Aug. 28, 1934. J. E. BROWNING 1,971,597

REPEATING FIREARM

Filed Sept. 17, 1932 2 Sheets-Sheet 1

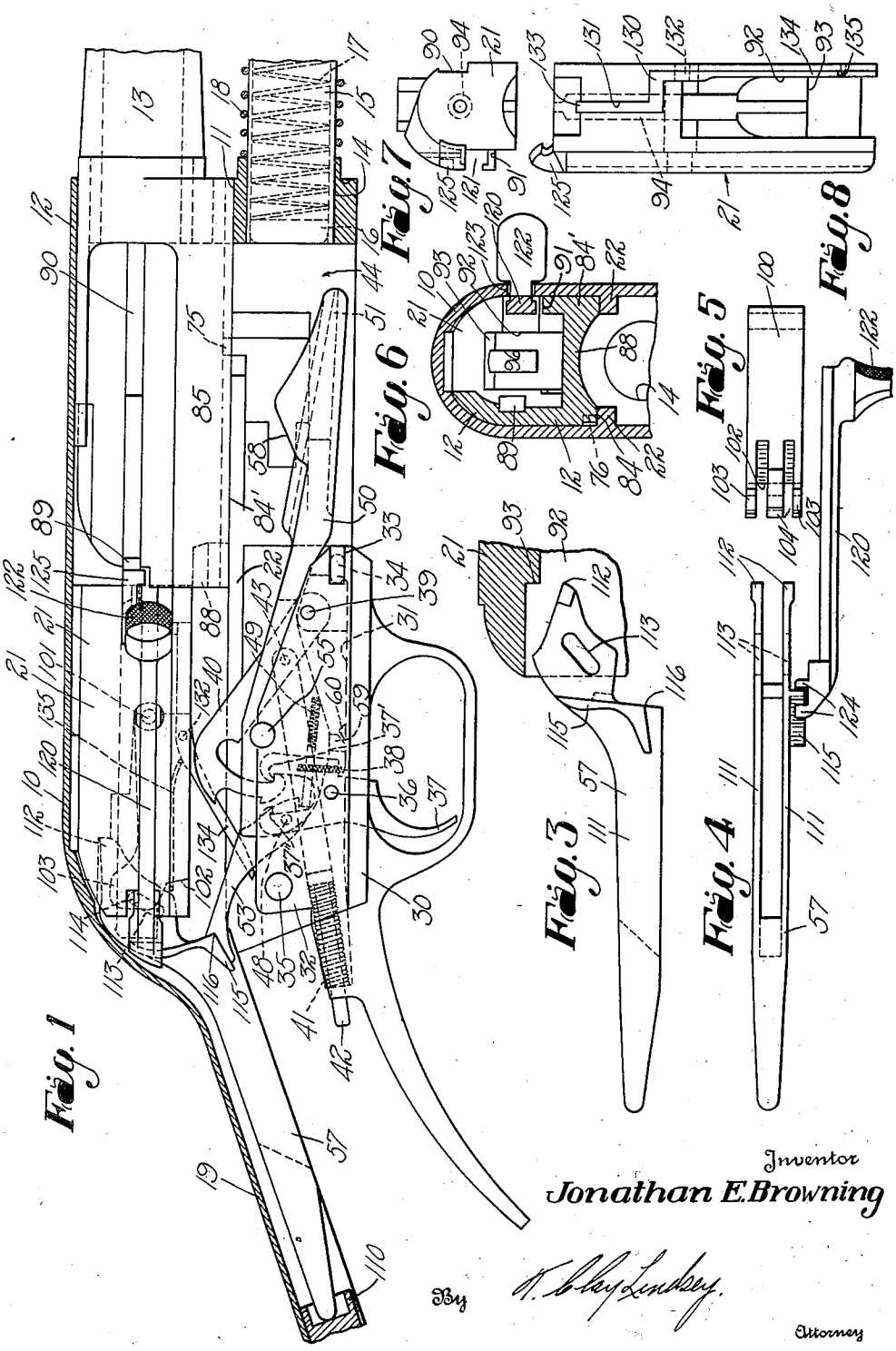

Fig. 1

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Fig. 8

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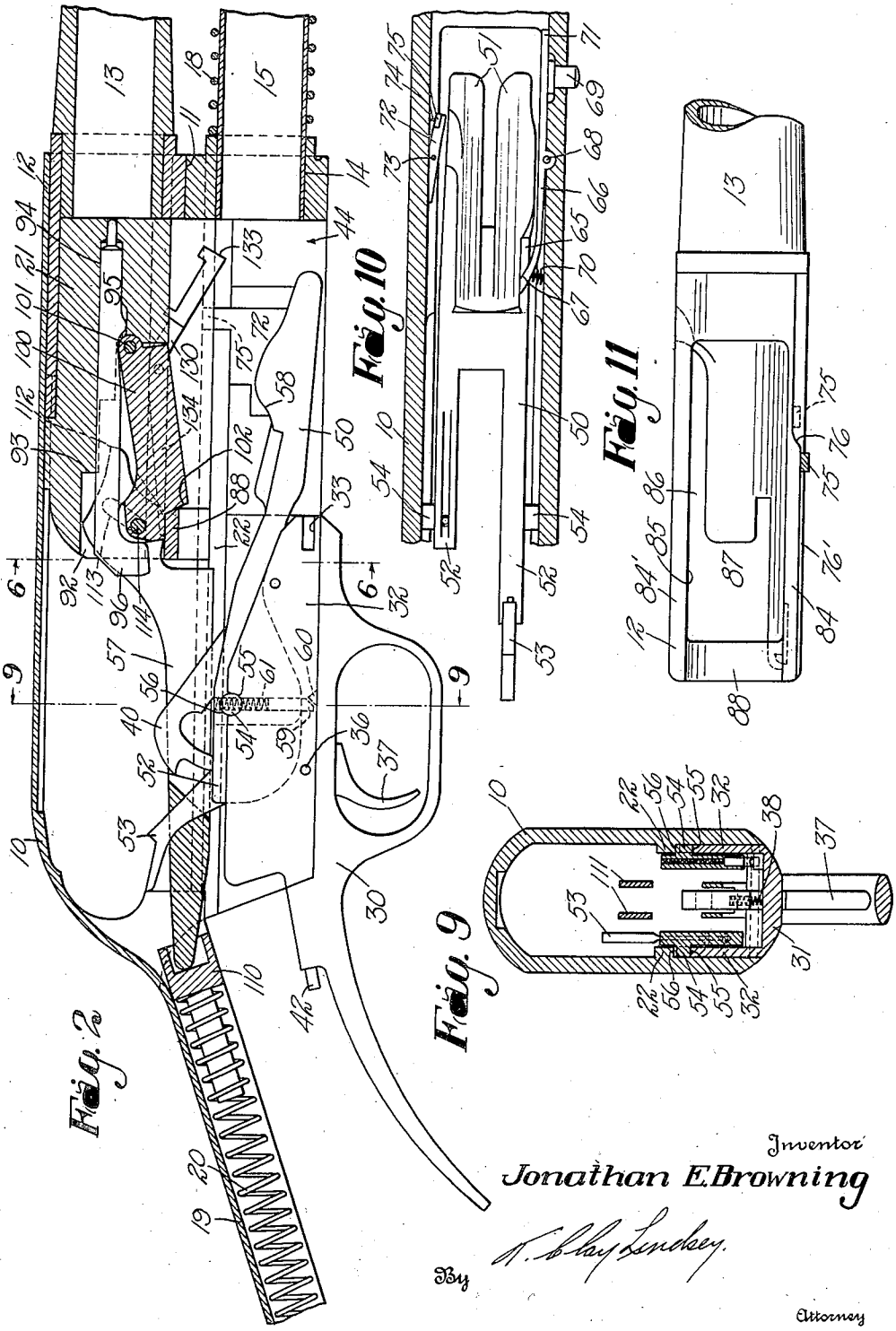

Fig. 2

Fig. 10

Fig. 11

Fig. 9

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1,971,597

REPEATING FIREARM

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Application September 17, 1932, Serial No. 633,650

15 Claims. (Cl. 42—4)

This invention relates to firearms, and especially to firearms of the shotgun class, particular reference being had to the type wherein the shells are transferred to the barrel from a magazine located beneath the barrel.

An aim of the present invention is to provide an improved arrangement wherein the various parts within the receiver are so constructed and arranged that the receiver may be made relatively narrow and will not extend above the top surface of the barrel to any appreciable extent. With my improved arrangement, the necessity of materially elevating the sights above the barrel is avoided, a relatively wide field of vision is permitted in aiming the gun, and the gun has a comfortable and better feel.

A further object of the invention is to provide an improved firearm of this kind having various features of novelty and advantage and which is particularly characterized by its simplicity and economy in construction, the ease and facility with which the parts may be assembled, and its effectiveness in operation.

Other objects will be in part obvious and in part pointed out more in detail hereinafter.

The invention accordingly consists in the features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter set forth and the scope of the application of which will be indicated in the appended claims.

