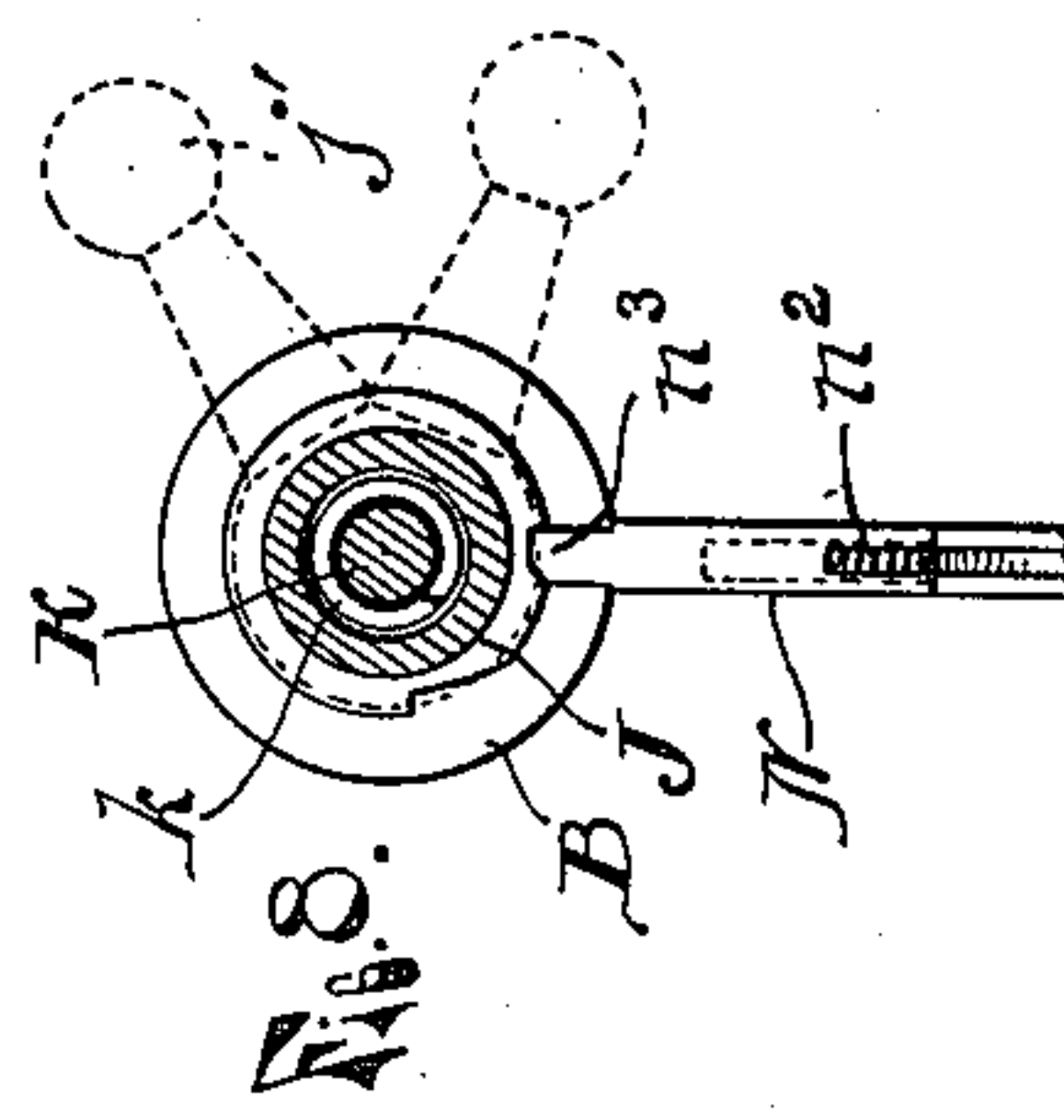
