

THE PATENT OFFICE



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A.D. 1853 . . . . . N° 131.

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**Fire-arms.**

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**LETTERS PATENT** to Joseph Rock Cooper, of Birmingham, in the County of Warwick, Gun Maker, for the Invention of "**IMPROVEMENTS IN FIRE-ARMS.**"

Scaled the 16th March 1853, and dated the 19th January 1853.

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**PROVISIONAL SPECIFICATION** left by the said Joseph Rock Cooper at the Office of the Commissioners of Patents, with his Petition, on the 19th January 1853.

I, **JOSEPH ROCK COOPER**, of Birmingham, in the County of Warwick, Gun Maker, do hereby declare the nature of the said Invention for "**IMPROVEMENTS IN FIRE-ARMS**" to be as follows:—

This Invention is applicable to breech loading fire arms, and consists of constructing the breech in the following manner:—Part of the breech is made moveable, near its back end, and it moves on a horizontal axis, so that its fire end may assume an angular position to receive the charge. The moveable breech is caused to assume the angular position by means of a lever, having its axis of motion at one side of the fire-arm, which lever, by a projection, acts on an incline on:

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the side of the moveable breech, and the moveable breech is returned to its firing position by the bringing back of the lever, which comes between the moveable and the solid parts of the barrel. The side of the lever is slightly inclined, and forces the moveable breech up to the barrel. The lever has a tendency of remaining in either of its two 5 positions (till it is forcibly acted on) by being acted on by a spring. Or the side of the lever may be bored out, and itself become the moveable breech of the fire-arm.

**SPECIFICATION** in pursuance of the conditions of the Letters Patent, filed by the said Joseph Rock Cooper in the Great Seal Patent 10 Office, on the 18th July 1853.

**TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOSEPH ROCK COOPER, of Birmingham, in the County of Warwick, Gun Maker, send greeting.**

**WHEREAS** Her most Excellent Majesty Queen Victoria, by Her 15 Letters Patent, bearing date the Nineteenth day of January, in the year of our Lord One thousand eight hundred and fifty-three, in the sixteenth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Joseph Rock Cooper, Her special licence that I, the said Joseph Rock Cooper, my executors, administra- 20 tors, and assigns, or such others as I, the said Joseph Rock Cooper, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain 25 and Ireland, the Channel Islands, and Isle of Man, an Invention for "**IMPROVEMENTS IN FIRE-ARMS,**" upon the condition, (amongst others) that I, the said Joseph Rock Cooper, by an instrument in writing under my hand and seal, should particularly describe and ascertain the nature of the said Invention, and in what manner the same, was 30 to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent:

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**NOW KNOW YE**, that I, the said Joseph Rock Cooper, 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 is applicable to breech loading fire-arms, and consists of constructing the breech in the following manner:—Part of the breech is made moveable, near its back end, and it moves, on a horizontal axis, so that its fore end may assume an angular position to receive the charge. The moveable breech is caused to assume the angular position  
 10 by means of a lever, having its axis of motion at one side of the fire-  
 arm; which lever, by a projection, acts on an incline at the side of the  
 moveable breech, and the moveable breech is returned to its firing  
 position by the bringing back of the lever, which comes between the  
 moveable and the solid parts of the barrel. The side of the lever is  
 15 slightly inclined, and forces the moveable breech up to the barrel. The  
 lever has a tendency of remaining in either of its two positions (till it is  
 forcibly acted on) by being acted on by a spring. Or the side of the  
 lever may be bored out, and itself become the moveable breech of the  
 fire-arm.

