

W. RICHARDS.  
Breech-Loading Fire-Arm.

No. 50,432.

Patented Oct. 10. 1865.

Fig:1.

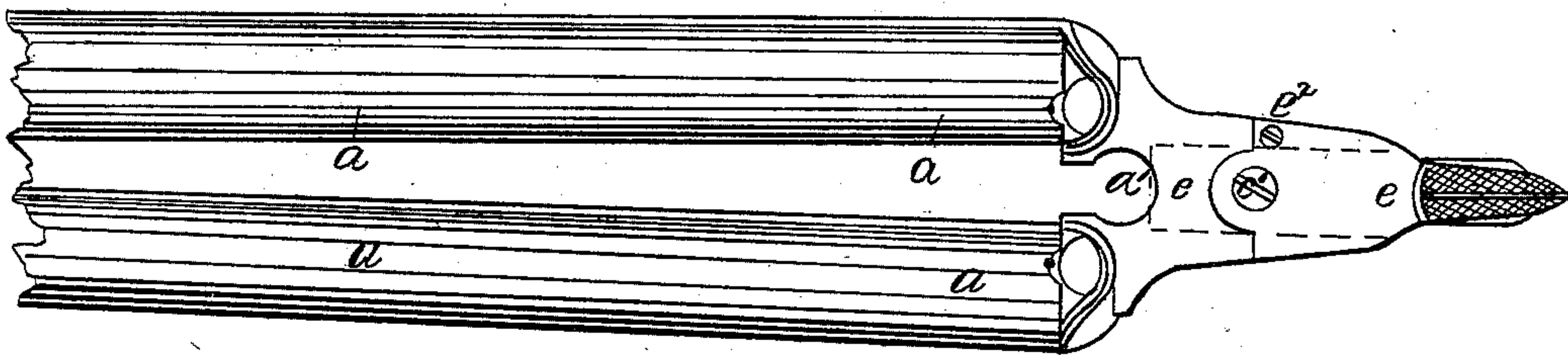


Fig:2.