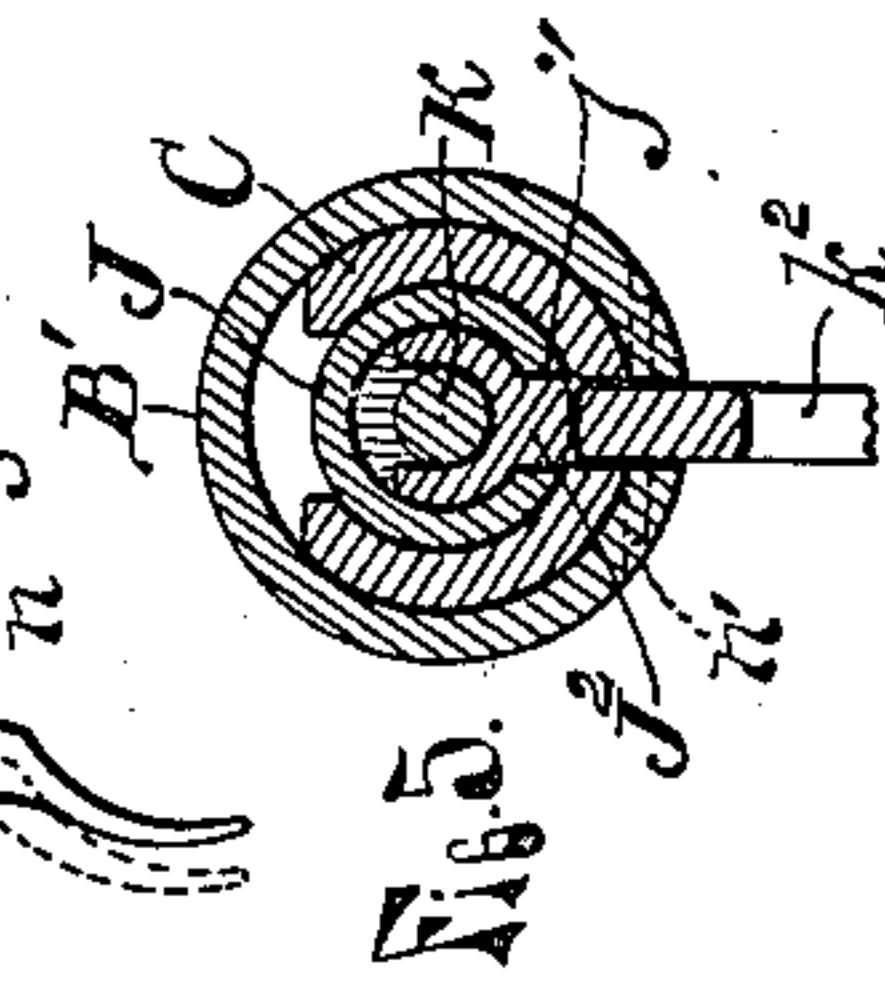
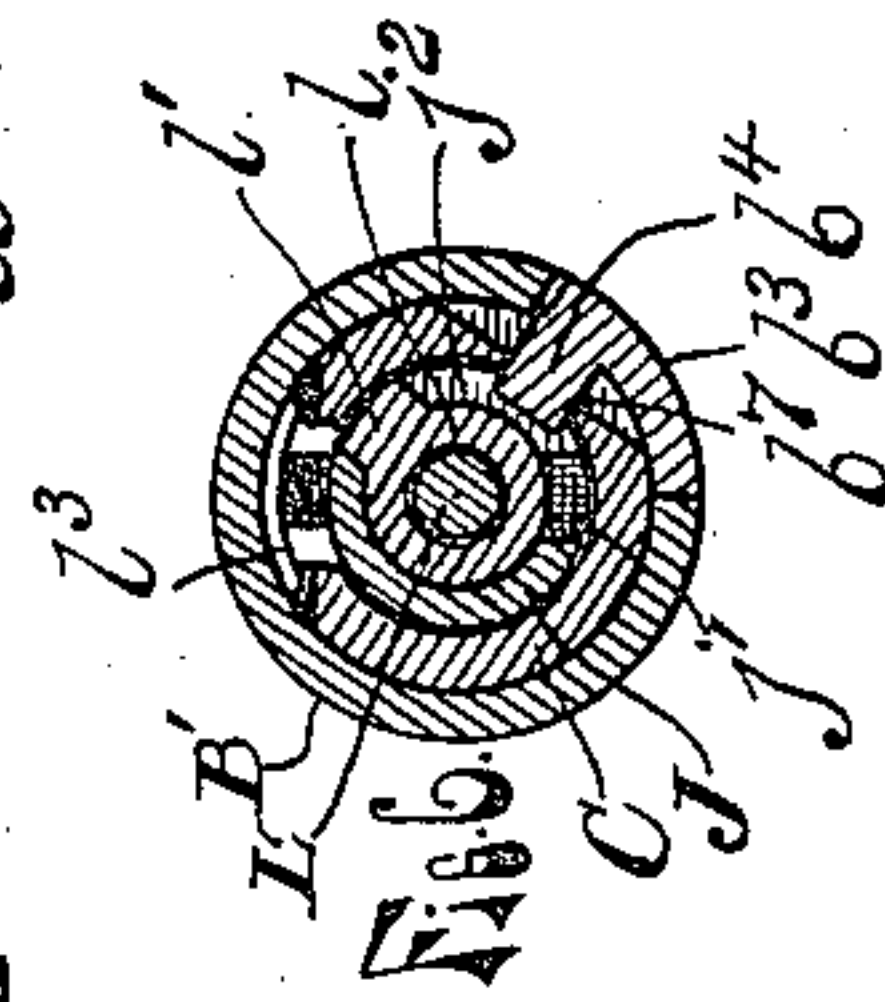
