

No. 713,535.

Patented Nov. 11, 1902.

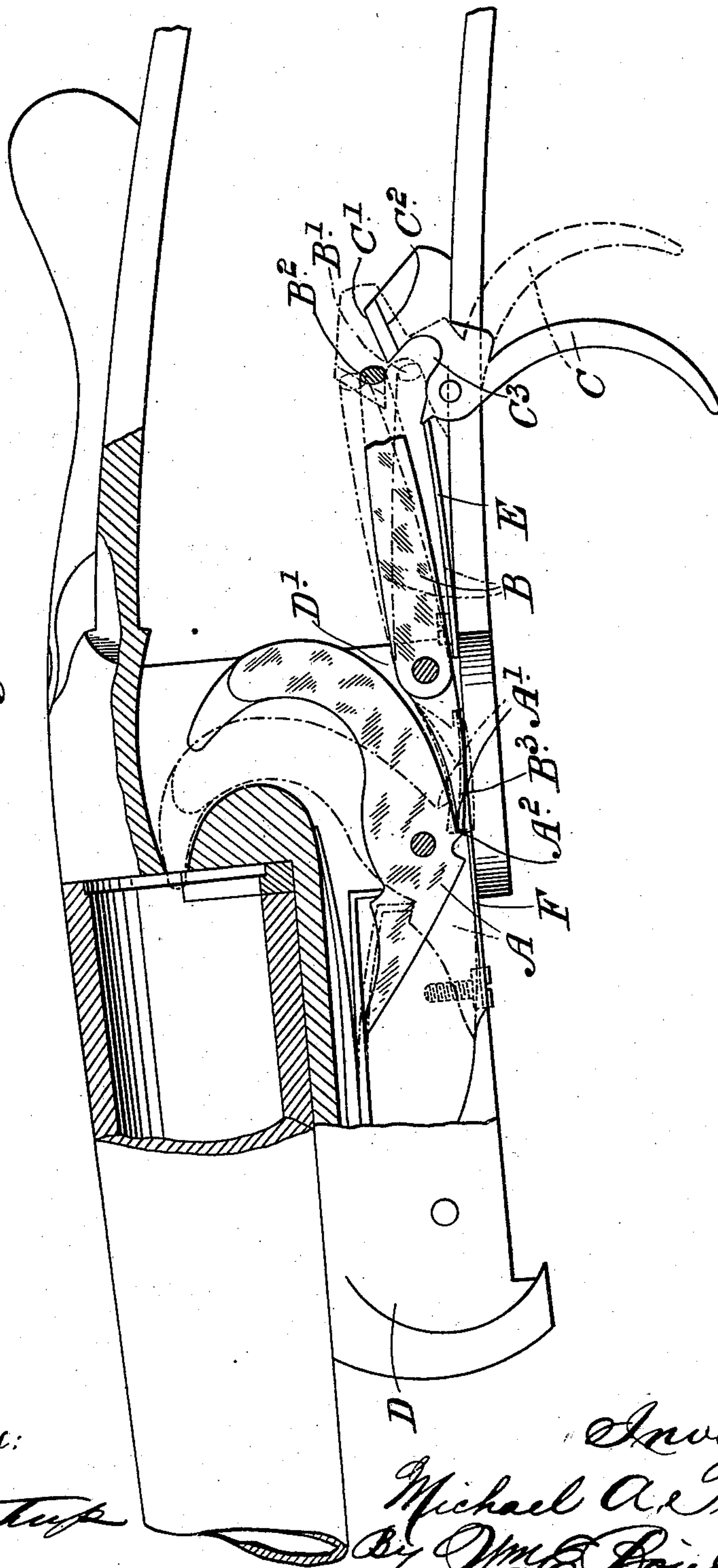
M. A. TIGHE.  
SINGLE TRIGGER MECHANISM.

(Application filed May 5, 1902.)

(No Model.)

4 Sheets—Sheet 1.

Fig. 1.



