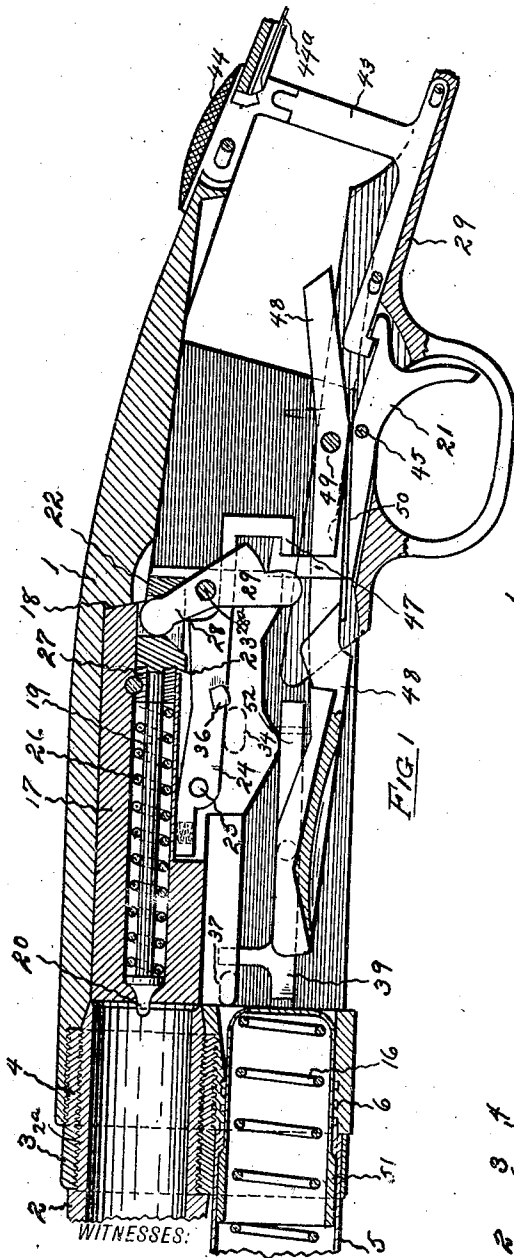


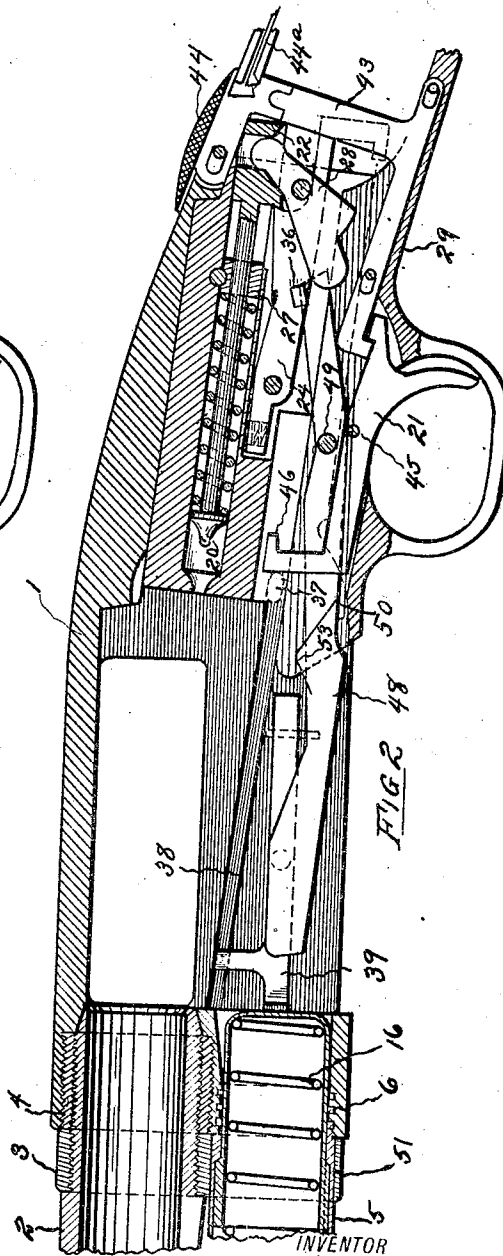
A. J. SAVAGE.
FIREARM.
APPLICATION FILED JUNE 1, 1910.

1,019,367.

Patented Mar. 5, 1912.
3 SHEETS—SHEET 1.