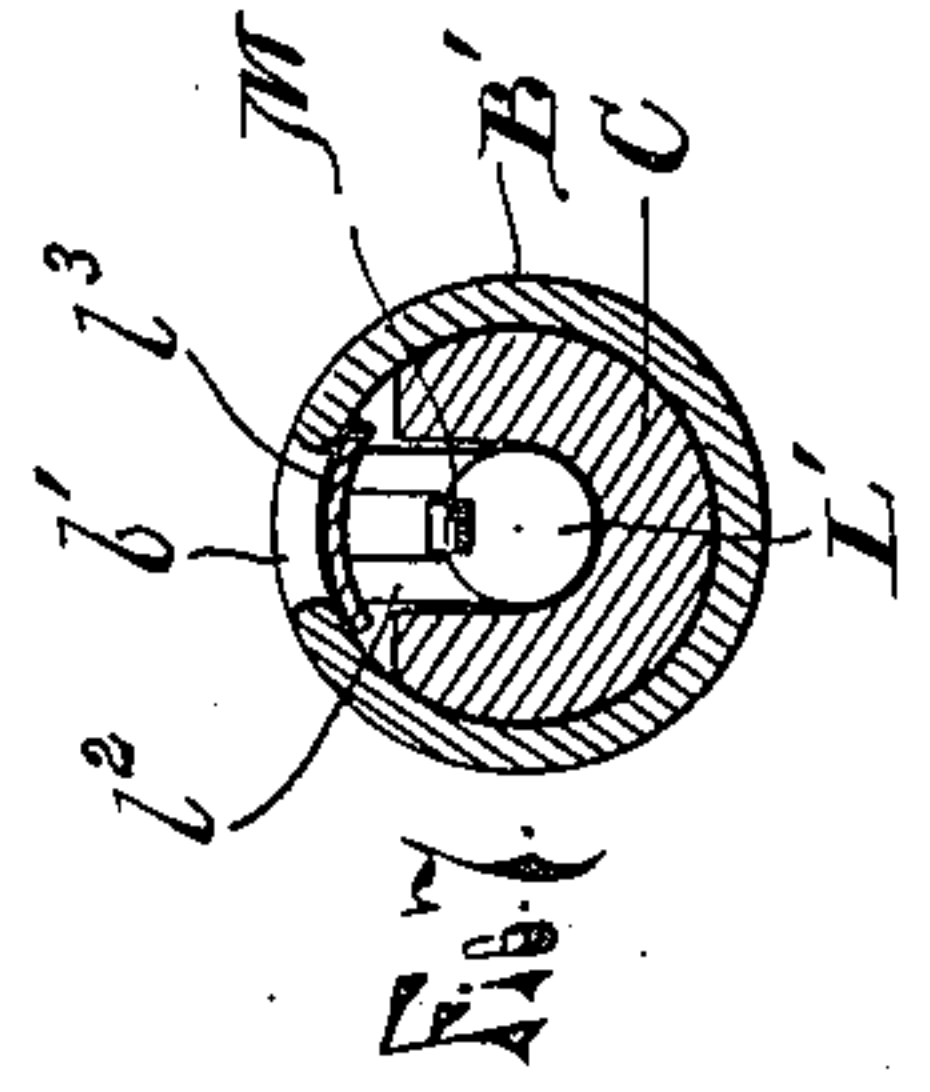