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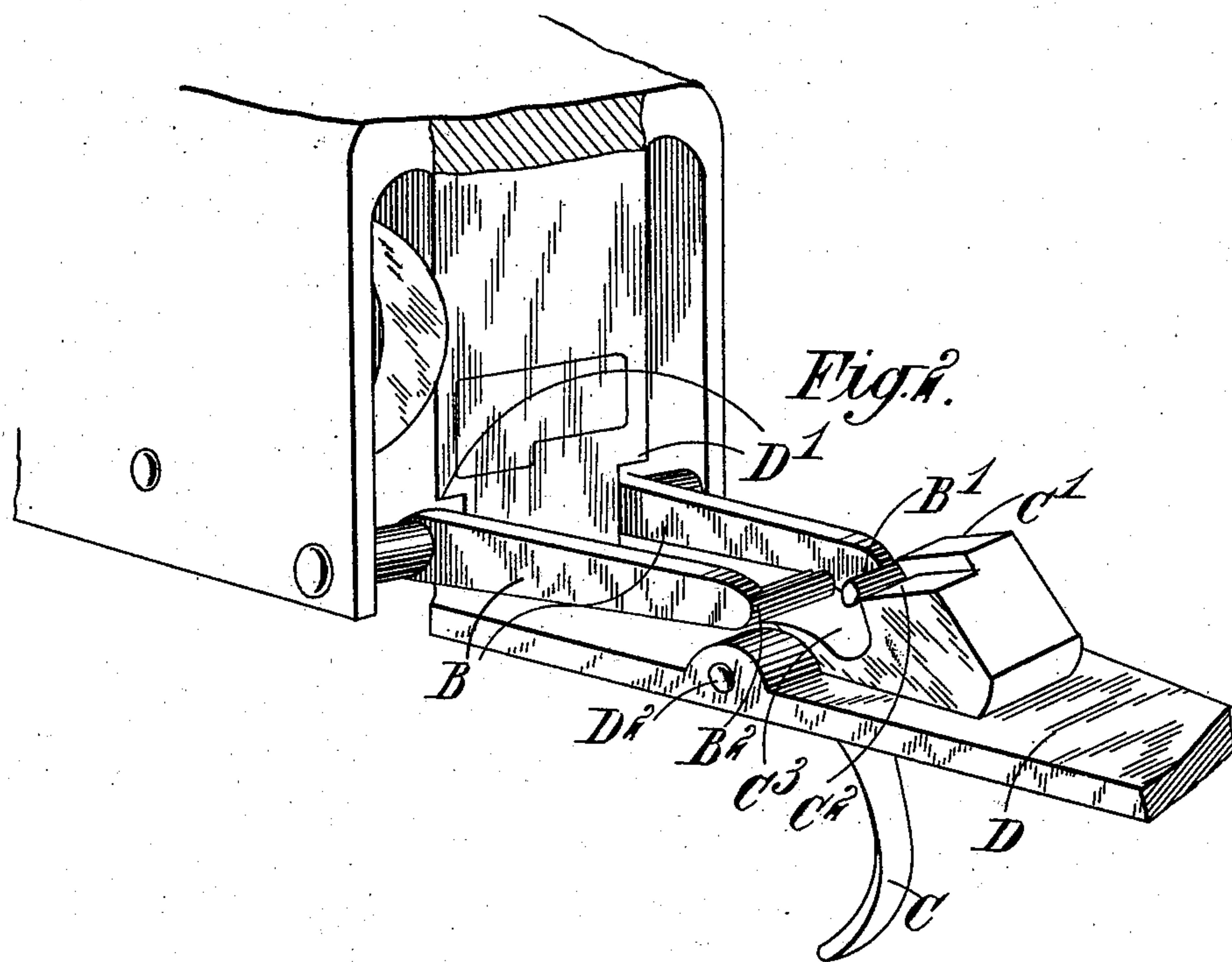
**M. A. TIGHE.**

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**4 Sheets—Sheet 2.**



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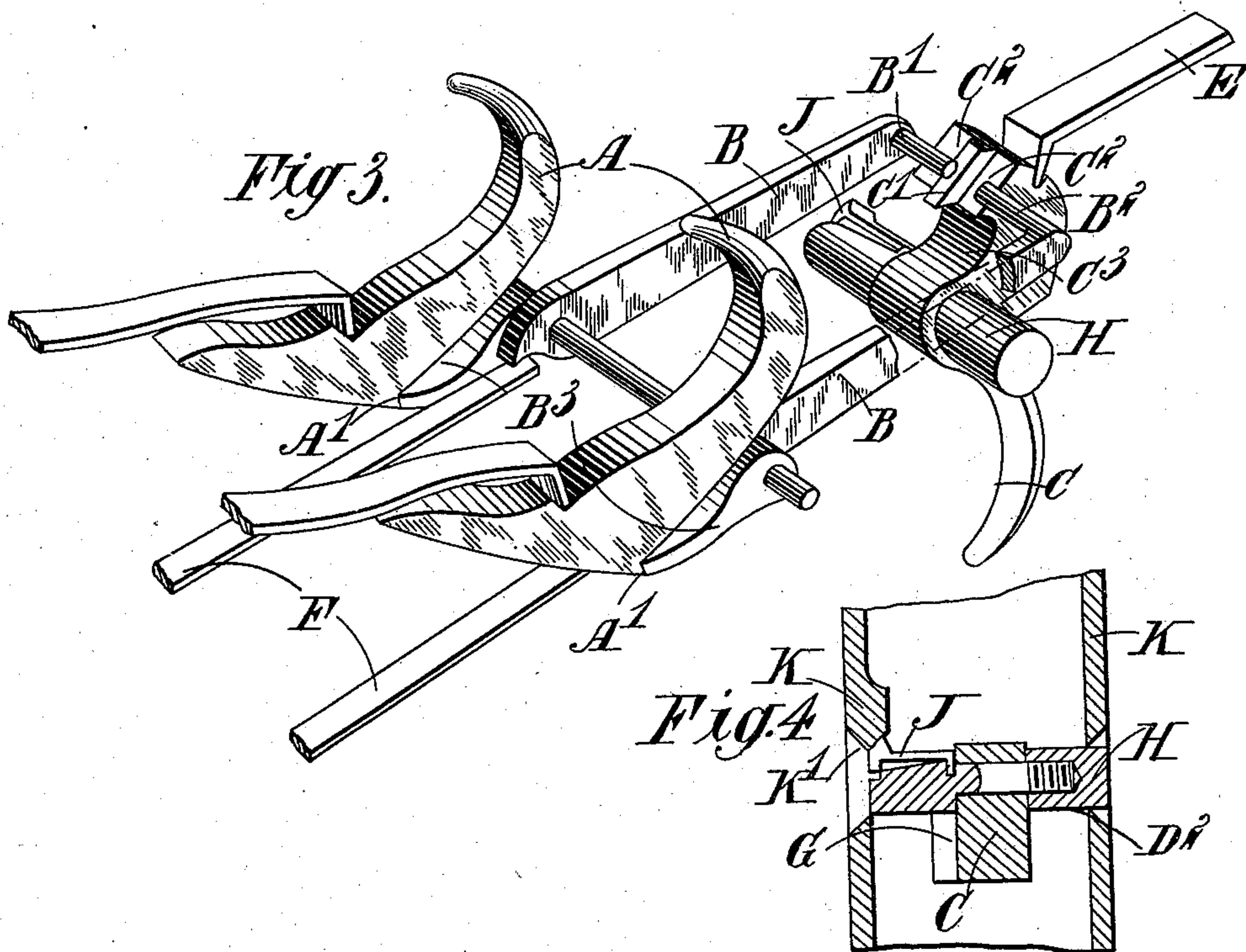
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(No Model.)