B. F. Fletcher,
E. J. Stannard.



ARTHUR J. SAVAGE,

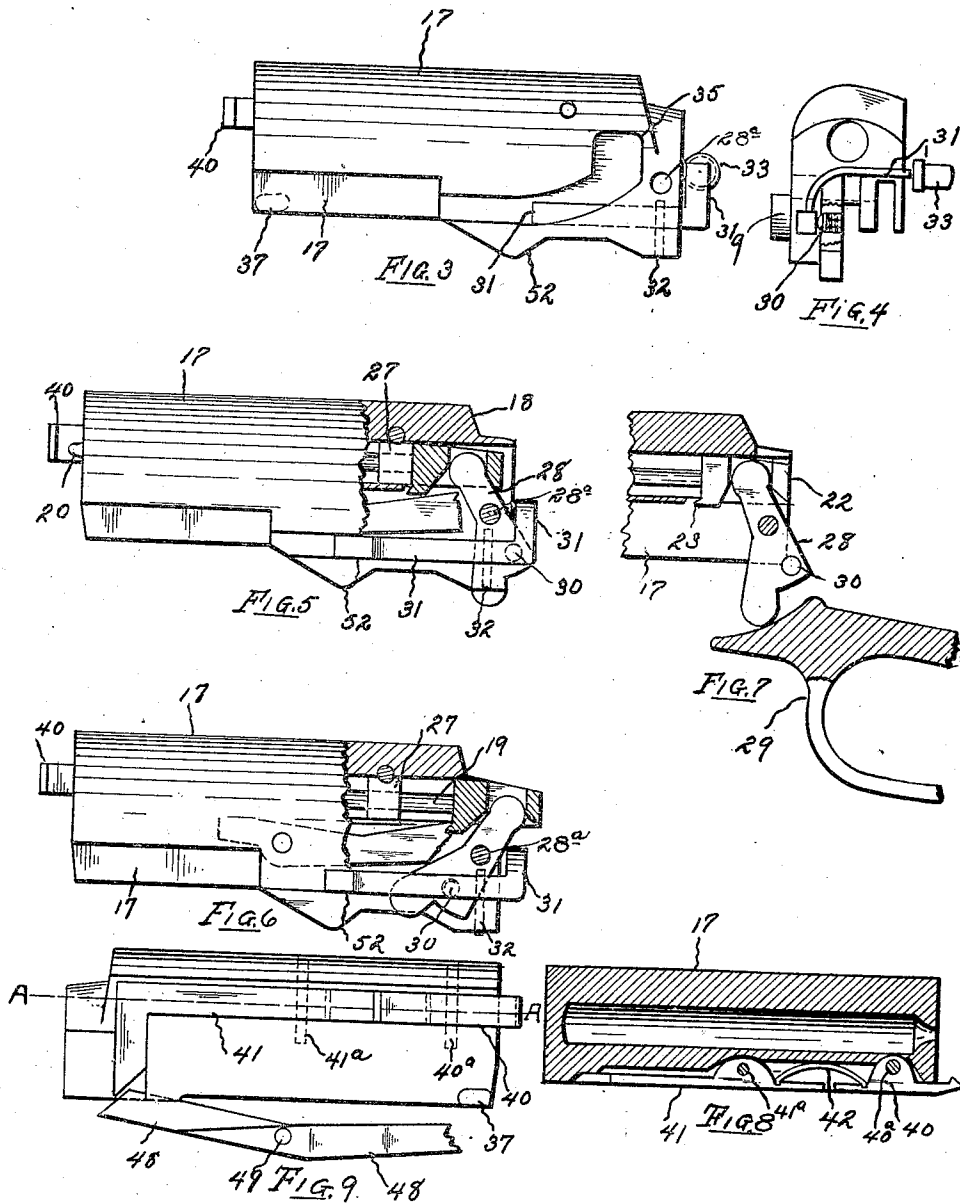
BY
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his ATTORNEYS.

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3 SHEETS—SHEET 2.