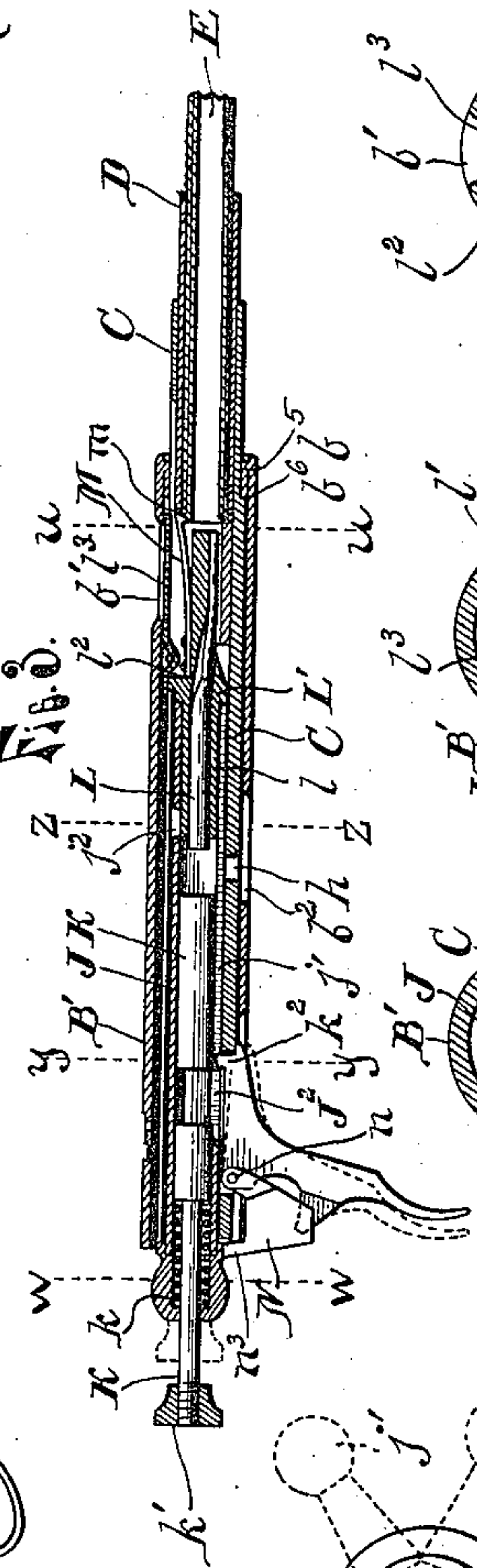
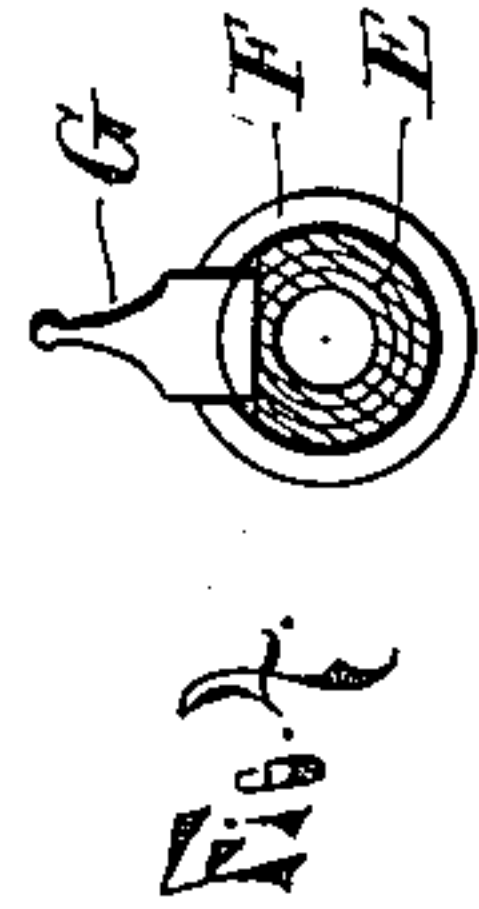