4 Sheets—Sheet 3.



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(No Model.)

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Fig. 5.

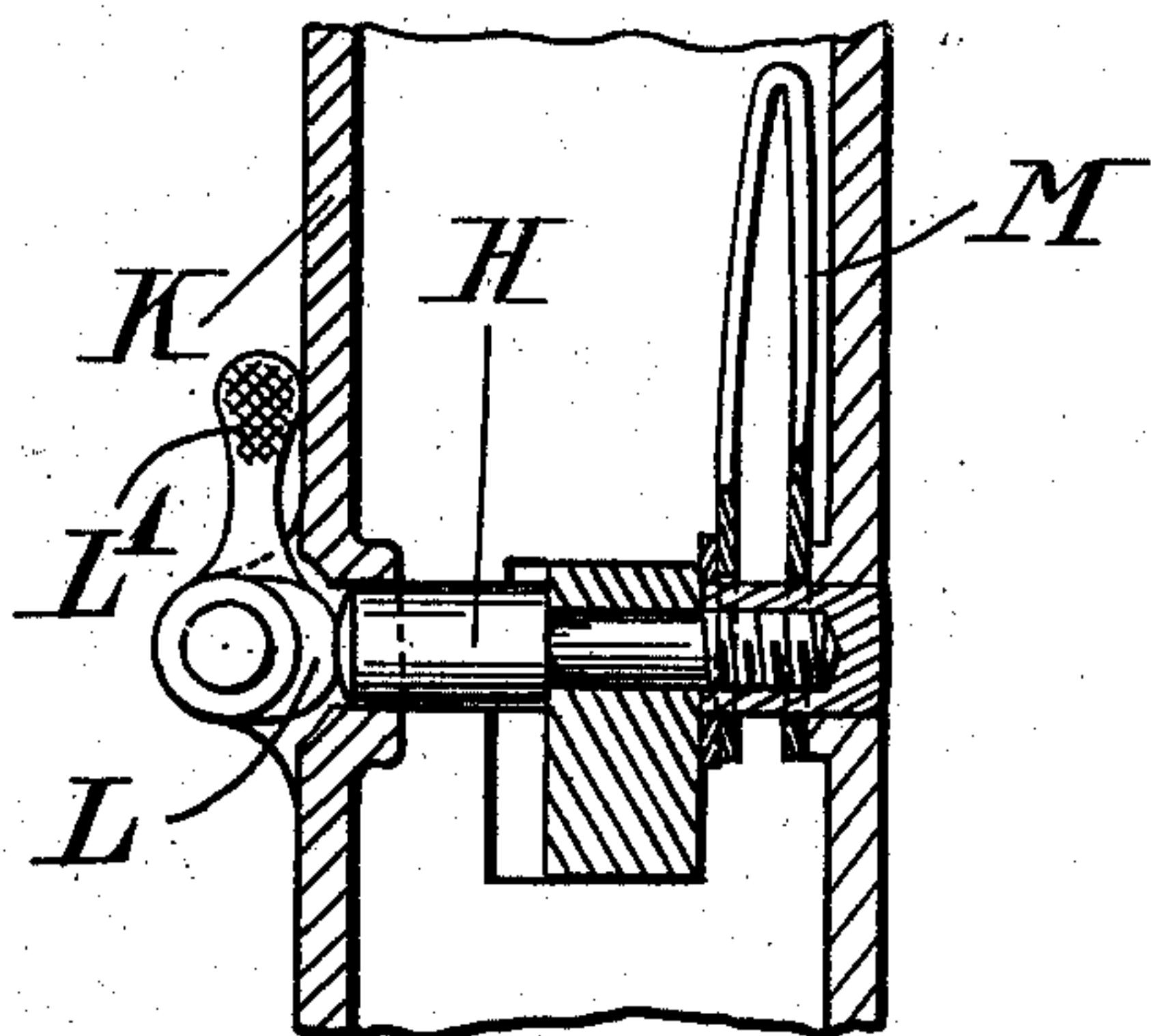


Fig. 6.

