July 29, 1924. 1,502,658

J. M. BROWNING

FIREARM

Filed May 21, 1920 2 Sheets-Sheet 1

Fig. 1.

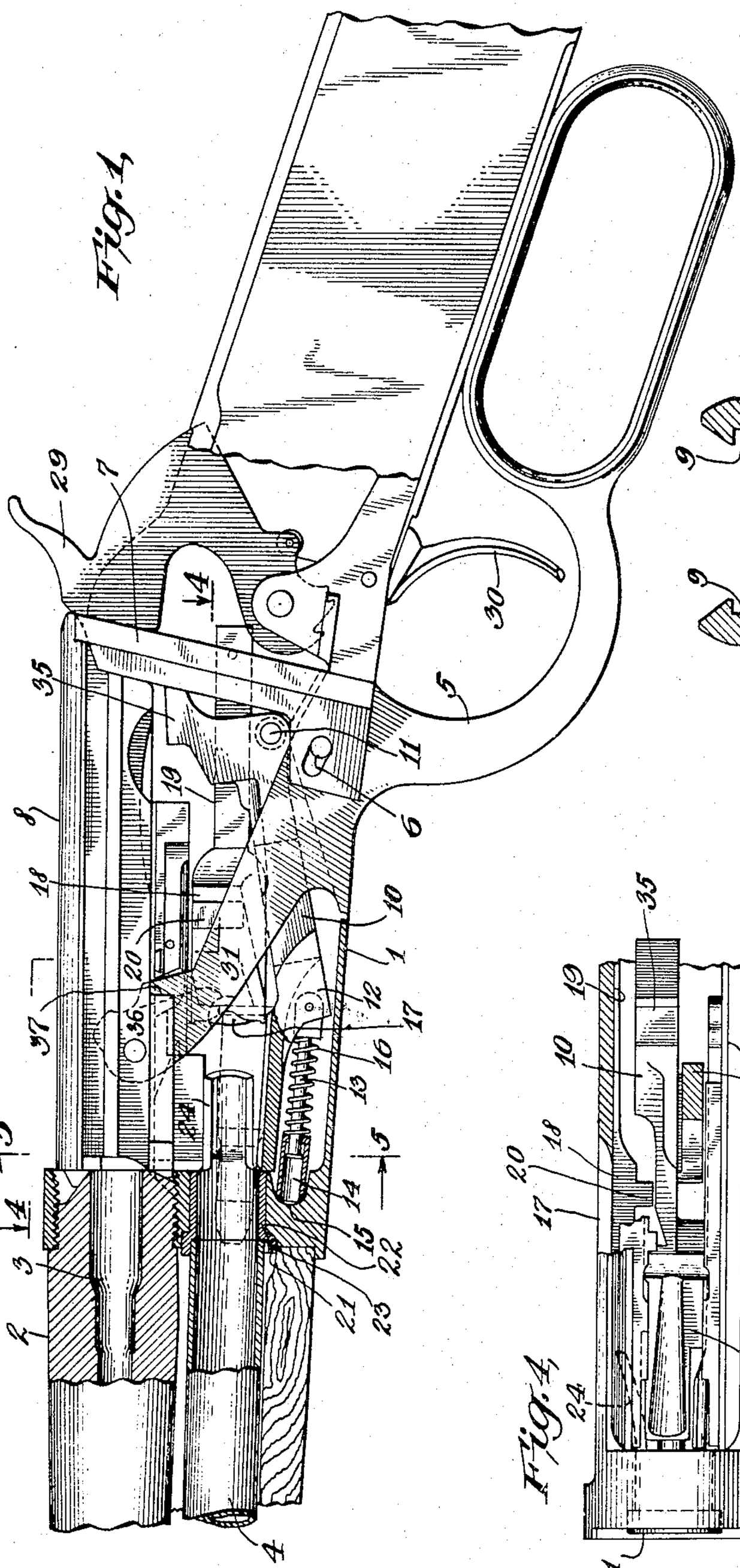

Fig. 3.