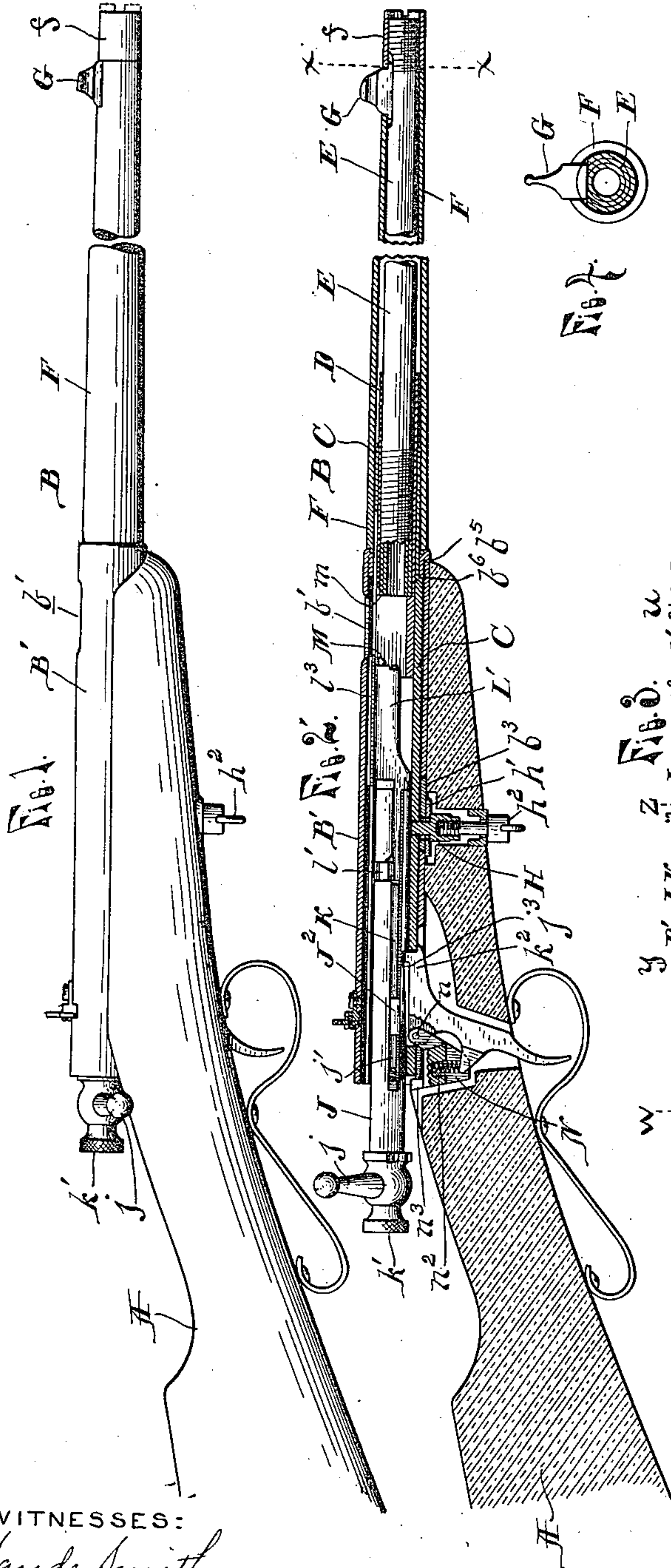