20 And in order that my said Invention may be more fully under-  
 stood, and readily carried into effect, I will proceed to describe the  
 means pursued by me:

## DESCRIPTION OF THE DRAWING.

Figure 1, is a longitudinal section of the back end of a barrel con-  
 25 structed and arranged suitably for carrying out my Invention.  
 Figure 2, shows a side view of the moveable breech. Figure 3, shows  
 a section of the barrel taken at A, B, in Figure 1. Figure 4, shows a  
 front and a back end view of the breech. Figure 5, shows two views  
 of the lever which moves the breech when about to load, and which  
 30 fastens the breech when in a firing position. Figure 6, shows a longi-  
 tudinal section of part of the barrel with the breech fastened in the  
 position for firing. Figure 7, shows the breech raised into an angular  
 position for loading. Figure 8, shows the breech in the position after  
 loading, and before the lever has forced it up to the barrel; and

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Figure 9, shows a side view of the barrel and breech on which the lever is applied. In all these Figures the same letters are used to indicate the same parts. *a*, is the barrel, and *a*<sup>1</sup>, is the solid part at the back end, between which and the back end of the moveable breech the lever comes, in order to fasten the breech, and to force it up to the 5 position for firing. *b*, is a spring, which acts on the projecting part of the breech, as shown; and this spring causes the breech and the lever to have a tendency to remain in either of the two positions into which the lever may be placed. *c*, is the moveable breech, having an under projection *c*<sup>1</sup>, with a slot in it, by which means it can not only be slid to 10 and from the barrel, but also be moved on the pin *d*, as an axis, there being a slot formed in the barrel *a*, at *a*<sup>2</sup>, for receiving the projection *c*<sup>1</sup>, of the breech *c*, as shown. The form of the breech and the end of the barrel being shewn in the Drawing, it will not require further description. *e*, is the lever; it moves on an axis *e*<sup>1</sup>, supported in projections on 15 the side of the barrel; the lever has a projection *e*<sup>2</sup>, which, passing through an opening in the barrel and the end of this projection, enters into a groove *e*<sup>3</sup>, formed in the side of the breech, by means of which, when the lever *e*, is moved over, it will release the back end of the breech, and by the end of the projection *e*<sup>2</sup>, it will move back and raise 20 the breech into an inclined position to admit of its being loaded; and the moving of the lever *e*, across the barrel will first cause the breech to assume the position shown at Figure 8, and will then by its inclined side force the breech up to the barrel, and cause it to assume the position, Figure 6.

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In Figures 10, and 11, is shown a variation of my Invention from that above described, and it consists of having the lever so formed that the breech is made by boring into the side, at the same time the lever is capable of such movement as to admit of the breech being forced up to the barrel, and of being held securely when firing. *f*, is the lever, which 30 consists of two parts *f*, and *f*<sup>1</sup>; the part *f*, is bored out to form the hollow breech of the fire-arm, of which *a*, is part of the barrel. *a*<sup>1</sup>, is the solid end thereof, there being an opening in the upper part of the barrel to receive the lever breech *f*, as is shown. The lever breech turns on an axis *f*<sup>2</sup>, carried by projections at one side of the barrel, which 35

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allows of an endway movement to the breech to allow of its moving to and from the barrel *a*. The part *f*<sup>1</sup>, of the breech turns on an axis *f*<sup>2</sup>, at the back end of the breech, and the part *f*<sup>1</sup>, where it embraces the axis *f*<sup>2</sup>, is made excentric, by which means, when the lever breech *f*,  
 5 has been loaded and moved into position behind the barrel *a*, the folding down of the part *f*<sup>1</sup>, will cause the lever breech *f*, to be forced up to and retained in position for firing.

Having thus described the nature of my Invention, and the manner of performing the same, I would have it understood that I make no  
 10 claim to the mechanical parts separately. But what I claim, is, first, the mode of combining the parts described with reference to Figures 1, to 9, inclusive; and, secondly, I claim the mode of combining the parts which I have called the lever breech, as herein described.

In witness whereof, I, the said Joseph Rock Cooper, have here-  
 15 unto set my hand and seal, this Sixteenth day of July, in the year of our Lord One thousand eight hundred and fifty-three.

JOSEPH ROCK COOPER. (L.S.)