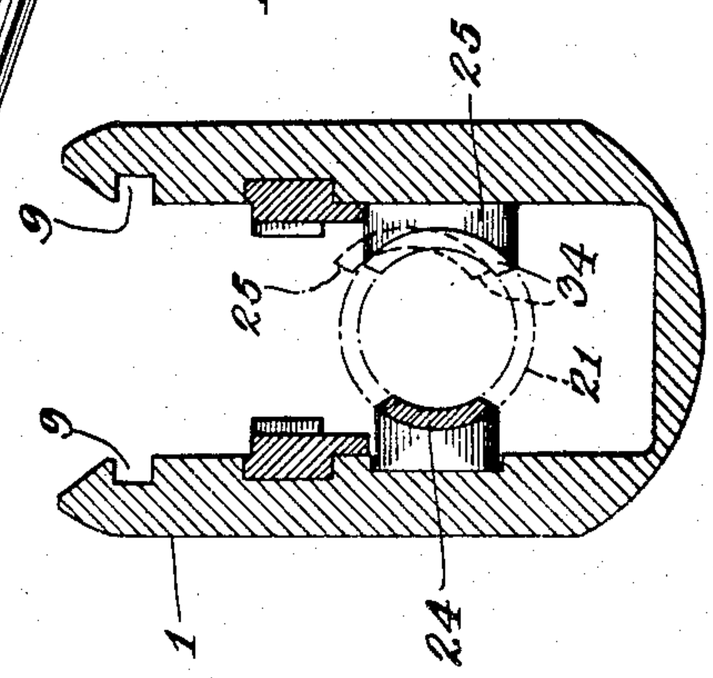

Fig. 4.

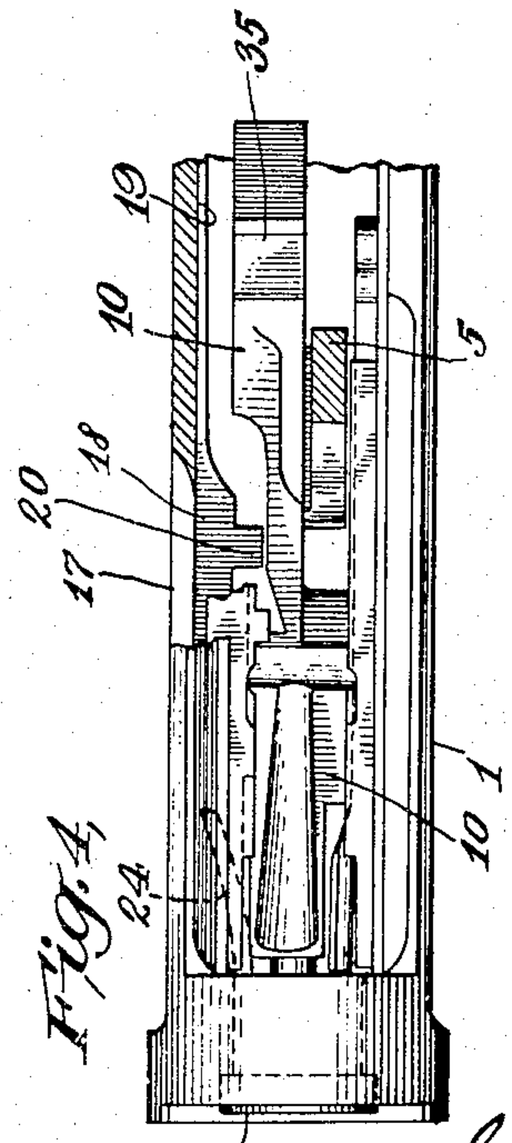

Fig. 6.

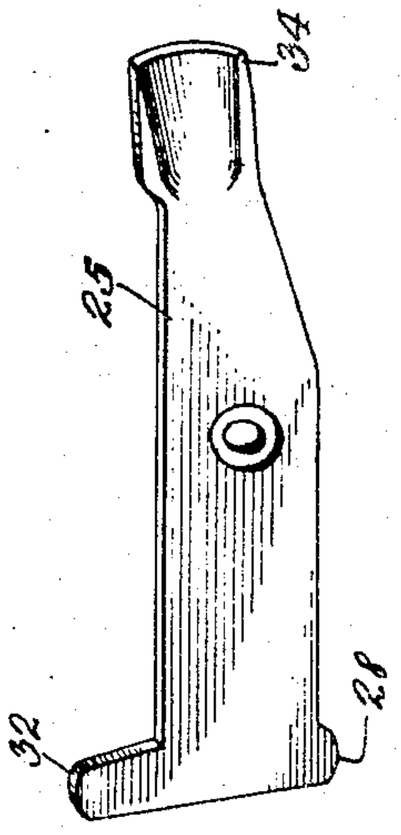

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Fig. 2.