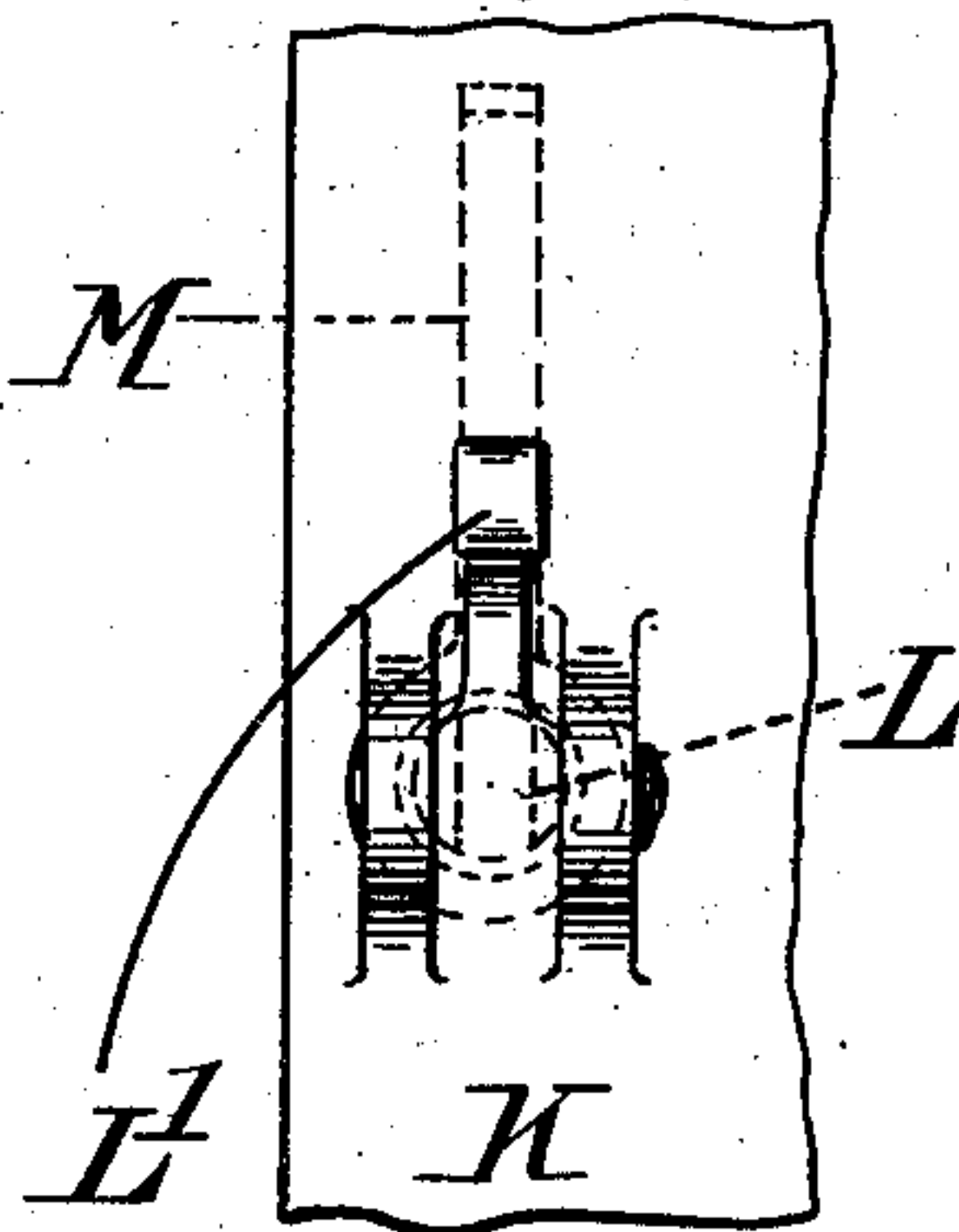
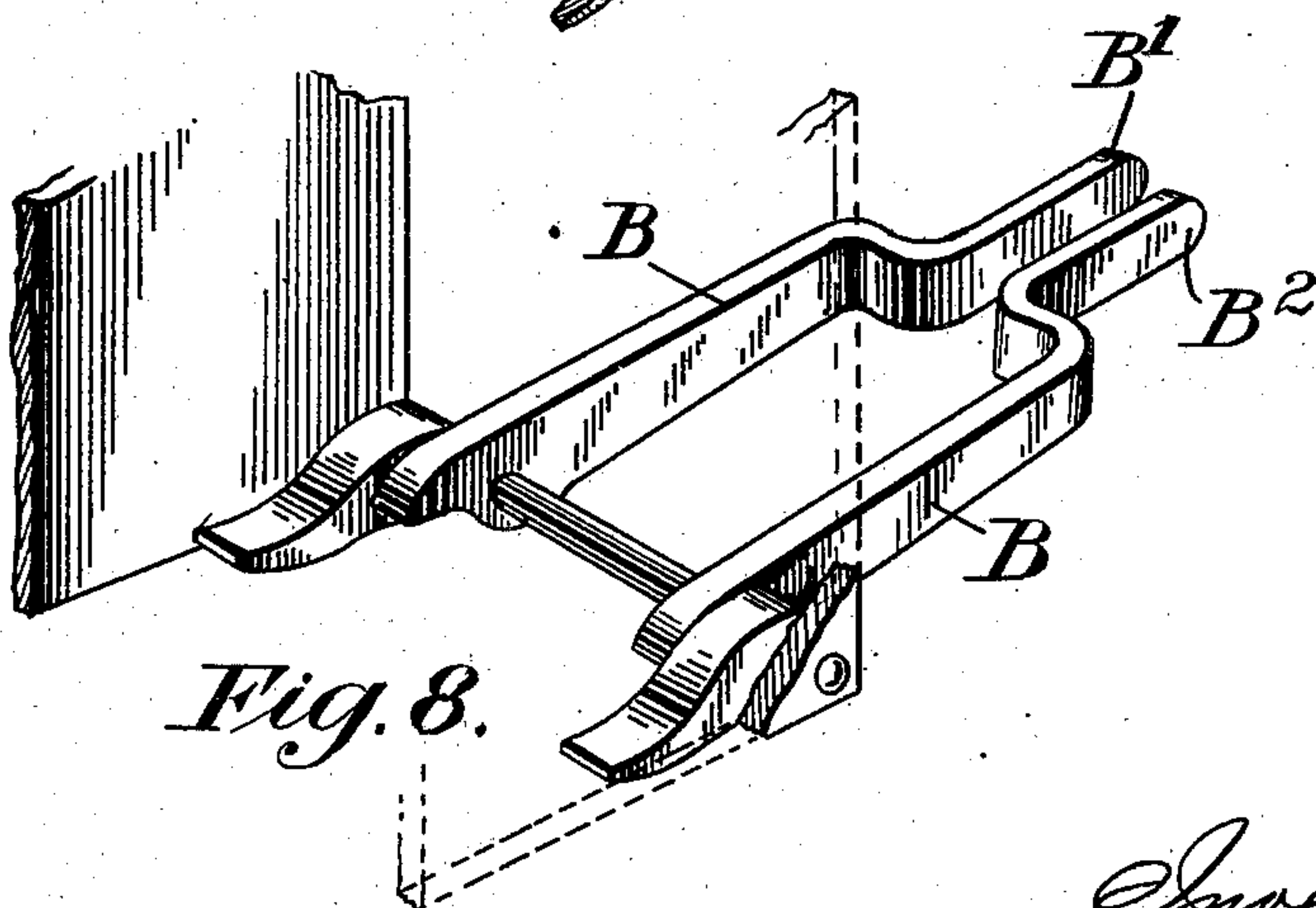