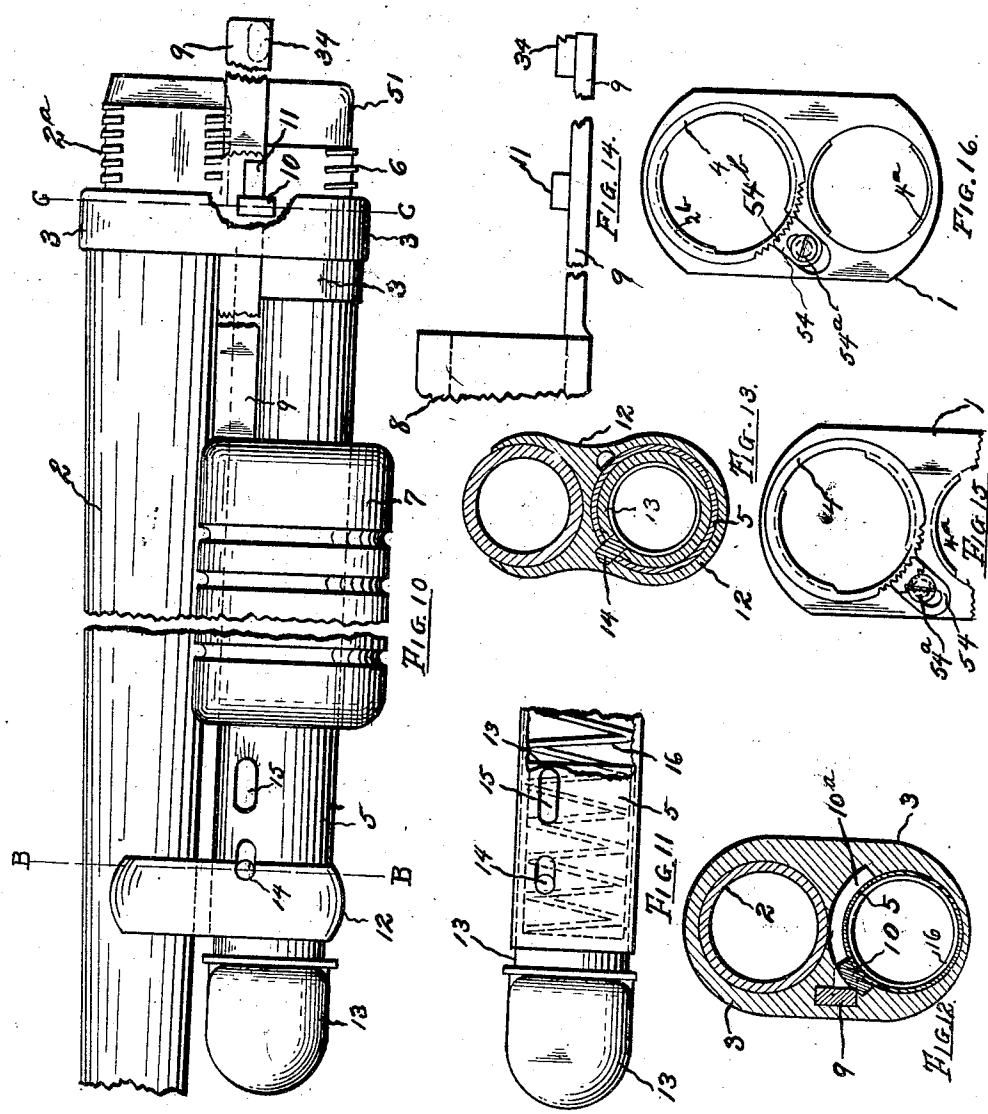


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UNITED STATES PATENT OFFICE.

ARTHUR J. SAVAGE, OF UTICA, NEW YORK, ASSIGNOR TO SEARS, ROEBUCK & CO., OF CHICAGO, ILLINOIS, A CORPORATION.

FIREARM.

1,019,367.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed June 1, 1910. Serial No. 564,515.

To all whom it may concern:

Be it known that I, ARTHUR J. SAVAGE, a citizen of the United States, residing at Utica, in the county of Oneida and State of New York, have invented new and useful Improvements in Firearms, of which the following is a specification.

This invention relates to improvements in magazine guns; and it has for its object to provide a magazine gun which will be superior in point of relative simplicity and inexpensiveness of construction, facility in assemblage and disconnection of parts, positiveness of operation and facility of control and adjustment, and which will be generally superior in point of efficiency.

The invention has for its particular object the provision of a magazine gun, the principal members and features of which, including the barrel and its stock, the breech bolt, the magazine, the cartridge carrier, the firing pin, and the associated elements which operate and actuate the same, may be speedily and conveniently assembled or taken down; and the detail structure and organization of which elements and members is characterized by fewness of parts, with respect to standard practice, without the sacrifice of positiveness of action and completeness of performance of the functions required of mechanism of the character under consideration.

The invention comprehends the provision of a number of specific features in the improvement of the art, certain of which will now be referred to. The transfer of successive cartridges from the magazine tube to the barrel chamber, the ejection of the exploded cartridge, and the setting of the trigger and attendant firing mechanism, are all performed under the control of a handle or grip slidable upon the magazine, in accordance with the well known principle utilized in magazine guns of the character under consideration.

According to the invention, I provide modifications and improvements of existing construction relating to the features last referred to, and which include, in particular, a cartridge carrier mechanism which comprises a carrier proper and a carrier dog, the same being associated with an extractor, which latter, together with the carrier dog, is controlled by a spring common to both.