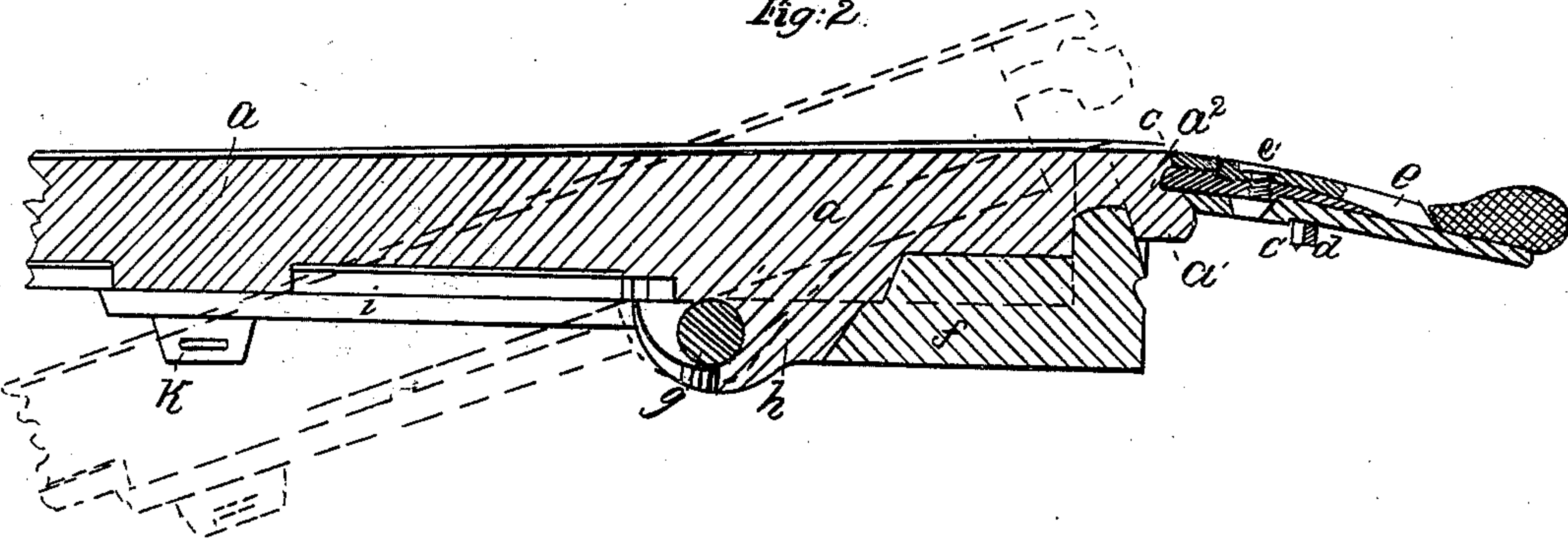


Fig:3.

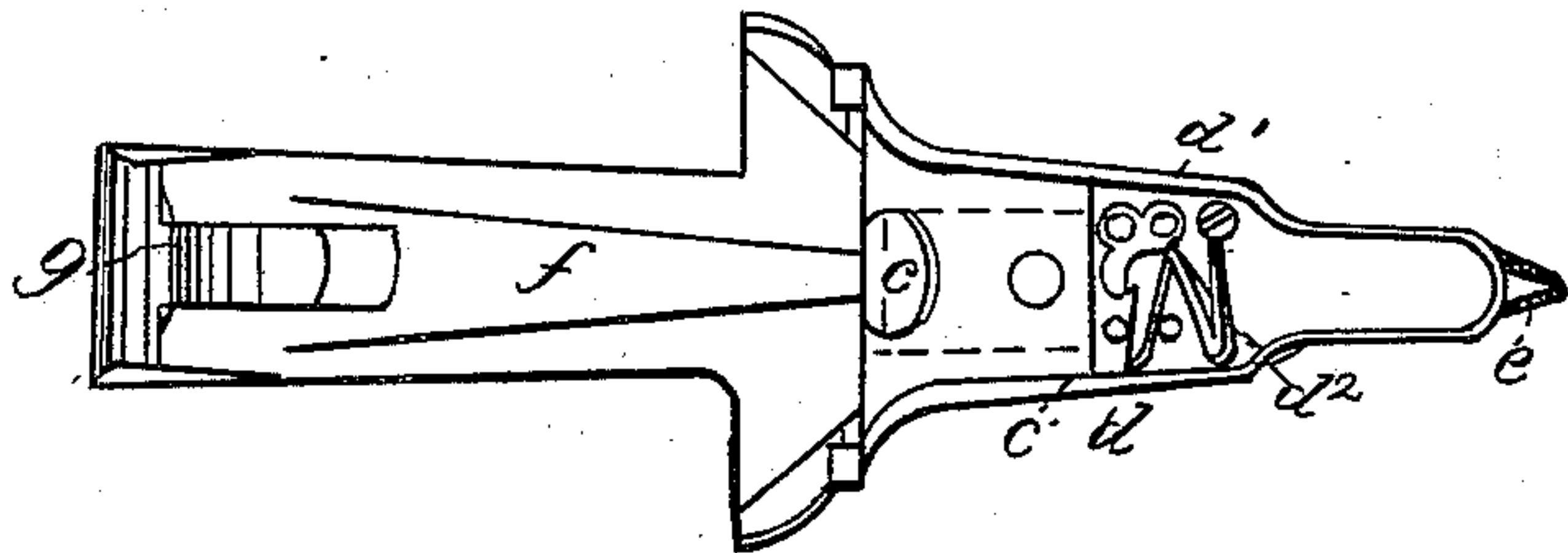
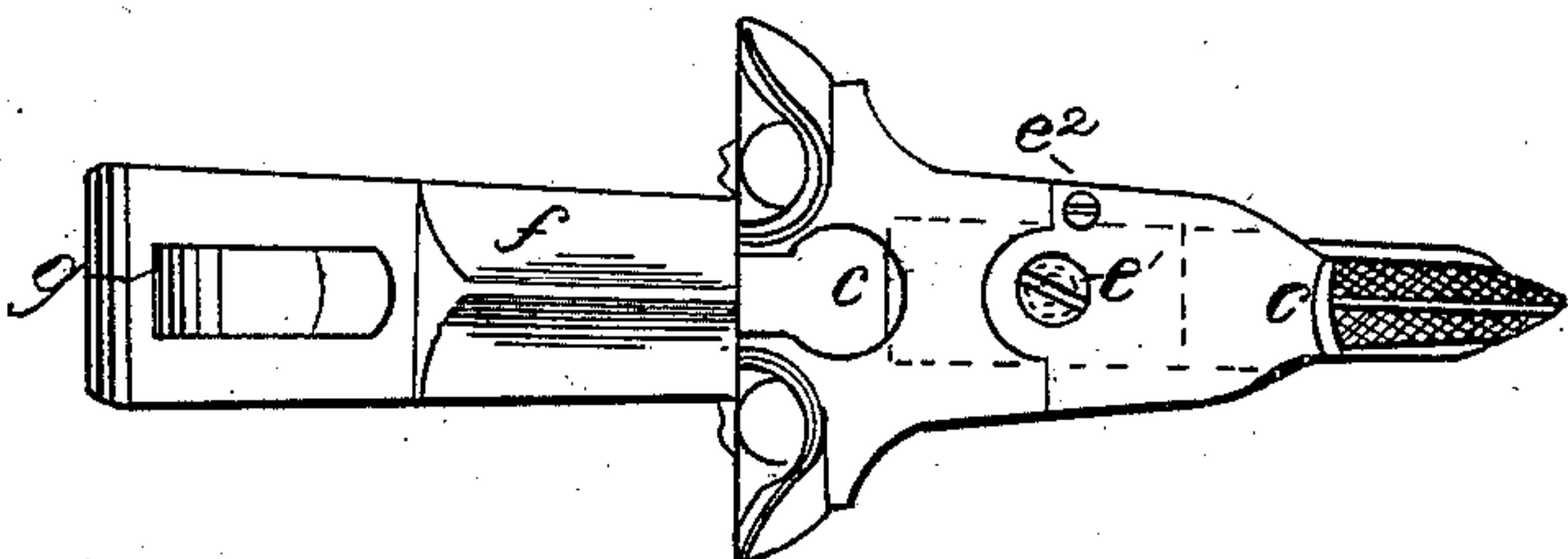