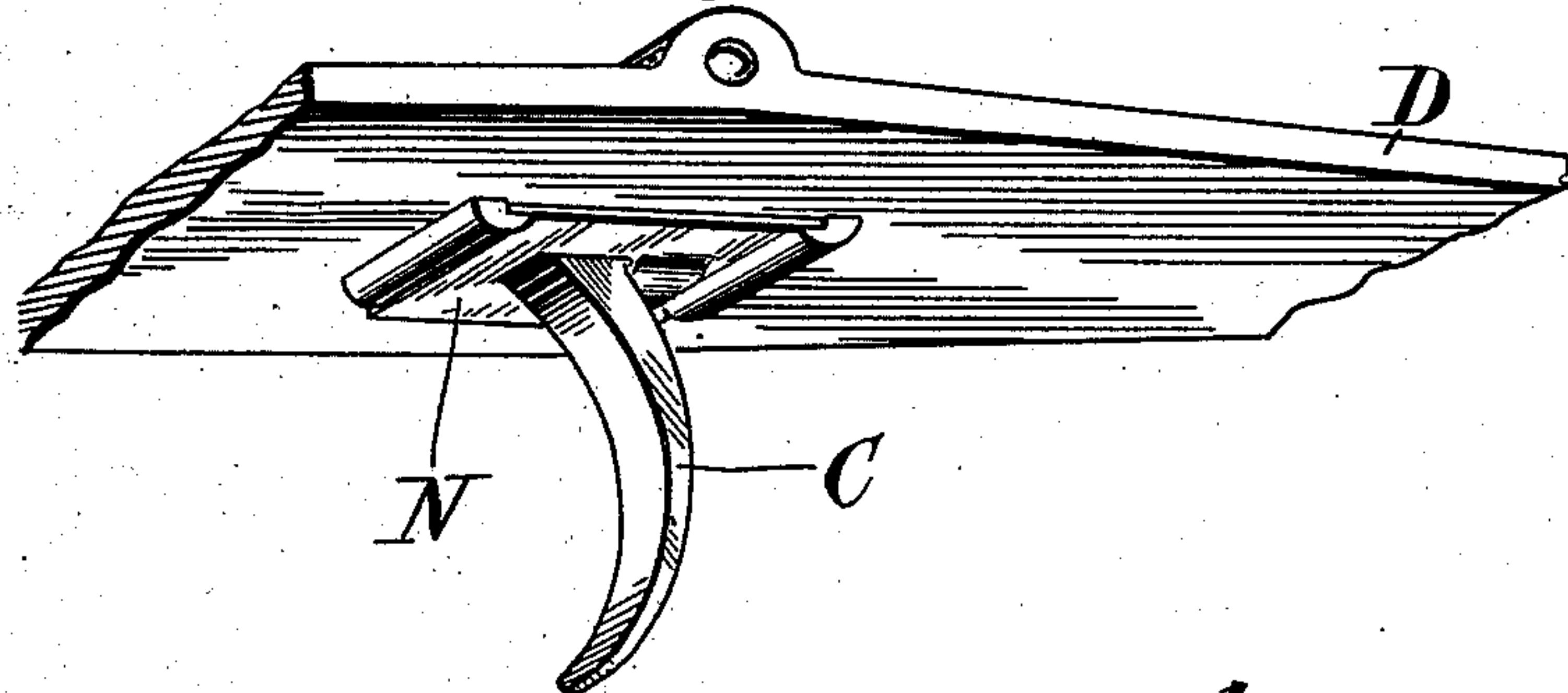


