings, making a part of this specification, in which—

Figure I is a side elevation, partly in section. Fig. II is a top or plan view, also partly in section.

Similar letters indicate similar parts throughout the figures.

My improvement in fire-arms has reference to that class which are breech-loading; and it consists in the employment of a revolving plug, whereby the opening and closing of the breech and the shearing off of the end of the cartridge are accomplished by a semi-revolution performed twice, or by a whole revolution once performed of said plug. The breech-plug is a cylinder of larger diameter than the bore of the gun. It is fitted in a socket formed in the stock, and immediately in the rear of the barrel, as represented at A. There is a cam-groove, *b*, cut completely around the plug, which has a slant or inclination at such angle as is necessary to give the plug such a length of movement as to withdraw its top below the opening leading to the barrel. The top of the plug is hollowed across the surface in an inclined direction. The upper part of the plug is shown in section, and at *c* is shown the direction of the bevel at the bottom of the hollow. The circumference of the plug at the top is thus formed into a sharp edge, which acts against the sharp edge of the rear opening of the barrel, and thus forms a shear by its combined revolving and sliding movement.

At *d* is the nipple, from which there is a touchhole, leading to the charge, as shown.

At *e* is a fixed pin or stud entering the cam-groove *b*, and at *f* is a handle attached to A, by which the plug is made to revolve. The Fig. I shows the breech-plug as elevated, and the rear of the barrel closed. By turning this handle to the position shown in dotted lines the plug will be partially revolved, and from the action of the pin *e* in the cam-groove *b* it will also be partially withdrawn from the socket, bringing the slant or lowest part of the bevel of the plug, as at *c'*, opposite to the lower rear end of the bore of the barrel, and below it, as indicated by the dotted line, when

the charge may then be inserted. As the handle or arm *f* is returned to its place, the plug will, while revolving, also rise and bring its shear edge to cut sharply across the end of the barrel, (which is hollowed out to correspond with the plug-socket and conform to its shape, as shown in Fig. 2). The end of the cartridge is thus cut off and the powder exposed to the fire.

At *g* a flanged piece or gland is intended to form a self-adjusting shear-plate and gas-joint. The end of the barrel is bored out to form a socket to receive this gland. The forward end of the gland bevels off to a fine edge, as shown. The back end terminates in a flange, which comes out flush with the curved end of the barrel all around. On the lower side this flange is prolonged, so as to terminate near the bottom of the socket, as at *g'*. This piece *g* has a slight play in the socket formed in the barrel, so that at each explosion of a charge it is driven back hard against the plug, and the flange portion is that which forms the other half of the shear, in connection with the sharp upper end of the plug. When, therefore, this wears away, it is easy to replace the part by a new gland. In order to be made gas-tight, the thin inner edge expands under fire, and thus closes up against the socket and makes a tight joint.

The removal of the plug is effected at any time by the withdrawal of the pin *e* from the cam-groove.

Back of the plug is a wedge-formed piece of metal, *h*, which extends upward from the lower side, and, as shown in Fig. 2, is hollowed out on the face next the plug, so as to partially surround it. The use of this piece is to insure a close fit of the plug against the end of the barrel, as the plug or its socket wears by use, and for this it is made as a wedge, and is to have a set-screw, by which it is retained in any desired position. This piece and the gland *g* should properly be made of an anti-corrosive metal or alloy.

I claim—

Opening and closing the rear end of the barrel by means of a plug, which has both a revolving and a sliding motion, substantially in the manner set forth.

In witness whereof I have hereunto subscribed my name.

GEO. W. WHITE.

Witnesses:

J. P. PIRSSON,
S. H. MAYNARD.