Witness,

ROBERT SAULER.

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Fig. 1.

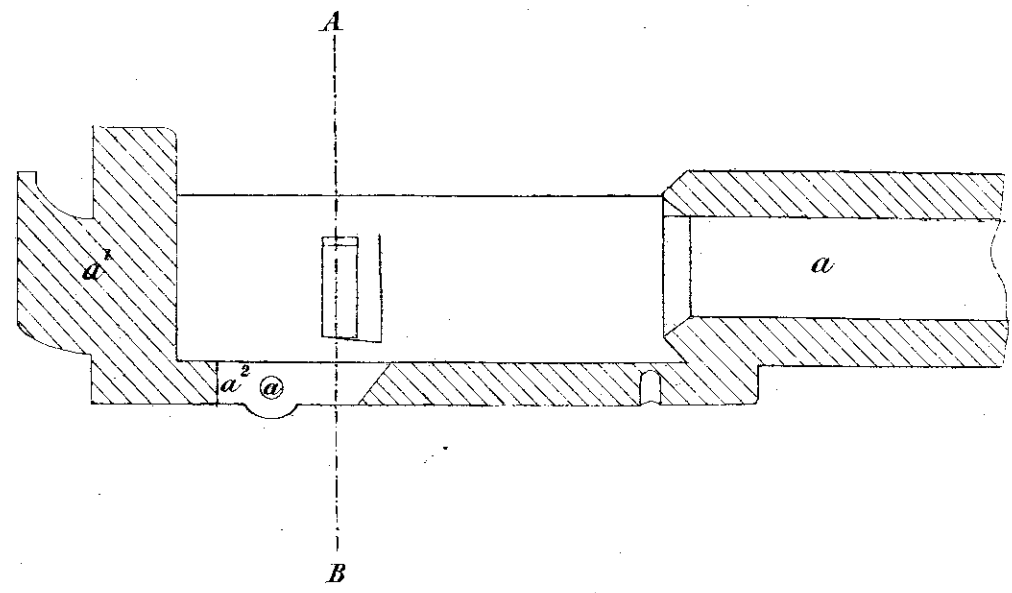


Fig. 3.

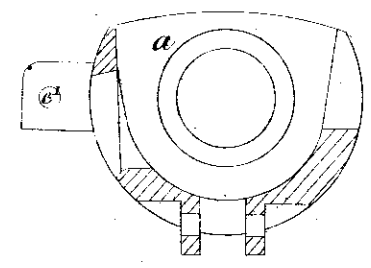


Fig. 2.

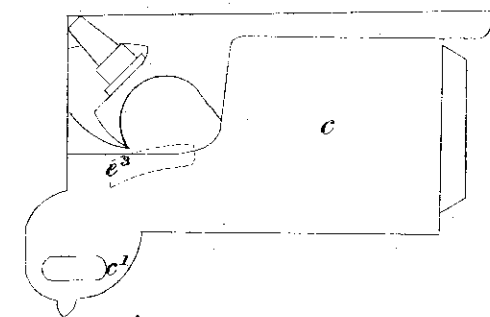


Fig. 4.

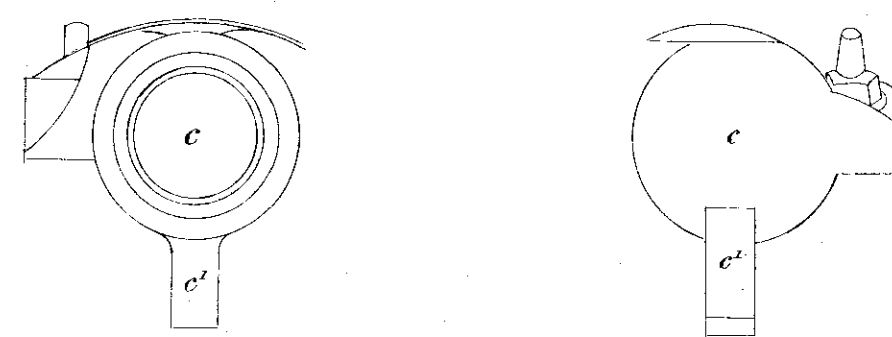


Fig. 5.