In the accompanying drawings:

Figure 1 is a right-hand side elevational view of as much of the gun as is necessary to illustrate the features of the present invention, the receiver being shown in longitudinal vertical section and the breech block being shown as having been manually brought to full withdrawn or retracted position;

Fig. 2 is a view similar to Fig. 1 and showing certain parts in longitudinal vertical section and the breech block in its normal or forward position;

Fig. 3 is a side elevational view of the link which moves the locking block into unlocked position, a portion of the breech block also being illustrated;

Fig. 4 is a top plan view of the link, together with the operating slide for manually retracting the link together with the breech block;

Fig. 5 is a top plan view of the locking block;

Fig. 6 is a view looking at the rear ends of the barrel extension and breech block, this view being taken substantially on line 6—6 of Fig. 2, and the link 57 and locking block being omitted;

Fig. 7 is a front elevational view of the breech block;

Fig. 8 is a bottom plan view thereof;

Fig. 9 is a transverse sectional view taken substantially on line 9—9 of Fig. 2;

Fig. 10 is a top plan view of the carrier with a portion of the trigger plate and a portion of the receiver, the latter being shown in longitudinal section; and

Fig. 11 is a bottom plan view of the barrel extension.

Referring to the drawings in detail, 10 designates a receiver having an opening 11 in its forward end adapted to receive the rear or extension portion 12 of the barrel 13. Located below the opening 11 is another opening 14 which receives the usual magazine 15 within which is a follower 16 backed up by a spring 17. About this magazine is a spring 18 which cooperates with the barrel in such manner as to normally urge the barrel forwardly. The connection between the spring and the barrel is not illustrated, as that arrangement is an old and well-known one. Extending rearwardly from the receiver and adapted to be used within the butt stock (not shown) is a tang 19 in the form of a slotted tube within which is located a compression spring 20 which normally urges the breech block 21 forwardly, as hereinafter described more in detail. On the opposed inner walls of the receiver are longitudinally extending ribs 22 upon which the barrel extension rests, as shown more clearly in Figs. 1 and 6.

Closing the rear portion of the opening in the bottom of the receiver is a trigger plate 30 having a bottom wall 31 and parallel side flanges 32, the latter fitting closely between the side walls of the receiver, as shown more clearly in Fig. 9. As shown in Fig. 1, the forward edges of the flanges 32 are provided with notches 33 which receive lugs 34 on the receiver, and the trigger plate is removably anchored to the receiver by a pin 35. Pivoted to the trigger plate, as at 36, is a trigger 37 which may be of the usual construction, it having a front notch 37′ and a rear one 37″. The trigger is normally urged into unpulled or normal position by a spring 38 mounted in a bore in the trigger itself and bearing against the bottom wall of the trigger plate. Pivoted to the trigger plate, as on a pin 39, is a hammer 40 which also is shown as being of an old construction. This hammer is normally urged forwardly by a main spring 41 cooperating with a plunger 42 which is pivoted to the hammer, as at 43.

Between the trigger plate and the magazine is a shell chamber 44 open at its top and its bottom.

A carrier, designated generally by the numeral 50, and shown most clearly in Figs. 1, 2 and 10, is employed for transferring the shells from this chamber up to and into the barrel extension. The forward end of the carrier has a shell supporting plate 51 located in the shell chamber. The rear end of the carrier is bifurcated to provide a pair of arms 52, the space between which accommodates the trigger 37, the plunger 42 and the hammer 40. Extending rearwardly from one of these arms is a carrier sear 53 which, as hereinafter described more in detail, is adapted to lock the breech block in retracted position. This sear is pivoted as at 48 and is normally urged upwardly and forwardly by a spring 49. This carrier is generally of an old construction but, in accordance with the present invention, I provide certain improvements therein which materially reduce the cost of manufacturing the same and which allow of a more ready assembly. The arms 52 have oppositely extending, aligned integral trunnions 54, and these trunnions are removably supported in open bearings 55 in the top edges of the flanges 32 of the trigger plate. When the trigger plate is assembled within the receiver, these trunnions lie immediately beneath the ribs 22 of the receiver and, if desired (although not necessarily), these ribs may be notched, as at 56, to accommodate the upper portions of the trunnions. With this arrangement, the carrier may be assembled on the trigger plate (before the latter is inserted in the receiver) by merely engaging the trunnions in the open bearings 55 and, after the trigger plate has been assembled in the receiver, displacement of the carrier is prevented by the ribs 22 (see Fig. 9).

When the breech block is moved to retracted position, the link 57 associated with that block, as hereinafter described more in detail, engages the carrier sear 53 thereby rocking the forward end or plate 51 of the carrier upwardly to transfer a shell from the shell chamber 44 to the chamber within the barrel extension. For the purpose of moving the carrier back to the normal or receiving position shown in Figs. 1 and 2, the plate 51 of the carrier is provided, at one side, with a raised cam edge 58 against which the forward edge of the breech block is adapted to engage when the breech block is moved from retracted to forward position. For the purpose of resiliently holding the carrier in each of its extreme positions and also completing the movement of the carrier after such movement has been initiated, there is provided (as shown in Fig. 2) a spring pressed plunger 59 carried by the left hand arm 52 of the carrier and cooperating with a wedge-shaped cam or nose 60. The spring behind the plunger is designated by the numeral 61. It will be observed that, by mounting the plunger 59 and spring 61 on the carrier, these parts may be assembled before the carrier is positioned in the trigger plate.