Fig. 7.



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# UNITED STATES PATENT OFFICE.

MICHAEL AUGUSTUS TIGHE, OF PRINCE'S RISBOROUGH, ENGLAND.

## SINGLE-TRIGGER MECHANISM.

SPECIFICATION forming part of Letters Patent No. 713,535, dated November 11, 1902.

Application filed May 5, 1902. Serial No. 106,064. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL AUGUSTUS TIGHE, major Indian Staff Corps, a subject of the King of England, residing at Prince's Risborough, county of Buckingham, England, have invented certain new and useful Improvements in or Relating to Single-Trigger Mechanism for Double-Barreled Guns and Rifles, of which the following is a specification.

This invention relates to single-trigger mechanism for double-barreled guns, rifles, pistols, and the like, and by its use the mechanism is simplified, the number of parts reduced, and the amount of stock cut away is also reduced.

The improvement is applicable to guns of the type known as "hammerless" or of those having hammers and with or without side plates, any slight modification in detail being made to suit the respective applications. The gun has either a selective or a non-selective action.

In carrying out this invention as applied to a double-barreled gun or the like, in which the action is to be non-selective, two tumblers or hammers and two corresponding sears of the usual type lying side by side are employed, and a single trigger is provided, having a head to engage one sear-tail, a shoulder lower than the head to engage the second sear-tail, and a recess to accommodate the first sear-tail during the second discharge. A portion of the breech action is arranged as a stop to prevent the first sear-tail from being raised up far enough to allow the shoulder to reach the second sear-tail during the first discharge.

In order that the first sear-tail may be accommodated in the recess in the trigger during the second discharge, it is necessary to cut an indentation in the tumbler to allow the first sear-tail to fall below its cocked position after the first discharge. The size of the indentation will depend upon the distance through which the sear-tail must fall.

In the case of the selective action the trigger is laterally movable to a certain extent. The trigger is provided with a central head to engage one sear-tail and two shoulders lower than the head, one of which can engage with the other sear-tail. As before, a recess

or space is formed in the trigger to receive the first sear-tail during the second discharge.

Any convenient device is employed to shift the trigger from side to side and to temporarily hold it in position. Preferably the pivot-pin projects into bearings in the trigger-plate, in which the pin can slide laterally, and a spring-catch or the like yieldingly holds the trigger at one side or the other. The pivot-pin projects into countersunk portions of the side plates, so as to be directly movable by the finger and thumb, or a cam or the like can be used as a shifter, preferably placed in a position in which it can be easily operated.

In the accompanying drawings, Figure 1 is a side elevation of a portion of the action of a double-barreled gun of non-selective type to which this invention has been applied, showing the successive positions of the hammers, sears, and trigger. Fig. 2 is a perspective view of the same. Fig. 3 is a perspective view of a portion of the action of a double-barreled gun of the selective type as constructed in accordance with one method of carrying out this invention; and Fig. 4 is a horizontal section through the pivot of the trigger, showing one form of shifter. Fig. 5 is a plan of a portion of the action of a double-barreled gun of the selective type, showing one method of shifting the trigger. Fig. 6 is a side elevation of the same. Fig. 7 is a perspective view of the trigger-plate and trigger of a gun of the selective type, showing the flanges that cover the aperture in the plate; and Fig. 8 is a perspective of a portion of the action of a double-barreled gun, showing one construction of the sears.

Like letters indicate like parts throughout the drawings.

Referring first to Figs. 1 and 2, the tumblers or hammers A and the sears B may be of any ordinary form and are placed side by side at a suitable distance apart, the sear-tails B' B<sup>2</sup> projecting toward each other, but leaving sufficient clearance between them. The sear-nose B<sup>3</sup> is arranged to engage in the ordinary recess A' in the tumbler when cocked. The trigger C is pivoted below the sear-tails and operates somewhat behind them. The trigger C is provided with a head C' at one



side to engage the first sear-tail  $B^1$  and a shoulder  $C^2$ , lower than the head, to engage the second sear-tail  $B^2$ . A recess  $C^3$  is also formed in the trigger to accommodate the first sear-tail  $B^1$  during the second discharge. The action-body forms a stop  $D^1$  to limit the motion of the first sear in order to prevent the shoulder  $C^2$  from reaching the second sear-tail  $B^2$  during the first discharge. Other means may be employed for this purpose. For example, an artificial stop may be provided on the trigger-plate lump or elsewhere. The trigger is controlled by a spring  $E$ , as in Figs. 1 or 3, and the sears by springs  $F$ .