Likewise of importance is a spring actuated lock controlling the action bar lock, which includes the action bar extending rearwardly from the grip or handle on the magazine. Such locking means is actuated by recoil to free the action bar lock and permit the movement of the action bar for the ejection of the cartridge and the introduction of the fresh cartridge by means of the carrier. The sear which co-acts with the cocking head connected with the firing pin, operates in the usual manner, after the cocking head has been moved to retract the firing pin, through the agency of the cocking lever; the sear being swung pivotally by the trigger, which latter is prevented from movement until released by a sliding trigger lock controlled by a thumb piece at the forward end of the stock. The cocking lever above referred to is actuated in the retraction of the grip or handle, and the rearward movement of the action bar, by engagement with a suitably formed portion of the trigger guard, obviating the necessity of providing any separate part for this purpose. As the action bar and grip or handle are retracted, a projection from the cartridge stop, which normally holds the cartridges in serial arrangement within the magazine, is actuated laterally by a cam projection, to permit passage of a cartridge from the magazine to the carrier; and thereupon the carrier is lowered beneath the advancing cartridge. Upon forward movement of the grip, a reversal of operations causes the elevation of the carrier to pass the cartridge vertically to the barrel chamber, and the cartridge stop is again projected into normally operative position to hold the next cartridge within the magazine.

I further provide novel parts and adjuncts associated with the barrel and the magazine, and relating to the connection of the same with, and the disconnection of the same from the receiver and the stock portion. The magazine and the barrel are connected by a magazine band which encircles the magazine and has a bifurcated portion embracing the barrel and fixed thereto. The magazine plays freely through this magazine band, within limitation determined by a stop co-acting with the magazine band. The magazine is provided at its rearward end with mutilated or interrupted threads

engaging with similar threads in the receiver, which latter is joined with the stock portion; said mutilated threads, and both series of the same, being adapted for connection and disconnection upon a quarter turn of the magazine; and the quarter turn resultant upon connection of said threads, after the interlocking of the magazine with the receiver, is limited by another stop which is received by a suitable recess in the magazine band. The inner end of the barrel is provided with a set of mutilated threads likewise formed for engagement with a similar set of mutilated threads formed interiorly of the upper portion of the receiver; said series of threads both being formed for connection or disconnection of the barrel with the receiver by a quarter turn in each instance; and the inner end of the barrel and of the magazine are embraced by a yoke fast to the barrel and within which the inner end of the magazine is rotatably mounted.

In order to disconnect the barrel and the magazine from the receiver, which is understood to have an upper portion and a lower portion as above stated, the magazine is released from the magazine band, by urging the magazine forwardly and longitudinally, after freeing the stop above referred to; whereupon the magazine may be axially rotated and moved forwardly longitudinally, upon disconnection of the magazine threads from those upon the receiver with which they engage, until such forward movement of the magazine is limited by the other stop above referred to. Thereupon, the barrel may be rotated, to disengage the interrupted threads thereon from the similar threads with which the same co-act, and the magazine and barrel are thus freed for disconnection from the receiver and stock portion. But the action bar must be released from the mechanism in the breech bolt. The action bar is normally prevented from withdrawal forwardly from the breech bolt by a stop co-acting with another stop on the action bar. The former stop is fixed to the magazine; and upon the axial rotation thereof above described, such stop is moved out of registration with the stop upon the action bar, traversing a segmental slot in the yoke above referred to which is fixed to the barrel.

In order to take up any loose motion or play resultant upon partial disruption of the co-acting threads upon the barrel and receiver and the magazine and receiver respectively, I may provide adjustments for the two sets of threads upon the receiver, said threads being cut in adjustable rings with which co-act adjustable locking means, so that the threaded rings may be partially turned to present new wearing surfaces of the threads.

The invention therefore consists in the novel provision, combination, association and relative arrangements of parts, members and features, all as hereinafter described, shown in the drawings and finally pointed out in claims.

In the drawings:—Figure 1 is a fragmentary longitudinal sectional view of the loading and firing mechanism of a magazine gun constructed and organized according to the invention, the stock portion and other adjunctive features being omitted for clearness of illustration, and the breech being closed; Fig. 2 is a similar view of the breech mechanism, the breech being open, and parts being omitted for clearness of illustration; Fig. 3 is a side elevation of the breech bolt in detached position; Fig. 4 is a rear end view of the breech bolt and of the action bar in engagement with the same; Figs. 5 and 6 are side elevations of the breech bolt, partly in section and partly broken away for fullness of illustration, and illustrating the relation of the cocking lever and adjunctive features to the action bar lock; Fig. 7 is a fragmentary sectional view of the breech bolt showing the cocking lever in engagement with the trigger guard to retract the cocking head and firing pin; Fig. 8 is a longitudinal sectional view taken through the breech bolt upon the line A—A, Fig. 9; Fig. 9 is a side elevation of the breech bolt and a fragmentary portion of the cartridge carrier, showing the carrier dog in engagement with the rear end of the carrier, the showing in this figure being reversed end for end with relation to that in Figs. 3, 5 and 6; Fig. 10 is a side elevation, partly broken away for fullness of illustration, of a portion of the barrel and magazine and adjunctive features illustrating the locking engagement of the action bar with the magazine tube, in the assembled relation of the barrel and magazine with the receiver; Fig. 11 is a fragmentary side elevation, partly broken away for fullness of illustration, of the forward end of the magazine tube and means for locking the magazine tube against rotation; Fig. 12 is a transverse sectional view, taken upon the line C—C, Fig. 10; Fig. 13 is a sectional view, taken upon the line B—B, Fig. 10; Fig. 14 is a fragmentary top plan view of a portion of the action bar and the actuating grip or handle connected therewith, and illustrating that portion of the action bar which co-acts with the breech block; and, Figs. 15 and 16 are front elevations of the receiver, illustrating adjustment of the threaded connection of the receiver with the barrel, such adjustment being directed at taking up wear and consequent loose motion.