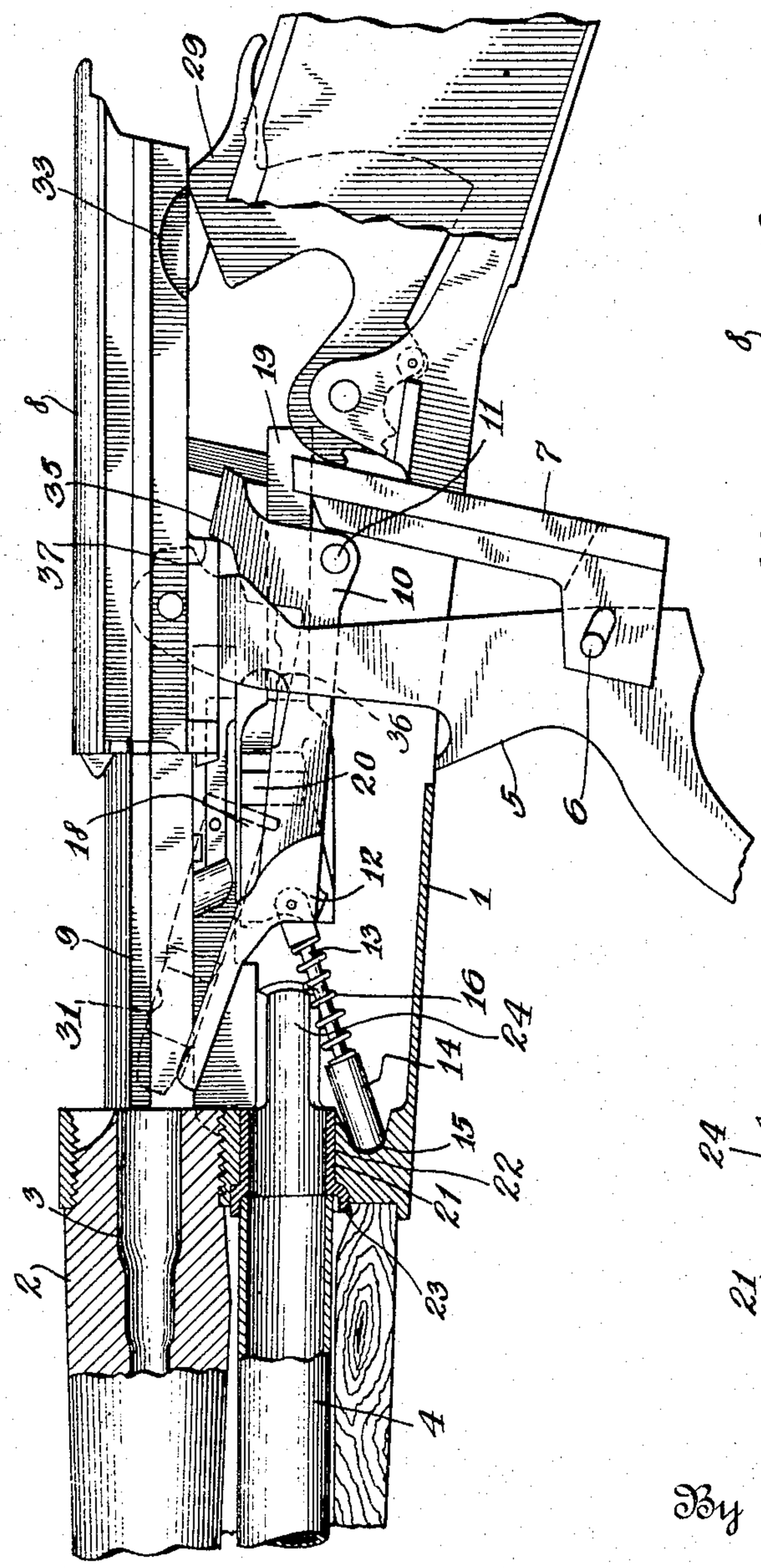


Fig. 3.