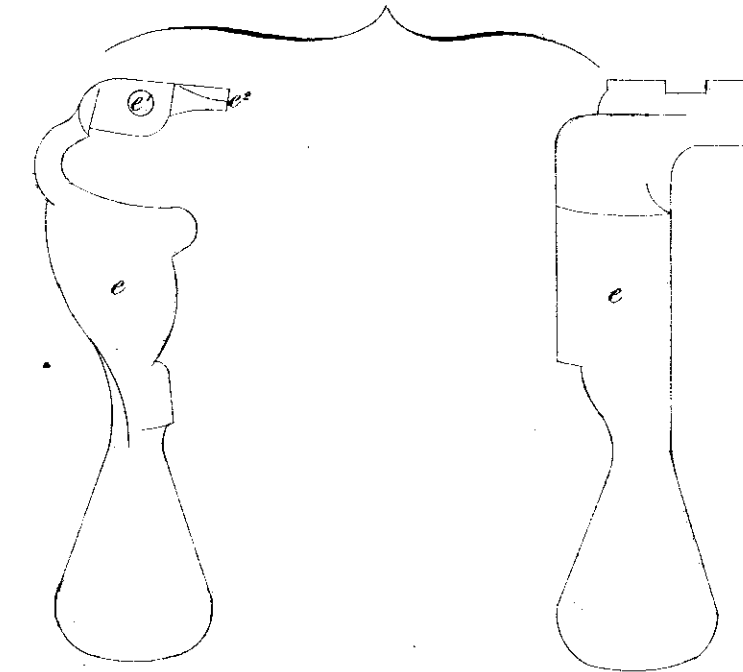


Fig. 6.

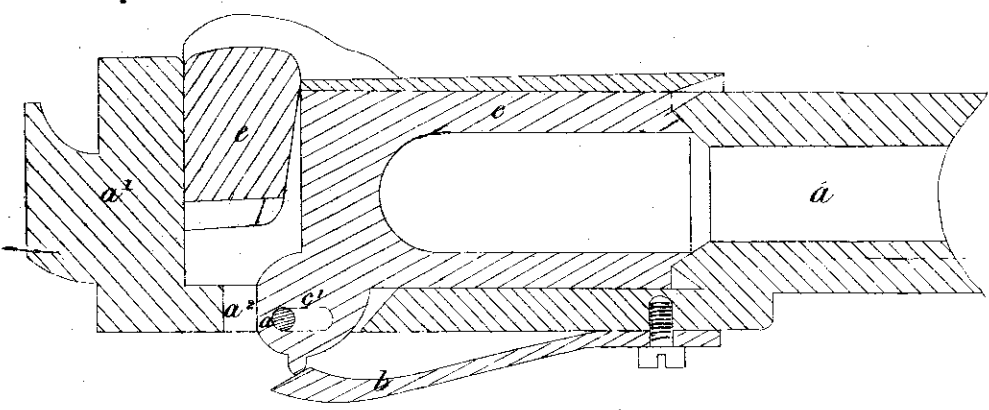


Fig. 7.