Corresponding parts in all the figures are denoted by the same reference characters.

Referring with particularity to the drawings, the magazine fire arm therein shown is of that class wherein the breech is opened and closed by a grip or handle sliding on the magazine, and disposed beneath the barrel. The handle, having operative connections with the breech bolt operating mechanism, is locked with the parts in closed position by spring actuated means which release the breech bolt mechanism under impulse of the recoil from the discharge of the gun. Mechanism is provided by which the breech bolt operating mechanism may be released manually without firing the gun. The magazine supplies cartridges rearwardly to the carrier in the receiver, which carrier lifts the cartridges into registration with the barrel. The breech bolt acts in the usual manner to impel a cartridge forwardly from the carrier into the barrel; and, by its adjuncts, to withdraw the empty shell from the barrel and eject the same through the side of the receiver.

1 designates the receiver, which is closed at the top and at the rear and is open at the bottom. The bottom opening of the receiver is in part closed by the trigger guard and in part by the carrier which is disposed forwardly of the trigger guard.

2 designates the barrel which is connected with the receiver by interrupted or mutilated screw threads 2^a which engage with corresponding threads formed within a bushing sleeve 4 screwed into the receiver. The rear end portion of the magazine tube 5 is provided with interrupted or mutilated threads 6 which co-engage with corresponding threads formed within the forward end of the lower portion of the receiver, such threads being designated at 4^a in Figs. 15 and 16.

A yoke 3 embraces and is fixed to the inner end of the barrel 2, forward of the screw threads 2^a, and also loosely embraces the rearward end of the magazine tube 5. Slidably surrounding the magazine tube 5 is the grip or handle 7, comprising an outer wood part and an inner metallic tube 8 which is formed integral with the action bar 9: these parts being unitary in construction. Mounted upon the rear end of the magazine tube 5 is the segmental lug 10 which operates within a segmental slot 10^a in the yoke 3. Said lug 10, when the magazine is in its normal position relative to rotation within the yoke 3, limits the forward movement of the action bar by engagement with the stud 11 thereupon.

The barrel 2, at the forward end of the magazine tube 5, is partially encircled by the bifurcated end portion of the magazine band 12 which loosely embraces the forward end of the magazine tube 5 and serves to hold the magazine tube in its normal posi-

tion. Disposed upon the outer surface of the magazine tube is a magazine stop 15 which limits the forward longitudinal movement of the magazine tube by engagement with the magazine band 12.

The magazine spring 16 acts against the magazine plug 13 which slidably enters the outer end of the magazine tube, and carries the lock pin 14 which is kept in engagement with the magazine band 12, and a recess therein, by the spring 16. In dismounting the barrel portion from the receiver and its mechanism, the magazine plug 13 is pressed rearwardly within the magazine tube 5, carrying the pin 14 out of the recess in the magazine band 12, which allows the magazine tube to be rotated, so as to disengage the interrupted threads 6 from the threads 4^a in the lower portion of the receiver. The magazine tube may then be longitudinally moved forwardly until the stop 15 engages with the magazine band 12. The slidable handle or grip 7 and action bar 9 may now be moved forwardly until the action bar clears the receiver. Thereupon, the barrel may be given a quarter turn to disengage the mutilated threads 2^a from the threads 2^b in the upper portion of the receiver. In remounting the barrel portion and connected magazine in connection with the receiver and its mechanism, the reverse of the steps followed as aforesaid is performed.

The breech bolt 17 when at its forward limit of movement, as shown in Fig. 1, engages a recoil shoulder 18 formed in the upper part of the receiver, the rear end portion of the breech bolt engaging with such shoulder 18. The breech bolt is longitudinally recessed to receive the firing pin 19 which is introduced therein from the rearward end, and is provided with a nose 20 adapted to indent the primer of the cartridge and to explode the latter when the trigger 21 is actuated to permit such action. The cocking head 22, which is directly connected with the rear end of the firing pin is provided with a notch or recess 23 arranged to be engaged by the sear 24 which is pivotally mounted, as upon a pin 25 carried by the breech bolt. The firing pin 19 is surrounded by a coil spring 26, acting at its forward end upon a shoulder rearward of the nose 20, its rearward extremity bearing against a shoulder of the breech bolt, such shoulder being provided by the insertion of a bushing 27 within the breech bolt, and within the opening within which operates the firing pin.