In the construction shown an indentation  $A^2$  is cut in the tumbler  $A$  to receive the sear-nose  $B^3$  in order that the sear-tail  $B^1$  may fall below its cocked position after the first discharge and pass into the recess  $C^3$  during the second discharge. With some constructions of tumbler this would not be necessary.

The operation of the mechanism is as follows: When the gun is cocked, the tumbler  $A$  is tilted back until the sear-noses  $B^3$  engage the recesses  $A^1$ . The sears  $B$  then occupy the position shown in full lines in Fig. 1. When the trigger  $C$  is pulled back by the finger, the head  $C^1$  in the first place comes into contact with the sear-tail  $B^1$  and pushes it upward, thus removing the sear-nose  $B^3$  from the recess  $A^1$  and releasing the first tumbler or hammer  $A$ . The sear  $B$  comes into contact with the action-body at  $D^1$  and blocks the motion of the trigger. The trigger  $C$  when released from the operator's finger returns, under the influence of its spring  $E$ , to zero, and the sear-spring  $F$  brings the first sear-tail  $B^1$  to its lowest position, the sear-nose  $B^3$  falling into the indentation  $A^2$  in the tumbler, if necessary. When the trigger  $C$  is pulled to discharge the second barrel, the first sear-tail  $B^1$  is accommodated in the recess  $C^3$  in the trigger  $C$ , while the latter proceeds forward until the shoulder  $C^2$  engages the second sear-tail  $B^2$  and discharges the second barrel. The trigger has therefore to be pulled farther in the second case than in the first.

Referring now to Figs. 3 and 4, which illustrate the selective action, the trigger  $C$  is laterally movable to a certain extent, a clearance  $G$  being left between the trigger and the sides of the recess in which it is mounted. The trigger  $C$  is provided with a central head  $C^1$  to engage one sear-tail, and two shoulders  $C^2$ , lower than the head, one of which can engage with the other sear-tail. As before, a recess  $C^3$  is formed in the trigger to receive the first sear-tail during the second discharge. Projecting from the trigger is a pin  $H$ , which conveniently consists of two portions screwed together and which can slide laterally in bearings  $D^2$  in the trigger-plate  $D$ , Fig. 2. In order to hold the trigger  $C$  temporarily at one side or other of the recess, a spring-catch  $J$  is fastened to the pin  $H$ . If the rifle or gun has side plates, as in Fig. 4, plates  $K$  can be

countersunk, as at  $K'$ , to allow access to the ends of the pin  $H$  without permitting the ends to project beyond the surfaces of the plates. The spring-catch  $J$  may act by engaging either with the outside or inside of one of the plates  $K$ .

The operation of the mechanism is as follows: When the gun is cocked, the trigger  $C$  is moved to the side of the barrel which it is desired to discharge first—say to the right. When the trigger is pulled, the head  $C^1$  engages the sear-tail  $B^1$  on the side to which the trigger has been moved and discharges the first barrel. The trigger is then released and springs back to zero. When the trigger  $C$  is pulled the second time, the shoulder  $C^2$ , which is appropriated to the second sear-tail  $B^2$ , discharges the second barrel, while the first sear  $B^1$  is, as before, accommodated in the recess  $C^3$ . If it should be desired to discharge the left-hand barrel first, the trigger  $C$  is shifted to the left, and under these circumstances when the trigger is pulled for the first time the head  $C^1$  will come into contact with the left sear-tail  $B^2$ , and the left barrel will therefore be discharged. The right-hand shoulder  $C^2$  will on the second operation lift the right-hand sear-tail  $B^1$ . The shifting of the trigger from side to side is effected by simply pressing on either end of the pin  $H$  with the finger or thumb, when the spring-catch  $J$  is moved from one of its fixed positions to the other.

Referring to Figs. 5 and 6, which illustrate an alternative form of shifter, a cam  $L$  is pivoted on the side plate  $K$  so as to abut against the pivot-pin  $H$  of the trigger. The pivot-pin is kept pressing against the cam by means of a spring  $M$ , and the cam is provided with a handle  $L'$ . By turning the handle  $L'$  the trigger may be shifted from side to side, and the handle  $L'$  is placed on the outside of the gun, so that it may be easily operated by the finger or thumb. The bearing for the shifter is so arranged that it does not interfere with the tails of the sears to prevent them falling into their discharged position.

Referring to Fig. 7, in the case of a gun having a selective action the aperture in the trigger-plate  $D$  when the trigger  $C$  is at one side is closed by sliding plate  $N$ .

In the construction illustrated in Figs. 1 and 3 the trigger-spring  $E$  is sufficiently broad to allow the trigger to shift laterally thereon.

In some constructions it may be more convenient to allow the spring to shift with the trigger. All the other usual working parts of the gun or the like are employed in their ordinary functions.

Referring to Fig. 8, the sear-tails  $B^1$   $B^2$  are bent at right angles, so as to project backward parallel to the length of the gun in order to be accommodated inside the bearings of the trigger-pin  $H$  when it is desired to make these particularly narrow.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a double-barreled firearm the combi-



nation of two spring-controlled tumblers, two spring-controlled sears, recesses in the tumblers in which the sears engage when cocked, a single spring-controlled trigger, an operating-face on the trigger to engage the first sear, a second operating-face lower than the first to engage the second sear, means for limiting the motion of the first sear so that only one can be operated at a single pull, means for accommodating the first sear during the second discharge and means for permitting the first-operated sear-tail to drop below cocked position.