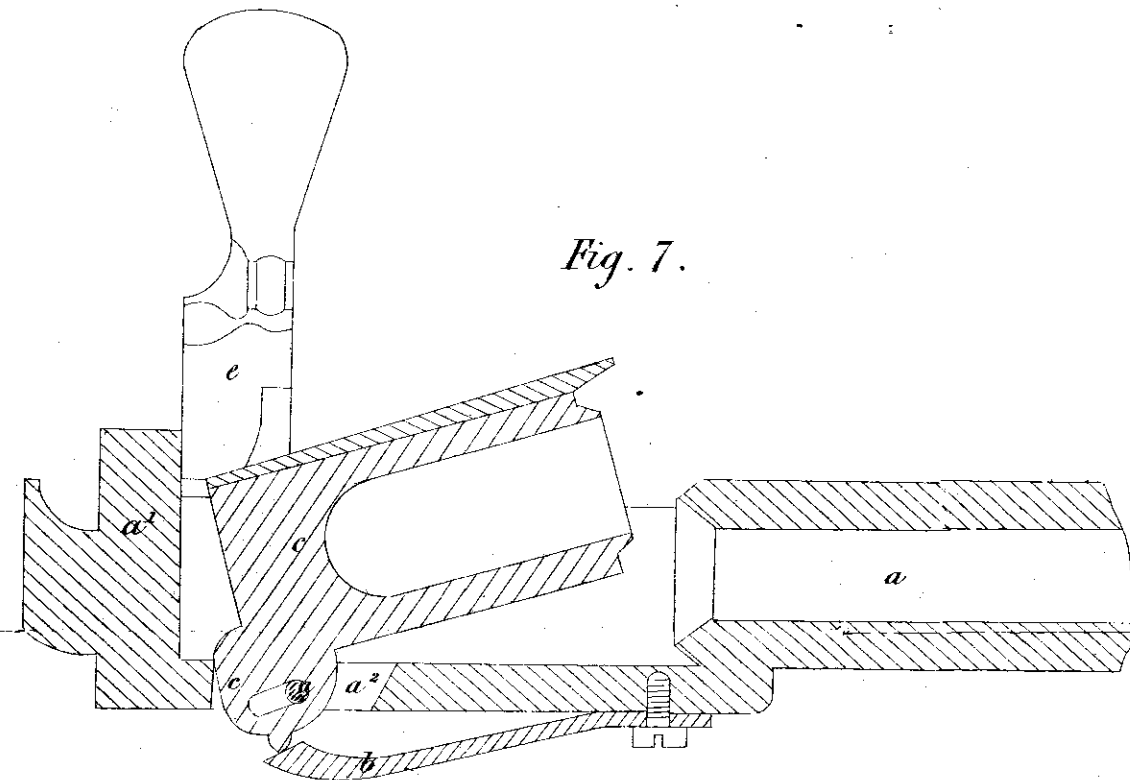


Fig. 8.