No. 830,587.

PATENTED SEPT. 11, 1906.

C. HAMILTON.  
RIFLE CONSTRUCTION.  
APPLICATION FILED SEPT. 18, 1905.

2 SHEETS—SHEET 1.



WITNESSES:  
Mande Smith.  
Henry E. Villerot.

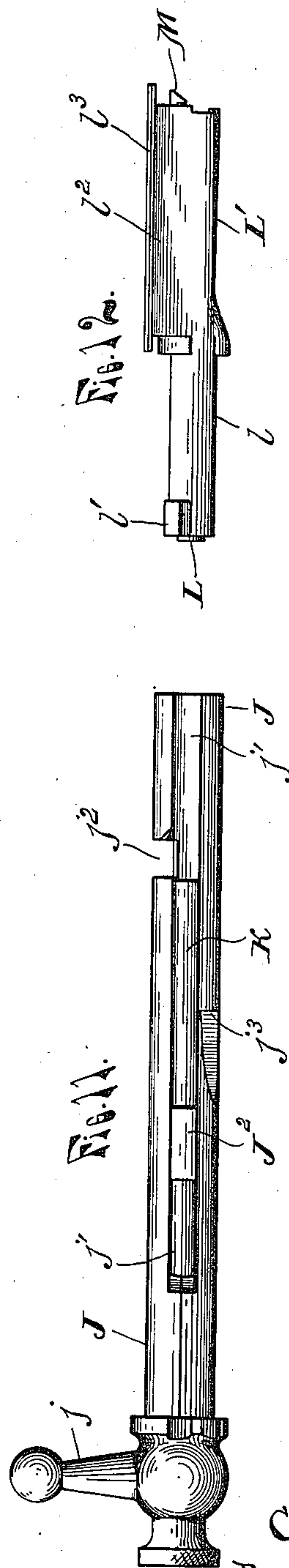
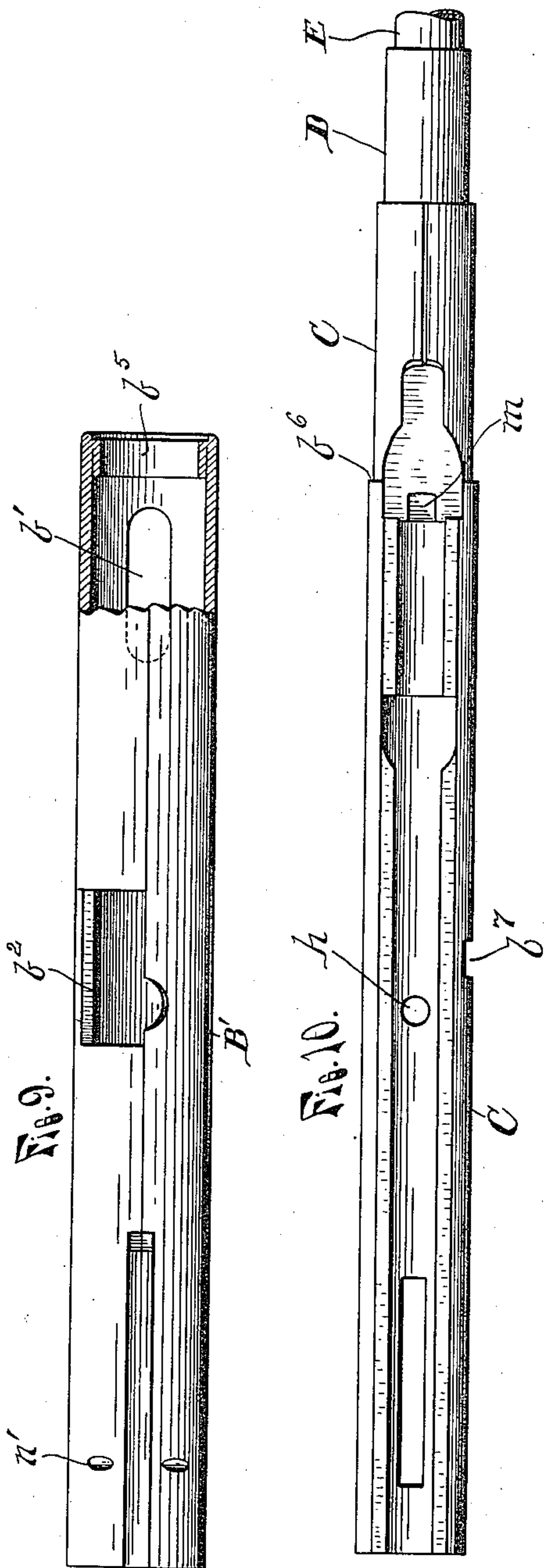
INVENTOR:  
Coello Hamilton,  
By  
Fisk & Thomas  
Attorneys.

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2 SHEETS—SHEET 2.



WITNESSES:

*Wm. Smith*  
*Henry E. Villot*

INVENTOR:

*Coello Hamilton*

*Fisk & Thomas*  
Attorneys.



# UNITED STATES PATENT OFFICE.

COELLO HAMILTON, OF PLYMOUTH, MICHIGAN.

## RIFLE CONSTRUCTION.

No. 830,587.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed September 18, 1905. Serial No. 278,848.

*To all whom it may concern:*

Be it known that I, COELLO HAMILTON, a citizen of the United States, residing at Plymouth, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Rifle Construction; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an improvement in rifle construction, and is shown in the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a longitudinal sectional view. Fig. 3 is a longitudinal section showing the construction of the reciprocating breech-block and plunger. Fig. 4 is a cross-section on line X X. Fig. 5 is a cross-section on line Y Y. Fig. 6 is a cross-section on line Z Z. Fig. 7 is a cross-section on line U U. Fig. 8 is a cross-section on line W W. Fig. 9 is a plan view of the lower side of the rear portion of the false barrel with a portion broken away to show the construction. Fig. 10 is a plan view of the upper side of the sections forming the rear end of the barrel proper. Fig. 11 is an inverted plan view of the tubular reciprocable firing-bolt carrier. Fig. 12 is a side elevation of the firing-pin case.