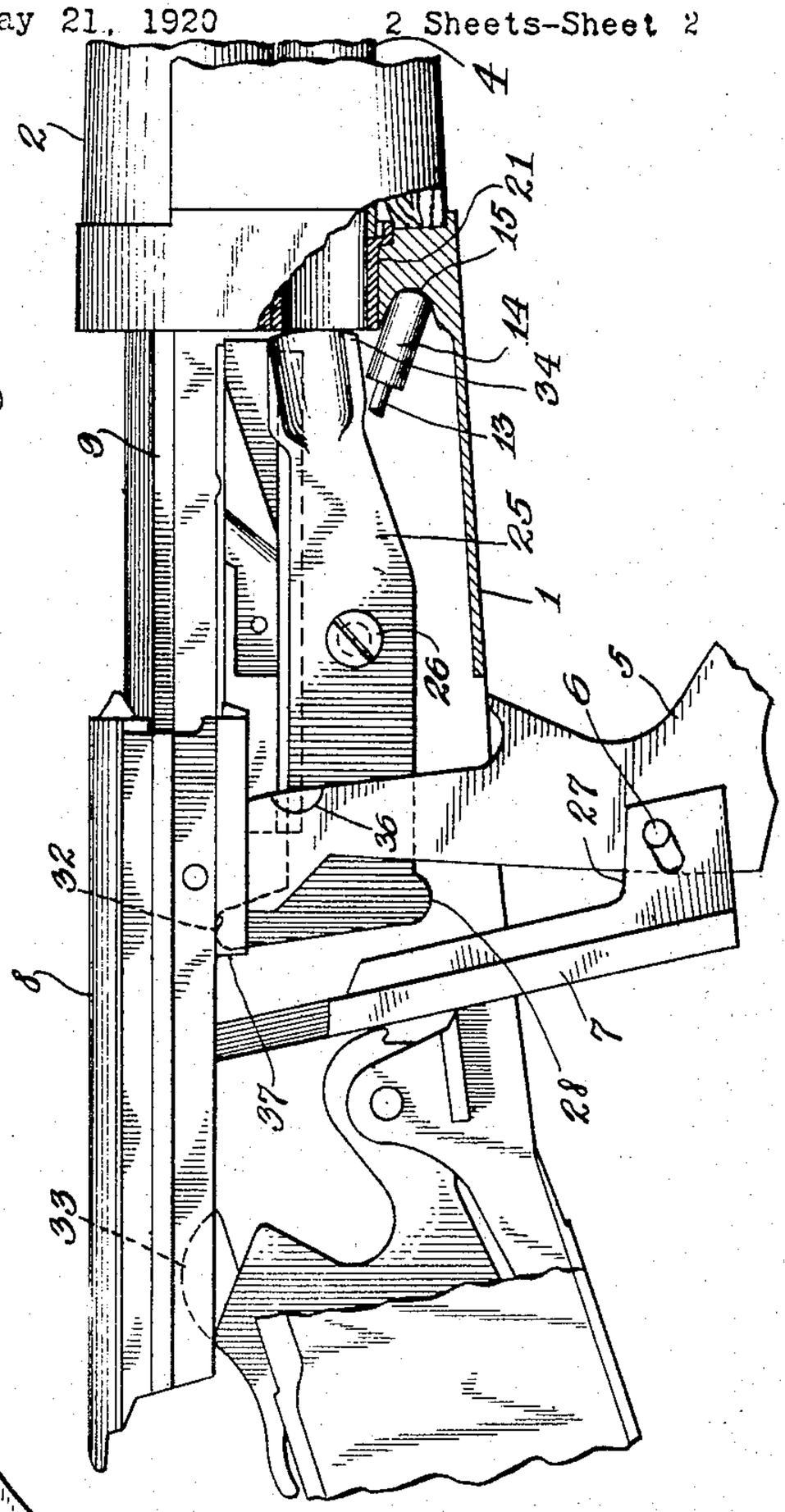
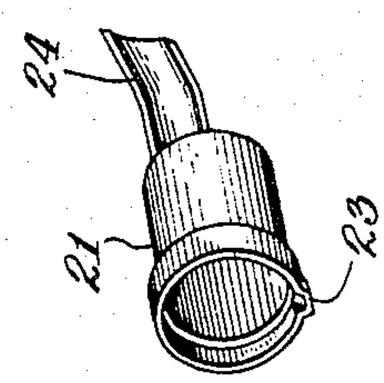


Fig. 4.