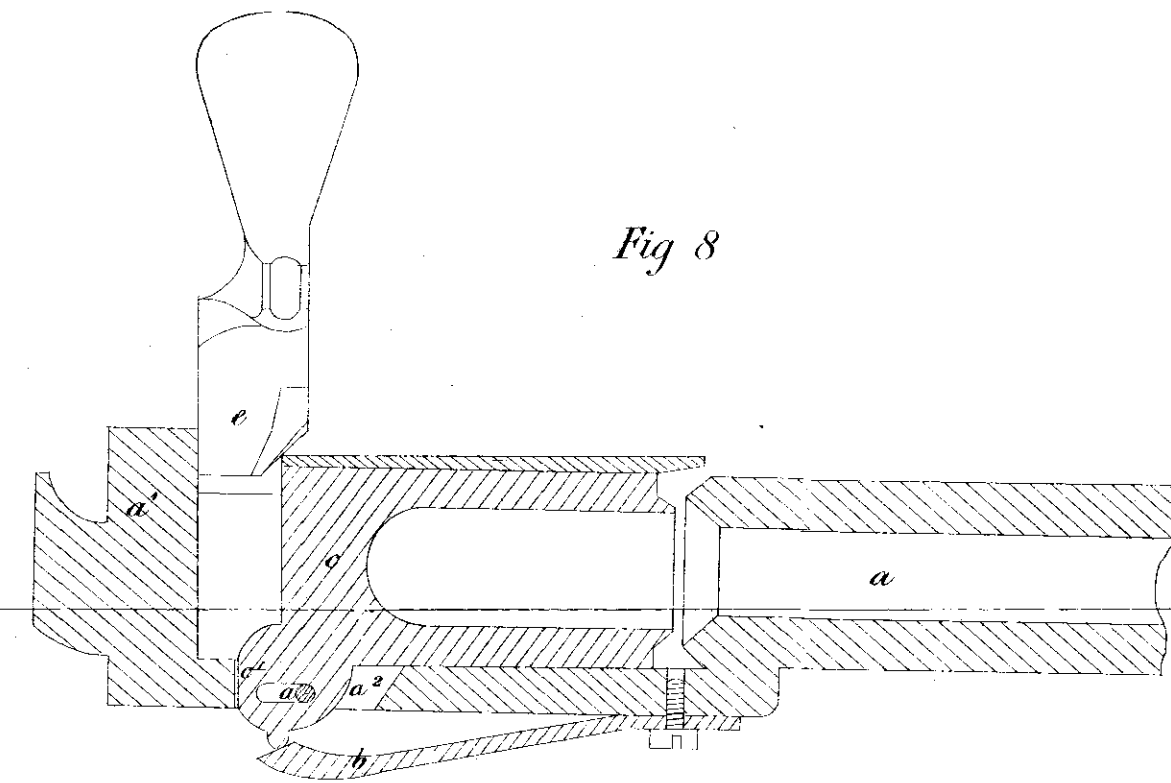


Fig. 10.

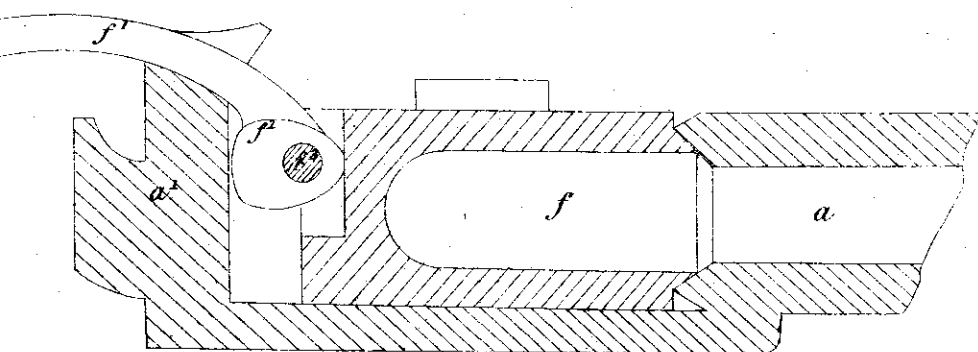


Fig. 11.