In the drawings, A represents the stock, and B the barrel. The barrel B is built of several concentric parts. The rear portion of the outer shell or false barrel (represented at B') is formed from a rectangular sheet of metal, with the seam on the lower side, and is provided with an opening at b' through which to enter the cartridge and discharge the shell. It is also provided with an opening b<sup>2</sup>, in which is inset the metal piece b<sup>3</sup>. This metal piece is provided with a lug b<sup>4</sup>, extending into the barrel, for purposes hereinafter described.

Before rolling up the section B' of the barrel the end of the metal strip from which it is formed—that is, to form the end—is folded upon itself, so that when the piece is rolled into a tube the fold forms an annular rib or ring b<sup>5</sup> on the inner side of the forward end of the tube. The next interior section C of the barrel is made longer than the outer section just described, and the portion that extends forward through the ring b<sup>5</sup> and the rear portion that fills the tube B' is formed with a

shoulder b<sup>6</sup> to engage the ring. The portion C of the barrel is also formed from a piece of sheet metal and is provided with an interior thread into which is screwed the next interior section D of the barrel. Into this section is fixed the final interior rifled section E, the rear end of which comes flush with the rear end of the section D and at the forward end of the opening b' in such a position that a cartridge entered through the opening b' will readily enter the breech of the interior barrel E.

The sections C, D, and E are rigidly held in a fixed position within the section B' by the metal piece b<sup>3</sup> inset in B', as described, the lug b<sup>4</sup> extending through an opening b<sup>7</sup> in the side of the section C, and also by the stem H, as hereinafter described.

The section C to the rear of the inner barrel is open at the top. The inner section E of the barrel is formed and rifled by the method shown in Patent No. 660,725, dated October 30, 1900, issued to Clarence J. and Coello Hamilton.

The forward end of the section B' is undercut to allow the rear end of the forward portion F of the outer cover or false barrel to enter to conceal the joint. This cover F is held in place by a short section f, which is threaded to run on the forward end of the interior barrel.

The forward sight G rests upon a seat cut away on the upper side of the interior barrel and extends through a slot cut from the forward end of the portion F and is held firmly in place by the short section f. To prevent the sight from lifting out, it is provided with beveled ends fitting snugly under the abutting parts of the cover F and f.

The means for attaching the barrel to the stock consists of the stem H, having a smaller threaded inner end that screws into a screw threaded hole h in the section C of the barrel, through the inset piece b<sup>3</sup>, and through a concave metal plate h', the shoulder of the stem drawing the parts firmly together when the stem is screwed to place and firmly screwing the inset piece in place and also locking the portion C of the barrel to the outer section B'. The stem H enters a hole in the stock provided with a bushing in its outer end, and the key h<sup>2</sup> screws into the stem entering from the outside of the stock through the bushing with which a head thereon engages to hold the parts together.

The firing mechanism consists of a tubular



reciprocating member J, or firing-bolt carrier provided with a handle  $j$  by means of which it is reciprocated and rotated. This tubular carrier is formed from a rectangular piece of metal and a slot  $j'$  is cut along the seam in which runs a traveler  $J^2$ , carried by the firing-bolt K, longitudinally movable in the tube.

The firing-bolt K extends part way through the tube J and is provided with a spiral spring  $k$ , operating against a shoulder on the bolt in the usual manner, and with a thumb-nut  $k'$  by which the bolt is drawn back and set. The traveler  $J^2$  when the firing-bolt is drawn back comes back of the trigger  $k^2$ , and the bolt is thus held in position for firing. As the traveler rotates with the tube J the trigger will not engage the traveler except when the tube is turned by its handle to bring the slot in which the traveler moves in line with said trigger, and the tube cannot be rotated from that position except when the traveler is opposite the trigger because of the engagement of the trigger with the slot.