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Patented July 29, 1924. 1,502,658

UNITED STATES PATENT OFFICE.

JOHN M. BROWNING, OF OGDEN, UTAH.

FIREARM.

Application filed May 21, 1920. Serial No. 383,063.

To all whom it may concern:

Be it known that I, JOHN M. BROWNING, a citizen of the United States, and a resident of the city of Ogden, county of Weber, and State of Utah, have invented certain new and useful Improvements in Firearms, of which the following is a specification.

This invention relates to magazine-firearms, an object of the invention being to provide a firearm in which cartridges of different lengths can be used with the one model, as distinguished from firearms as now manufactured wherein different models must be employed to accommodate the firearm to different lengths of cartridges.

The receiver of the present firearm is adapted to take both short and long cartridges and cartridges of various calibers, which is very advantageous from a manufacturer's standpoint inasmuch as the receiver is usually the most expensive part of the firearm to manufacture.

In the accompanying drawings wherein I have illustrated an embodiment of my invention,—

Fig. 1 is a part sectional elevational view taken through the chamber, magazine and receiver of a firearm with the action locked;

Fig. 2 is a part sectional elevational view of the apparatus of Fig. 1 with the action-lever in its forward position and the breech-block in its extreme rearward position;

Fig. 3 is a view similar to Fig. 2 but taken from the opposite side of the receiver;

Fig. 4 is a view taken substantially on the line 4—4 of Fig. 1;

Fig. 5 is a section of Fig. 1 taken on the line 5—5;

Fig. 6 is a view of what will hereinafter be termed a combined cartridge-stop and bullet-guide; and

Fig. 7 is a view of a bushing which functions to receive the end of the magazine and also as a guide for guiding the passage of a cartridge from the receiver into the magazine in filling the magazine.

Referring to the drawings in detail, 1 designates a receiver which is adapted to be secured in any suitable manner to the barrel 2 of a firearm, the barrel being chambered at 3. The receiver is also adapted to receive a magazine 4, the connection of the magazine to the receiver being described more in detail hereinafter. 5 designates an action-lever pivoted at 6 to a locking block 7, the upper end of the action-lever engaging a breech-block 8 so that when the lever is moved from the position shown in Fig. 1 to the position shown in Fig. 2 and vice versa, the breech-block 8 will be reciprocated in a well known manner, the breech-block being guided in its movement by suitable guides 9. A carrier 10 pivoted in the receiver at 11 is provided for the purpose of receiving a cartridge from the magazine 4 and raising it into position to be forced into the chamber 3 by movement of the breech-block 8 as the same is moved forward from the position shown in Fig. 2 to the position shown in Fig. 1. This carrier is provided with a downwardly extending lug 12 to which is pivoted a short rod 13 adapted to be reciprocated in a short tube 14, the forward end of which tube engages at all times a recess 15 provided for that purpose near the front end of the receiver. The rod 13 carries a coil-spring 16 extending longitudinally of the carrier 10 and adapted to be placed under compression as the rod 13 is reciprocated in the tube 14.

The receiver 1 is provided with a loading opening 17 through which the firearm may be charged with a supply of cartridges. This loading opening is here shown in the side of the receiver but it is to be understood that it may be located in any other convenient position. A spring-closed loading-trap 18 is carried at the loading-opening and supported in the receiver in the usual way, this loading-trap, as will be seen from Fig. 4, carrying a flat spring 19 provided for the purpose of maintaining the trap closed when the firearm is in operation, the loading opening being closed at all times except when charging a supply of cartridges into the firearm. Carried on the loading-trap is a lug 20 functioning as a cartridge arrester and provided for the purpose of limiting rearward movement of a cartridge relative to the receiver 1, the carrier 10, and action-lever 5.