In the rear of the breech bolt, and about at the center thereof, is formed a recess in which is pivoted a cocking lever 28, the same being mounted upon a pin 28^a. The upper portion of this cocking lever projects within a suitable recess in the cocking head 22. The lower part of the cocking lever is

adapted to be brought against the forward part of the trigger guard 29, to cock the firing pin when the breech bolt is unbreeched or moved rearwardly, as shown in detail in Fig. 7. Mounted within a suitable recess in the cocking lever is a spring actuated operating plunger 30, shown in detail in Figs. 4 and 5 and 6. When the firing pin is in the retracted or cocked position, as shown in Fig. 6, and the breech bolt is locked, the action bar 9 is locked against rearward movement by the horizontal swinging action bar lock 31 fulcrumed in the breech bolt upon a pin 32, as indicated in Fig. 3. The breech bolt is recessed to receive the action bar lock 31, which plays transversely of the breech block. The action bar lock is held in its normal or locking position, with relation to the action bar 9, by the spring actuated plunger 30 suitably mounted in the recess in the cocking lever, and playing transversely thereof, as indicated in Figs. 5 and 6. The action bar lock 31 may be thrown from normal position by manipulation of the button 33 which plays through an opening in the side wall of the receiver, and the inner extremity of which is arranged to engage the rear arm of the action bar lock 31 when the breech bolt is in its forward and locked position.

When the trigger is pulled and the cocking lever is returned to the position shown in Fig. 5, the spring actuated plunger 30 reverses tension on the action bar 31, thereby tending to release the lock from its engagement with the stud 34, mounted on the action bar. As the cartridge is exploded, the gun, with the exception of the grip or handle 7, recoils, such grip or handle being held by the hand of the operator in a position somewhat stationary relative to the other parts. This recoil action throws the action bar lock and its connection rearwardly, while the action bar stud 34, through the handle, is held against rearward movement, thus disengaging the action bar lock 31 from the stud 34, permitting the action bar to be moved rearwardly. The forward end of the action bar lock 31 is moved inwardly through the action of the spring actuated plunger bearing upon the action bar lock 31 rearwardly of the vertical pivot 32, thus leaving the parts of the mechanism in position to be operated for ejection of the shell and introduction of a fresh cartridge to the barrel through the receiver. The breech bolt is provided at its rear left-hand side with a groove 35, which is adapted to receive the stud 34 upon the action bar to operate the breech block vertically and longitudinally. Arranged upon the left-hand side of the sear 24 is a projection 36 which is adapted to engage the stud 34 during the final upward breeching movement of the breech bolt, to prevent the disengagement of

the sear 24 from the notch 23, providing the trigger be held while the parts are being actuated, thus preventing premature discharge of the cartridge when introduced to the barrel.

The breech bolt is provided at its forward end with a stud 37, disposed at one side, and adapted to support the breech bolt, such stud being guided by a groove 38 in the wall of the receiver at the corresponding side of the breech bolt. This stud operates the cartridge stop 39. Mounted at the forward right-hand side of the breech bolt, and adapted to engage the rim of the shell, is the extractor 40 which is pivoted on the pin 40^a. Both the extractor 40 and the carrier dog 41 which controls the cartridge carrier 48, are actuated by a common spring 42, bearing upon the rearward end of the extractor and the forward end of the carrier dog. The spring actuated cartridge stop 39 is mounted in a recess in the side wall of the receiver, so as to play laterally, and releases the cartridge for its withdrawal from the magazine, through the action of the stud 37 upon the forward end and at one side of the breech bolt.

The trigger lock 43 is mounted for longitudinal movement in the trigger guard 29, and locks over the rear end of the trigger 21, being operated by the thumb piece 44 arranged at the top of the forward end of the stock, and held temporarily in either retracted or forwardly projected position by a spring 44^a. The trigger 21 is intermediately pivoted upon a pin 45, and has an angularly and forwardly and rearwardly directed finger 46 adapted and arranged to engage with a projection 47 extending forwardly from the sear 24. Pressure upon the trigger depresses the finger 46 and the projection 47, pivotally swinging the sear upon its pin 25 and freeing the same from the shoulder 23 to release the firing pin for its forward movement to discharge the cartridge.