2. In a double-barreled firearm the combination of two spring-controlled tumblers, two spring-controlled sears, recesses in the tumblers in which the sears engage when cocked, a single spring-controlled trigger laterally movable, a central operating-face on the trigger to engage the first sear, two lower operating-faces one of which can engage the other sear, means for limiting the motion of the first sear so that only one can be operated at a single pull, means for accommodating the first-operated sear during the second discharge and means for permitting the first-operated sear-tail to drop below cocked position.

3. In a double-barreled firearm the combination of two spring-controlled tumblers, two spring-controlled sears, recesses in the tumblers in which the sears engage when cocked, a single spring-controlled trigger laterally movable, a central operating-face on the trigger to engage the first sear, two lower operating-faces one of which can engage the other sear, means for limiting the motion of the first sear so that only one can be operated at a single pull, means for accommodating the first-operated sear during the second discharge, means for permitting the first-operated sear-tail to drop below cocked position, and a pin projecting from the trigger into bearings in the body of the firearm.

4. In a double-barreled firearm the combination of two spring-controlled tumblers, two spring-controlled sears, recesses in the tumblers in which the sears engage when cocked, a single spring-controlled trigger laterally movable, a central operating-face on the trigger to engage the first sear, two lower operating-faces one of which can engage the other sear, means for limiting the motion of the first sear so that only one can be operated at a single pull, means for accommodating the first-operated sear during the second discharge and means for permitting the first-operated sear-tail to drop below cocked position, a pin projecting from the trigger into bearings in the body of the firearm, and a spring-catch on the trigger to yieldingly hold it at one side or the other.

5. In a double-barreled firearm the combination of two spring-controlled tumblers, two spring-controlled sears, recesses in the tumblers in which the sears engage when cocked, a single spring-controlled trigger laterally movable, a central operating-face on the trig-

ger to engage the first sear, two lower operating-faces one of which can engage the other sear, means for limiting the motion of the first sear so that only one can be operated at a single pull, means for accommodating the first-operated sear during the second discharge, a pin projecting from the trigger into bearings in the body of the firearm, a spring-catch on the trigger to yieldingly hold it at one side or the other and means for accommodating the sear-noses so that the sear-tails fall below the cocked position after discharge.

6. In a double-barreled firearm the combination of two spring-controlled tumblers, two spring-controlled sears, recesses in the tumblers engaging with the sears when cocked, tails on the sears, a single spring-controlled trigger, a head on the trigger to engage the first sear-tail, a shoulder on the trigger lower than the head to engage the other sear-tail, a recess in the trigger to accommodate the first sear-tail during the second discharge and means for permitting the first-operated sear-tail to drop below cocked position.

7. In a double-barreled firearm the combination of two spring-controlled tumblers, two spring-controlled sears, recesses in the tumblers engaging with the sears when cocked, tails on the sears, a single spring-controlled trigger, a head on the trigger to engage the first sear-tail, a shoulder on the trigger lower than the head to engage the other sear-tail, a recess in the trigger to accommodate the first sear-tail during the second discharge, means for permitting the first-operated sear-tail to drop below cocked position and stops to block the first-operated sear so that only one tumbler can be released at a single pull.

8. In a double-barreled firearm the combination of two spring-controlled tumblers, two spring-controlled sears, recesses in the tumblers engaging with the sears when cocked, tails on the sears, a single spring-controlled trigger laterally movable, a central head on the trigger to engage the first sear-tail, two shoulders on the trigger lower than the head, one of which can engage the remaining sear-tail, a recess in the trigger to accommodate the first sear-tail during the second discharge, means for permitting the first-operated sear-tail to drop below cocked position and stops to block the first-operated sear so that only one tumbler can be released at a single pull.

9. In a double-barreled firearm the combination of two spring-controlled tumblers, two spring-controlled sears, recesses in the tumblers engaging with the sears when cocked, tails on the sears, a single spring-controlled trigger laterally movable, a central head on the trigger to engage the first sear-tail, two shoulders on the trigger lower than the head, one of which can engage the remaining sear-tail, a recess in the trigger to accommodate the first sear-tail during the second discharge, means for permitting the first-operated sear-tail to drop below cocked position, stops to block the first-operated sear so that only one



tumbler can be released at a single pull, a pin projecting from the trigger into bearings in the firearm and a spring-catch on the trigger to yieldingly hold it to one side or the other.

10. In a double-barreled firearm the combination of two spring-controlled tumblers, two spring-controlled sears, recesses in the tumblers engaging with the sears when cocked, 10 tails on the sears, a single spring-controlled trigger laterally movable, a central head on the trigger to engage the first sear-tail, two shoulders on the trigger lower than the head, one of which can engage the remaining sear-tail, a recess in the trigger to accommodate 15 the first sear-tail during the second discharge,

stops to block the first-operated sear, so that only one tumbler can be released at a single pull, a pin projecting from the trigger into bearings in the firearm, a spring-catch on the trigger to yieldingly hold it to one side or the other, and indentations in the tumblers to allow each sear-tail to fall below its cocked position after discharge.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MICHAEL AUGUSTUS TIGHE.

Witnesses:

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HARRY B. BRIDGES.