When it is desired to employ the receiver 1 in a firearm using cartridges of small caliber, it becomes necessary, of course, to provide a smaller magazine 4 and as the opening in the forward end of the receiver 1 is bored to receive a large magazine to accommodate cartridges of a larger caliber, I

have provided a bushing 21 which is adapted to be inserted in the opening 22 at the forward end of the receiver and which will receive the magazine 4. This bushing is shown in Fig. 7 and from an inspection of this figure it will be seen that it is provided with a key 23 which is adapted to engage a keyway in the opening 22 in the receiver. In order that the cartridge may be properly guided as it is forced into the magazine through the receiver in filling and then from the magazine into the receiver preparatory to being lifted by the carrier 10 (for it is to be remembered now that the cartridge being used is of a small caliber) I have provided the bushing 21 with a rearwardly extending projection 24. It will be understood, of course, that when it is desired to use the firearm for larger caliber cartridges the magazine will be of a size corresponding to the opening 22 in the receiver and that the bushing will then be unnecessary.

The receiver is also provided with a combined cartridge-stop and bullet-guide shown in detail in Fig. 6 and designated 25, this cartridge-stop and bullet-guide being pivoted in the receiver at 26. This device is provided for the purpose of controlling the feed of cartridges to the receiver from the magazine and for guiding the passage of a cartridge into the magazine in filling especially, and also from the magazine to the receiver, and is controlled by movement of the breech block 8 and the locking block 7, the latter being offset at 27, from the action-lever, as indicated in Fig. 3, to engage a projection 28 provided on the rear end of the combined cartridge-stop and bullet-guide 25 when the action-lever is moved to closed position as indicated in Fig. 1, this engagement of the block 7 with the projection 28 causing the combined cartridge-stop and bullet-guide 25 to move about its pivot 26 from the position shown in Fig. 3 which is indicated in dotted lines in Fig. 5 to the position shown in full lines in said figure, the lower part of the curve of the end of the member 25 when in the dotted line position shown in Fig. 5 preventing cartridges from passing from the magazine into the receiver, the curve when the member is moved to the full line position of Fig. 5 guiding the bullet of a cartridge being forced into the magazine, or the head of a cartridge passing from the magazine to the receiver.

The firearm illustrated is provided with the usual firing mechanism comprising the hammer 29, trigger 30 and firing pin but inasmuch as these parts form no part of the present invention their operation will not be described as they are well known in this art.

Assuming now that it be desired to operate the firearm and that the firearm is to be employed with short small caliber cartridges: the bushing 21 will have been inserted in the opening 22 in the forward end of the receiver in order to accommodate the receiver to the small sized magazine 4. The receiver will also under these conditions have been provided with the loading-trap 18 carrying a cartridge-arrester 20. With the parts in the position shown in Fig. 1 cartridges may now be fed into the magazine 4 through the loading-opening, the cartridges being properly guided into the magazine by the projection 24 formed on the bushing 21, and the bullet guiding portion 34 of the cartridge-stop 25, as already described; and as the last cartridge is fed into the magazine it will assume the dotted line position upon the carrier 10 shown at 31 in Fig. 1 with the cartridge-head resting against the shoulder 36 formed for this purpose on the action-lever. This shoulder 36 is made to stop cartridges of large caliber or whose heads are of larger diameter and it is possible for cartridges with smaller heads to slip past it. In order, however, that the cartridge may not slide rearward past the action lever far enough to jam the action of the firearm, I have provided the cartridge-arrester 20 already referred to, so that if the cartridge should escape the shoulder 36 on the action-lever 5 it will stop against the cartridge-arrester 20 in position to be raised by the carrier. The carrier 10 at this time is held in the position shown in Fig. 1 by the expansion of the spring 16 as the force exerted by this spring with the carrier in this position is below the pivot 11 about which the carrier moves. At this time also the curved end of the combined cartridge-stop and bullet-guide is in the full line position shown in Fig. 5, having been forced into that position by engagement of the offset 27 of the locking-block 7 with the projection 28, and I might here mention that movement of the combined cartridge-stop and bullet-guide in this position forces the lug 32 formed on the rear end of the member 25 into a concave depression 33 formed in the breech-block 8. If the action-lever 5 be operated from the position shown in Fig. 1 to that shown in Fig. 2 it will be seen that the first movement of this lever will force the breech-block 8 rearwardly and this rearward movement of the breech-block will cause the cam surface at the front end of the depression 33 in the breech-block to force the rear end of the combined cartridge-stop and bullet-guide 25 downwardly swinging the same about its pivot 26 until the curved forward end of this member assumes the dotted line position shown in Fig. 5 from which it will be seen that the bottom 34 of this curved portion will be moved into cartridge-stopping position to prevent the next cartridge in the mag-