Fig:4.



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# UNITED STATES PATENT OFFICE.

WESTLEY RICHARDS, OF BIRMINGHAM, COUNTY OF WARWICK, ENGLAND.

## IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 50,432, dated October 10, 1865.

*To all whom it may concern:*

Be it known that I, WESTLEY RICHARDS, of Birmingham, in the county of Warwick, England, gun-manufacturer, a subject of the Queen of Great Britain, have invented or discovered new and useful Improvements in Fire-Arms; and I, the said WESTLEY RICHARDS, do hereby declare the nature of the said invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof—that is to say:

This invention has for its object improvements in fire-arms. In constructing breech-loading fowling-pieces and other small fire-arms where the barrels are mounted so as to turn on horizontal axles under their breech ends, as in breech-loading fowling-pieces of ordinary construction, I employ, in order to lock the barrels in position for firing, a self-acting spring catch or bolt taking into a notch in a piece projecting from the upper part of the breech end of the barrels. This piece, as the breeches are closed for firing, enters a recess in the top of the breech-plate or false breech. The recess and the piece entering it are both inclined so as to draw the breeches tightly against the breech-plate. The spring-catch is mounted on the tang of the breech-plate, by preference, so as to slide longitudinally thereon, a spring tending constantly to throw it forward in closing the breeches of the barrels however it recedes, both it and the piece at the breech end of the barrels being suitably inclined. Immediately the barrels are closed it again springs forward into its recess, and so holds the barrels securely. The catch is drawn back to open the breeches by a thumb-piece on the top of the stock. This thumb-piece I prefer to connect by a pin to the catch, and by another pin to the tang, so that when turned sidewise it draws back the spring-catch; or the pin jointing the thumb-piece to the tang may be omitted, and the catch may then be worked by drawing the thumb-piece directly back, the sidewise motion being resorted to only if the catch should happen to work stiffly and a little leverage is required to draw the catch out. To most persons, however, the sidewise motion will be found most convenient for general use.

Figure 1 shows a plan of the barrels, with

the body and action of a double-barreled fowling-piece constructed according to my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is an under-side view of the body and parts connected therewith. Fig. 4 is a plan of the same.