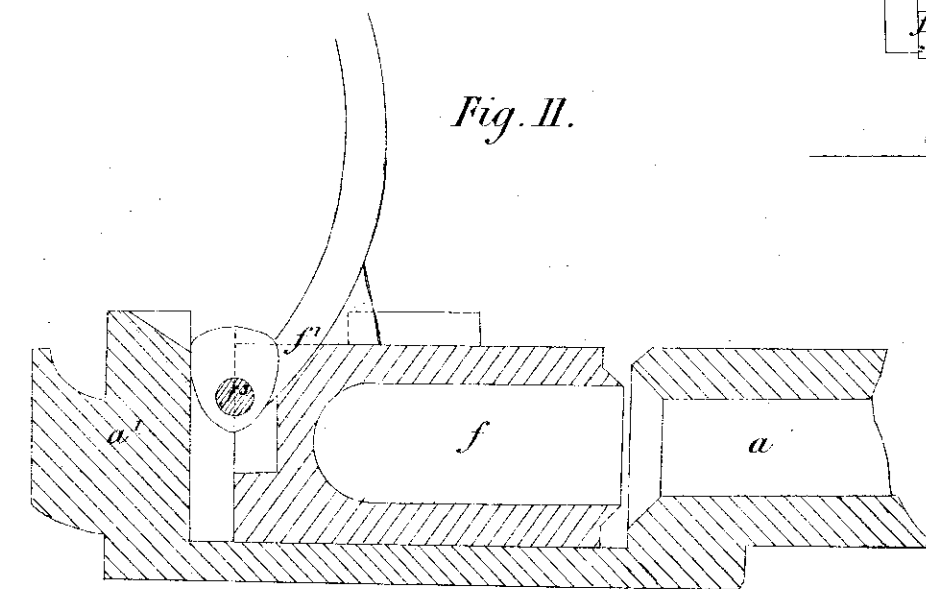
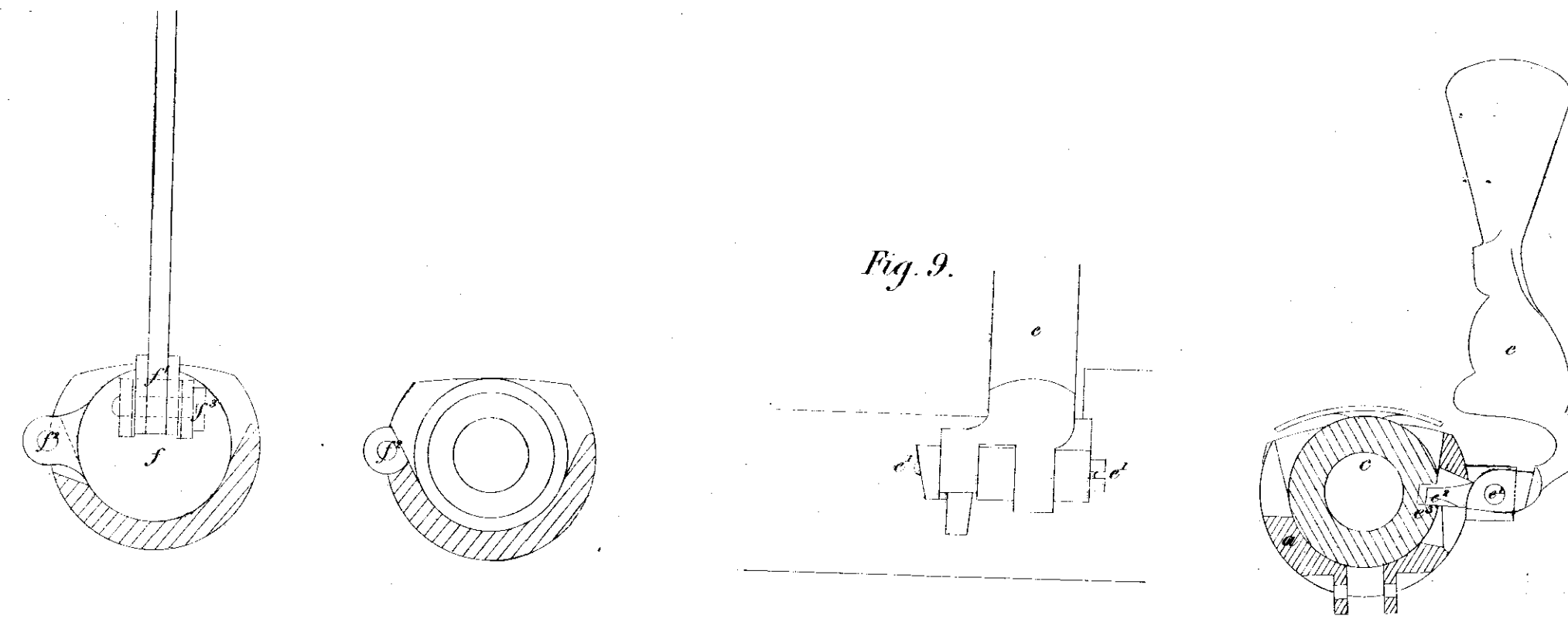


Fig. 9.



The Filed Drawing is partly colored.

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1 SHEET ONLY