The cartridge carrier 48 is supported on a pivot bearing 49 intermediate of the ends of the carrier, and arranged at the right-hand side of the receiver. The carrier extends forwardly from its pivotal mounting, and when in lowered position it partially fills the opening in the bottom of the receiver in front of the trigger guard 29. The carrier 48 moves upwardly pivotally to a predetermined point, as shown in Figs. 1 and 2, acting as a cartridge stop after the cartridge stop 39 has been withdrawn in the forward movement of the breech bolt. The carrier 48 is held in this position by a spring 50 the rear end of which is secured to the trigger guard 29. The magazine is filled by pressing the cartridges under the carrier and past the cartridge stop 39. To introduce the cartridges to the barrel chamber, the carrier 48 is ele-

vated by the spring actuated dog 41, which is pivoted in the breech bolt. This final elevation of the carrier occurs substantially at the time of the commencement of the forward movement of the breech bolt. The carrier dog 41 is acted upon by the rear end of the extractor spring 42, as shown in Fig. 8, and is forced against the side of the rear end of the carrier during the final phase of the rearward movement of the breech bolt; the carrier dog 41 being thus permitted to snap over the rear end of the carrier at the termination of the rear movement of the breech bolt. Upon the subsequent forward movement of the breech bolt the carrier dog causes the elevation of the forward end of the carrier, which movement results in the elevation of the cartridge into the barrel chamber. The carrier 48 is thrown down at its forward end, to permit a cartridge to enter the receiver from the magazine tube 5, by the action of cams 52 and 53, the former of which is formed upon the lower portion of the breech bolt and the latter of which is formed upon the upper forward portion of the carrier. As the breech bolt moves forwardly these cams cause the depression of the carrier, the reverse movement of the breech bolt causing a similar depression, to enable the passage of the cartridge above the same.

In the forward face of the receiver, at the upper portion of the same, and in a suitable recess, as shown in Figs. 15 and 16, is mounted a slidable lock plate 54 for the bushing sleeve carrying the mutilated threads 2^b which co-engage with the mutilated threads 2^a upon the rearward end of the barrel 2. The locking plate 54 and the bushing sleeve 4 are provided with co-engaging serrations 54^b; and the locking plate 54 is held in position of adjustment by a binding screw 54^a. The locking means last described provide for holding the bushing sleeve 4 in position of adjustment after rearrangement of engaging surfaces of the threads 2^a and those within the bushing and with which they engage. The customary cartridge follower 51 is provided within the rearward end of the magazine 5, and the same receives the rearward end of the magazine spring 16.

The operation, method of use and advantages of the improved firearm constituting the invention will be readily understood from the foregoing description, taken in connection with the accompanying drawings and the following statement:—The operator grasps the handle by one hand and the gun stock by the other hand in aiming and firing, the magazine being filled, as explained, by passing the cartridges into the receiver from beneath and thence urging the same forwardly into the magazine against the spring 16. A backward pull upon the grip

or handle 7 causes the mechanism to unlock the breech bolt and to operate the front end of the cartridge stop 39, allowing a cartridge to move to the rear against the front of the carrier which now temporarily acts as a cartridge stop. The breech bolt, continuing its rearward movement, throws the carrier down at its front end, through the action of the cams 52 and 53. The cartridge continues to move rearwardly under the breech bolt, and the spring actuated cartridge stop 39 returns to its normal position preventing the next succeeding cartridge within the magazine from escaping therefrom. The succeeding forward movement of the grip or handle closes the breech bolt, elevates the carrier, and introduces the cartridge within the barrel chamber; the final forward movement of the breech bolt depressing the carrier to its normal lower position in which it may act as a cartridge stop, such forward movement of the breech bolt again retracting the cartridge stop 39 and freeing the entering cartridge which moves rearwardly until stopped by the forward end of the carrier, such carrier being sustained in position by the spring 50. The firing pin having been set or cocked in the rearward movement of the bolt, by contact with the trigger guard 29, is held cocked by the sear acting upon the shoulder 23 upon the cocking head; the action bar being locked by the action bar lock, in its forward position. A pull of the trigger releases the firing pin through actuation of the sear, in the manner heretofore described, thus firing the cartridge; and the resultant recoil allows the action bar lock to be thrown out of engagement with the stud 34 of the action bar, and permits the breech bolt to extract or eject the fired shell upon the successive rearward movement thereof.

The method of disconnection of the barrel and magazine and their adjuncts and mechanism, from the receiver and its mechanism and adjuncts and the stock, has been fully set forth at a preceding point.

I do not desire to be understood as limiting myself to the specific provision, combination, construction, formation, and relative arrangement of parts, members and features herein described and shown, but reserve the right to vary the same, in adapting the improvements to varying conditions of use, without departing from the spirit of the invention and the terms of the following claims:—

Having thus described my invention, I claim and desire to secure by Letters Patent:—

1. In a firearm, the combination, with a magazine tube having a segmental stop formed on its outer surface; of a barrel yoke embracing the magazine tube and having