The firing-pin L is set in a case  $L'$ , that is engaged with the tube J through a stem  $l$ . The stem is held in engagement with the tube J by the lug  $l'$ , that rotates into a channel  $j^2$ , cut from the side of the longitudinal slot  $j'$  in the tube. The lug  $b^4$  on the inset-plate  $b^3$ , projects through the opening  $b^7$  in the barrel C and also into the slot  $j'$  in the carrier J, as shown in Fig. 6. This lug is also adapted to travel laterally from said slot into the lateral channel  $j^2$  when the carrier is turned, but it prevents the turning of the carrier by its engagement in said slot, except when the carrier is at the inner end of its longitudinal movement, when its lateral channel will be opposite said lug. This lug  $b^4$ , engaging the channel  $j^2$ , also prevents the carrier from being pulled out and limits its turning. Therefore the movement of the carrier or tube J is a rotation to the left and a longitudinal movement outward and then in the reverse direction. The outward movement is limited by a shoulder  $j^3$ , cut on the side of the tube J, that comes against the trigger. If it is desired to take the firing mechanism out entirely, a pressure on the trigger will disengage the same from said shoulder and release it.

The case  $L'$  is provided with an upward extension  $l^2$ , adapted to travel in the slot formed by cutting away the upper side of the section C of the barrel, and a convex plate or slide  $l^3$  is to travel within the space formed by the slot between the outer section  $B'$  and said section C. This part of the mechanism is thus prevented from rotating while free to move longitudinally, and the slide  $l^3$  forms a closure for the opening  $b^1$ . The firing-pin reciprocates in this case when driven by the firing-bolt. In this case is also inclosed the spring-extractor M, which normally lies on an incline  $m$ , formed on the inner end of the barrel E, but when the firing mechanism is

drawn back to prepare to load the spring-extractor catches the head of the cartridge and extracts it.

The trigger mechanism consists of a hollow case N, pivoted on the pin  $n$ , which passes through a hole  $n'$  in the lower portion of the outer barrel-covering. The edge of the case that is pivoted, as described, is made thin and the trigger is pivoted over it on the same pin  $n$ . Inside of the case N is the spring  $n^2$ , acting against a rear extension of the trigger to hold it normally up against the firing mechanism.

The rear extension  $n^3$  of the case N is forced and held to the upward limit of its movement by the action of the spring  $n^2$  and acts as a spring-pressure dog to lock the breech in notches cut in the block.

What I claim is—

1. In rifle construction, the main-barrel covering recessed at its end for the sight, the front sight with lips at each end, the rear lip engaging under the barrel-covering, the barrel channeled to receive the sight, and a short section of barrel-covering arranged to screw on the end of the barrel and to engage over the lip formed at the forward end of the sight, substantially as described.

2. In rifle construction, the barrel provided with a shoulder on the breech-section, a breech-covering formed with an interior annular rib at its forward end, the main-barrel covering and the short section of covering adapted to engage with the barrel at the muzzle to hold the part together, substantially as described.

3. The combination of the telescoping breech-tube containing the firing mechanism, arranged to be partially rotated and drawn out, the trigger arranged to limit the distance it can be drawn out and the trigger-spring case arranged to limit the amount of rotation of the breech-tube, substantially as described.

4. In rifle construction, the false barrel, the reciprocating firing-pin carrier having a non-rotatable connection with the false barrel, the tube J provided with a longitudinal channel and an annular channel, said non-rotatable firing-pin carrier provided with a traveler to run in the channels in the tube J, substantially as described.

5. In rifle construction, the false barrel, the reciprocating firing-pin carrier having a non-rotatable connection with the false barrel, the tube J provided with a longitudinal channel and an annular channel, said non-rotatable firing-pin carrier provided with a traveler to run in the channels in the tube J, the firing-bolt mounted in the tube J and provided with a traveler registering with the longitudinal channel in the tube J, and the trigger, substantially as described.

6. In rifle construction, the false barrel, the reciprocating firing-pin carrier having a



non-rotatable connection with the false barrel and arranged to travel longitudinally to fill the cartridge-receiving chamber, the true barrel having its breech end forward of the  
5 cartridge-receiving chamber, the tube J having a rotatable connection with the firing-pin carrier, and means operated by the rotation of the tube J for setting the firing-pin carrier

against the cartridge, substantially as described.

In testimony whereof I sign this specification in the presence of two witnesses.

COELLO HAMILTON.

Witnesses:

MAUDE SMITH,  
HENRY E. VILLEROT.