azine 4 from being fed into the receiver. Movement of the action-lever 5 allows the cartridge 31 to be forced back by the magazine spring into position on the carrier, with its front end clear of the magazine, at the same time causing the breech-block 8 to travel rearwardly. The lug 37 of the latter will engage the tail 35 formed on the carrier 10 to cause the forward end of the carrier to be lifted to elevate the cartridge 31 carried thereby. this movement of the carrier compressing the spring 16 and when the force exerted by the tendency of this spring to expand passes above the center line of the pivot 11 about which the carrier 10 is moving, the carrier will be forced up under this action of the spring to the position shown in Fig. 2 and be maintained in this position by the spring. The cartridge is now in an inclined position as indicated in Fig. 2, with its bullet abreast of the chamber 3. The reverse movement of the action-lever 5 to force the cartridge into the chamber 3 will cause the breech-block 8 to move forwardly and engage the cartridge to force the same into the chamber 3 and as the locking-block 7 moves upwardly due to rearward movement of the action-lever, it will engage the tail 35 on the carrier 10 to force the rear end of the carrier upwardly until finally the force exerted by the spring 16 which is compressed due to this movement of the carrier passes below the pivot 11 of the carrier when the spring will cause the carrier to snap downwardly into the position shown in Fig. 1 which is its cartridge-receiving position as will be obvious. The carrier will be held in this position by the spring until the next movement of the action-lever. Inasmuch as it is desired at this time to have the next cartridge in the magazine fed into the receiver to rest against the shoulder 36 of the action-lever 5 it is necessary to move the combined cartridge-stop and bullet-guide 25 out of cartridge-stopping position, that is to say, out of the dotted line position shown in Fig. 5 and this is accomplished by the offset 27 of the locking block 7 engaging the projection 28 on the rear end of this member as the locking-block is moved upwardly which will cause the member 25 to rock about its pivot 26 into the full line position shown in Fig. 5.

It will be obvious from the foregoing that I have provided a firearm with a receiver which is adapted for use with cartridges not only of different calibers but also of different lengths for obviously if it be desired to use this receiver for a longer cartridge than was used in the operation of the firearm as above described it would merely be necessary to substitute a loading-trap for the loading trap 18 which would not be provided with the cartridge-arrester 20, and to shorten the lug 37 on the breech-block 8 to allow the latter to travel farther to the rear.

It will be obvious also that by merely removing the bushing 21 and providing a magazine 4 of the proper size as well as substituting the proper size of barrel, cartridges of a larger caliber may be used with this same receiver.

In short, it will be obvious that the receiver here described is adapted for use in a firearm with cartridges of different lengths as well as different calibers which as pointed out is very advantageous inasmuch as the receiver is very expensive.

It will be seen also that I have provided a cartridge-arrester which is operative independently of the action lever for positively limiting movement of a cartridge rearwardly of the receiver relative to said lever.

While I have herein illustrated and described a preferred embodiment of my invention it is to be understood that changes may be made in the details thereof within the purview of the present invention.

What is claimed as new is:

1. In a firearm adapted to be used with cartridges of different calibers, a receiver provided with a loading-opening through which the firearm is charged with cartridges, a loading-trap in said opening for maintaining the loading-opening closed when the firearm is in operation, a stop for limiting rearward movement of a cartridge of one caliber when the action is locked, and an auxiliary stop for positively limiting the rearward movement of a cartridge of different caliber.

2. In a firearm adapted to be used with cartridges of different calibers, a receiver provided with a loading-opening, a loading-trap in said opening, a cartridge-carrier, a stop for preventing a cartridge of one caliber moving rearwardly in the receiver when the action is locked, and an auxiliary stop for positively limiting the rearward movement of a cartridge of a different caliber.

3. A receiver for a firearm adapted to be used with cartridges of different calibers comprising in combination an action lever having a stop for engaging a cartridge of one caliber when the action is locked and a cartridge arrester operative independently of said lever for positively limiting the rearward movement of a cartridge of a different caliber in said receiver.