- a segmental slot to accommodate said stop, and an action bar formed to engage with said stop to limit the forward movement of the action bar.
- 5 2. In a firearm, a magazine tube having a segmental stop disposed at its outer surface, and a barrel yoke embracing the magazine tube and having a segmental slot formed to receive the stop and accommodate the stop in rotation of the magazine tube.
 - 10 3. In a firearm, the combination, with a barrel, of a rotatable magazine tube, a magazine band extending from the barrel and embracing the magazine tube, a spring actuated longitudinally operating magazine lock co-acting with the magazine band, and a magazine plug movable longitudinally of and within the magazine tube and connected with the magazine lock.
 - 15 4. In a firearm, the combination, with a barrel, and a magazine tube rotatably mounted; there being a magazine band extending from the barrel and embracing the magazine tube; of longitudinally operating locking means for the magazine tube co-acting with the magazine band, and a finger piece disposed at the forward end of the magazine tube and operatively connected with the locking means.
 - 20 5. In a firearm, the combination, with a barrel, and a rotatable magazine tube; there being a magazine band extending from the barrel and embracing the magazine tube; of locking means operating longitudinally of the magazine tube for the magazine tube and co-acting with the magazine band; and a finger piece disposed at the forward end of the magazine tube operatively connected with the locking means.
 - 25 6. In a firearm, a rotatably mounted magazine tube containing a magazine spring, a magazine band embracing the magazine tube, and longitudinally operating locking means for the magazine tube actuated by the magazine spring and co-acting with the magazine band.
 - 30 7. In a firearm, a magazine tube provided with a magazine spring, a magazine band embracing the magazine tube, longitudinally operating locking means for the magazine tube co-acting with the magazine band, and a finger piece at the forward end of the magazine tube and actuated by the magazine spring to actuate the locking means.
 - 35 8. In a firearm, a receiver, a breech bolt within the receiver, a cocking lever mounted within the breech bolt, a firing pin operatively connected with the cocking lever, a sear mounted within the breech bolt and co-acting with the firing pin, a trigger guard, and means whereby the breech bolt is lowered and retracted to cause co-action of the cocking lever with the trigger guard to retract the firing pin.
 - 40 9. In a firearm, a breech bolt, a cocking lever mounted within the breech bolt, a firing pin operatively connected with the cocking lever, a trigger guard, and means whereby the rearward end of the breech bolt is lowered and retracted to cause co-action of the cocking lever with the trigger guard to retract the firing pin.
 - 45 10. In a firearm, a receiver having a recoil shoulder in its upper portion, a breech bolt within the receiver and engaging such recoil shoulder, a firing pin mounted within the breech bolt, a sear co-acting with the firing pin, an action bar arranged to move longitudinally of the gun barrel, an operating stud on the rearward portion of the action bar and adapted to actuate the breech block into engagement with the recoil shoulder, and means whereby the sear is locked in engagement with the firing pin by the said stud during the movement of the breech bolt.
 - 50 11. In a firearm, a receiver, a breech bolt mounted therein, a firing pin mounted within the breech bolt, an action bar arranged to travel substantially in parallelism with and below the gun barrel, a cocking lever intermediately mounted in the breech bolt and operatively connected at one end with the firing pin, a trigger guard with which the other end of the cocking lever co-acts to retract the firing pin during movement of the breech bolt, and a sear co-acting with the firing pin.
 - 55 12. In a firearm, a trigger guard, a trigger pivotally mounted within the trigger guard, a trigger lock arranged to co-act with the rear end of the trigger, a vertically and longitudinally movable breech bolt, a sear mounted in the breech bolt and arranged to engage with the trigger as the breech bolt is moved vertically to its locked position, and a thumb piece arranged to actuate the trigger lock to hold the trigger against actuation of the sear.
 - 60 13. In a firearm, an extractor, a cartridge carrier, a dog for the cartridge carrier, and a spring acting jointly upon the extractor and the carrier dog.
 - 65 14. In a firearm, a receiver, a breech bolt within the receiver, a firing pin, a cocking lever operatively connected with the firing pin and mounted in the breech bolt, a trigger guard with which the cocking lever co-acts to retract the firing pin, an action bar provided with a stud, an action bar lock pivotally mounted in the breech bolt and arranged to engage with the action bar stud to lock the action bar against rearward movement, and means carried by the cocking lever to lock and unlock the action bar lock.
 - 70 15. In a firearm, a firing pin, a cocking lever operatively connected with the firing pin, an action bar lock, and means carried by the cocking lever to yieldingly actuate the action bar lock.

16. In a firearm, a longitudinally moving action bar, a pivoted action bar lock, and a cocking lever provided with means to yieldingly actuate the action bar lock with resultant locked or unlocked condition of the action bar.

17. In a firearm, a longitudinally movable breech bolt, a firing pin mounted in the breech bolt, a cocking lever intermediately mounted in the breech bolt and operatively connected at one end with the firing pin, a vertically pivoted action bar lock across the

pivotal point of which the other end of the cocking lever travels, and means carried by the cocking lever to lock or unlock the action bar lock in the travel of the cocking lever.

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

ARTHUR J. SAVAGE.

Witnesses:

RAYMOND IVES BLAKESLEE,
C. P. WARDEN.