*a a* are the barrels, having a conical projecting piece, *a'*, at the breech end. This projecting piece is made of steel, and enters a corresponding recess formed for it in the breech-plate. In the projection *a'* there is a notch, *a<sup>2</sup>*, into which the spring-catch *c* enters when the barrels are in position for firing. This spring-catch *c* slides upon the tang of the breech-plate, and is held thereon in consequence of its foremost end passing through a horizontal hole or passage in the breech-plate. On the under side of the catch is a pin, *c'*, which slides in a slot in the tang of the breech-plate, and against which a small arm, *d*, turning on a center at *d'*, is caused to press by the action of the small spring *d<sup>2</sup>*, and this causes the spring-catch at all times to assume its locking position when it is free to do so. The spring-catch *c* is drawn back to release the barrels by a thumb-piece, *e*, jointed to it by the pin *e'*; and *e<sup>2</sup>* is a pin which may also be used to pinjoint the thumb-piece to the tang of the breech-piece. This pin, however, may be omitted; but without it the leverage cannot be obtained to force home the spring-catch *c*, and this may sometimes be required. When the catch *c* has been drawn back the barrels may be turned up into the position shown in red lines in Fig. 2, and loaded in the manner now common in breech-loading fowling-pieces. On turning the barrels down the inclined end of the projection *a'* will force back the spring-catch until the notch *a<sup>2</sup>* comes level with it, when it will spring forward into this notch and hold the barrels firmly in position for firing. I would remark that a spring-catch such as that shown may be made to lock the barrels of a fire-arm in position by entering a recess in the rear ends of the barrels, the inclined projection *a'* not being employed. This inclined projection and its corresponding recess are, however, also important parts of my invention, as by the use of them the piece is much strengthened, and it is rendered more durable, the joint being relieved of much of the strain which would otherwise come upon it.



The thumb-piece or lever may also be made to work at the side of the stock, the catch still taking into a piece projecting from the top of the barrels, or the self-acting spring-catch may be underneath the barrels, the thumb-piece only for operating it being on the tang or at the top of the stock. The arrangement first described is, however, most convenient.

Another part of my invention refers to the joint or axis on which the barrels turn.

In fire-arms in which the barrels turn on a horizontal axis I make the joint (in place of with a separate pin screwed in, as heretofore) with the axis formed in one solid piece with the body, by which means I am able to make the parts lighter without sacrificing strength. This arrangement is shown clearly at Figs. 2, 3, and 4.

*f* is the fore part of the body, and *g* is the axis, cut out of the metal and solid therewith.

*h* is a hook on the under side of the barrels, catching onto the axis *g*.

*i* is a strap secured to the barrels by a key at *k*. The end of this strap, together with the hook *h*, incloses the axis *g*.

It will be seen that by this arrangement I am able to make the axis as large in diameter as the cheeks which support it on either side, and it then comes in contact with the under side of the barrels, whereas heretofore, where the axis has been a separate pin, it was necessarily kept at a distance from the barrels equal to the thickness required for the cheeks, and this was objectionable, as it kept the axis so far from the line of strain, and for this and other

reasons it was necessary to make the parts heavier.

What I claim is—

1. The self-acting spring-catch mounted on the tang of the breech-plate or on the top of the stock and taking into a notch in a projection from the upper part of the barrels or into a notch in the upper part of the barrels themselves, substantially as described, and independently of the position of the thumb-piece or lever which actuates the said catch.

2. The thumb-piece mounted on the tang of the breech-plate or on the top of the stock and actuating a spring-catch, substantially as described, and independently of the position of the said catch whether it be over or under the barrels.

3. The self-acting spring-catch, in combination with its thumb-piece, both mounted on the tang of the breech-plate, substantially as described.

4. The inclined projection from the upper part of the barrels entering a corresponding inclined recess in the breech-plate, so as to hold the two firmly together, substantially as described.

5. The making the axis on which the barrels turn in one solid piece with the body, substantially as described.

WESTLEY RICHARDS.

Witnesses:

CROWTHER DAVIS,

THOMAS JARRETT,

*Clerks to C. E. Mathews, Solicitor and Notary,  
Birmingham.*