4. A receiver for a firearm adapted to be used with cartridges of different calibers comprising in combination a cartridge-carrier, an action-lever having a stop for engaging and preventing rearward movement of a cartridge of one caliber when the action is locked, and a cartridge-arrester operative independently of said lever for positively

limiting the rearward movement of a cartridge of a different caliber relative to said carrier.

5. A receiver for a firearm adapted to be used with cartridges of different caliber comprising in combination a cartridge-carrier, an action-lever having a stop for normally engaging a cartridge of one caliber when the action is locked, a loading-trap, and a cartridge-arrester carried by said loading-trap and operative independently of said lever for positively limiting a movement of the cartridge of different caliber rearwardly relative to said carrier.

6. A receiver for a firearm comprising a loading trap, and a pivoted member, said pivoted member functioning as a cartridge stop and its forward end being shaped to form a bullet guide for guiding a cartridge being fed through the receiver into the magazine of the firearm past said loading trap.

7. In a firearm, a receiver and a combined cartridge-stop and bullet-guide sustained thereby, the forward end of said stop and guide being curved to serve as a bullet-guide, the lower edge of said curve functioning as a cartridge-stop.

8. In a firearm the combination of a breech-block, a locking-block and a combined cartridge-stop and bullet-guide controlled by said blocks.

9. In a firearm the combination of a sliding breech-block, a sliding locking-block and a combined cartridge-stop and bullet-guide moved to cartridge-stopping position by rearward movement of the breech-block and to cartridge-releasing and bullet-guiding position by closing movement of the locking-block.

10. In a firearm the combination of a magazine, a sliding breech-block, a sliding locking-block and a combined cartridge-stop and bullet-guide actuated by the breech-block in opening to stop a cartridge following in the magazine and actuated by the locking-block in closing so as to release the cartridge in the magazine and function as a bullet-guide.

11. In a firearm the combination of a magazine, a receiver having a loading-opening therein, a loading-trap at said opening, a carrier, a sliding breech-block and an action-lever sustained by said receiver, a cartridge-arrester carried by said loading-trap for limiting movement of a cartridge rearwardly relative to said receiver and said carrier and a combined cartridge-stop and bullet-guide acted on by the said breech-block in opening to stop a cartridge following in said magazine and a locking-block acting on said cartridge-stop and bullet-guide in closing to move the same out of cartridge-stopping position to release the cartridge in the magazine.

12. In a firearm having a magazine and a pivoted carrier for transferring a cartridge from the magazine to the chamber of the firearm, a sliding breech-block which in its rearward movement moves said carrier into loading position, a locking block which in its closing movement moves said carrier to receiving position, and a coil spring extending longitudinally of said carrier for maintaining the carrier in said respective loading and receiving positions.

13. In a magazine-firearm the combination of a magazine, a receiver having an opening therein, a bushing in said opening for receiving said magazine, said bushing being provided with a rearwardly extending projection for guiding a cartridge passing into said magazine.

14. In a firearm having a magazine and a pivoted carrier for transferring a cartridge from the magazine to the chamber of the firearm, a sliding breech-block which moves said carrier into loading position, a locking-block which moves said carrier to receiving position, and a coil spring extending longitudinally of said carrier for maintaining the same in loading position during forward movement of the breech-block.

15. In a firearm having a magazine and a pivoted carrier for transferring a cartridge from the magazine to the chamber of the firearm, a sliding breech-block which moves said carrier into loading position, a locking-block which moves said carrier to receiving position, and a coil spring extending longitudinally of said carrier for maintaining the same in receiving position after being forced to such position by the locking-block.

16. In a firearm having a magazine, a pivoted carrier for transferring a cartridge from the magazine to the chamber of the firearm, and a coil spring for holding the carrier in loading position and in receiving position.

17. In a firearm having a magazine, a pivoted carrier for transferring a cartridge from the magazine to the chamber of the firearm and a coil spring exerting an actuating force upon the carrier below the pivotal point thereof when the carrier is in receiving position and above said pivotal point when the carrier is in loading position.

This specification signed this 17th day of May, 1920.

JOHN M. BROWNING.