At one side of the plate 51 of the carrier is an upwardly facing ledge or abutment 65 (see Fig. 10), and pivoted on the inner side of the right hand side wall of the receiver is a carrier latch 66, the rear end 67 of which is inturned so as to extend over the ledge 65 and lock this carrier in lowered or receiving position. This latch is pivoted as at 68 and has, adjacent its forward end, a push pin or finger piece 69 projecting through an opening in the side wall of the receiver. The latch is normally urged to the latching position shown in Fig. 10 by a spring 70. The extreme forward end 71 of the latch constitutes an initial stop for preventing, at certain times, a shell from moving from the magazine into the shell chamber 44. This latch 66 is of a well-known construction, and a description of its operation will be made later in connection with other cooperating stops and latches. On the opposite or left hand side of the receiver is a secondary cartridge stop 72 pivoted as at 73 and normally urged into operative position by a spring 74. This stop has a lug 75 with which cooperates a cam 76 on the barrel extension, as shown most clearly in Fig. 11. Rearwardly of this cam is a surface 76' which holds the stop out of operation when the barrel is in forward position. This stop is of a well-known construction, and a description of its operation will be reserved for the present.

Referring now to the barrel extension, the same has an opening in its bottom, the edge of which opening is designated by the numeral 85. This opening is adapted to register with the shell chamber when the barrel is in forward position. The extension is open at one side, as at 86, and the top wall is cut away at the rear, as at 87. The lower edges of the side walls 84 and 84' of the barrel extension rest upon and have a sliding movement on the ribs 22, as shown most clearly in Fig. 6. At the rear end of the barrel extension, and behind the opening 85 therein, is a cross piece or member 88 which, as hereinafter described more in detail, constitutes an abutment with which the locking block cooperates, means for controlling movement of the supplemental cartridge stop 130, and means for cocking the hammer. On the left hand side wall of the barrel extension is the usual shell ejector in the form of an abutment 89 which, when the barrel jumps forwardly, engages behind one side edge of the head of the shell, thereby throwing it out.

Referring now to the breech block, particular reference being had to Figs. 1, 2, 7 and 8, the left hand side thereof is adapted to engage the left hand wall of the barrel extension and is provided with a groove 90 for accommodating the ejector 89. The right hand side of the breech block is rabbeted so as to provide a surface 91 which rests and slides upon the right hand wall 84' of the barrel extension. The rear end of the breech block is recessed on its under side, as at 92, and in the top of this recess and forwardly of the rear end of the breech block is a rearwardly facing shoulder or abutment 93 with which the link 57 is adapted to cooperate, as hereinafter described more in detail. Extending forwardly from the recess is a bore 94 in which the firing pin 95 is slidably mounted. This has, at its rear end, a downwardly extending projection 96.

Located within the recess 92 of the breech block is a locking block 100, shown most clearly in Figs. 2 and 5. This block is pivoted at its forward upper corner on a pin 101 and has, at its rear end, a rearwardly facing shoulder 102 above which are rearwardly extending ears 103. The central ear 103 has a cam surface 104 so disposed with reference to the projection 96 of the firing pin that, when the locking block is raised from the position shown in Fig. 2 to that shown in Fig. 1, the firing pin will be withdrawn to the position shown in Fig. 2.

Cooperating with the locking block and the breech block is the link 57, shown most clearly in Figs. 3 and 4. The rear end of this link engages a follower 110 at the forward end of the spring 20. The link is bifurcated for the major portion of its length so as to provide a pair of

rallel arms or legs 111, the space between which commodates the hammer. Each arm 111 is ovided, at its extreme forward end with a nose 2, which are adapted to engage behind the oulder 93 on the breech block, as shown in Fig. Rearwardly of these noses are downwardly and arwardly inclined slots 113 through which exds a transverse pin 114 carried by the ears 103. ie slotted portions of the arms of the link go in tween the ears 103. Rearwardly of the slots d to one side of the link is a rib 115 adjacent e lower edge of which is a projection or tooth 6 which the notch in the rear end of the car- r sear 53 is adapted to receive.

For the purpose of manually withdrawing or tracting the breech block to the position shown Fig. 1, an operating slide 120 is provided. This de is accommodated by a channel or groove 121 the right side of the breech block (see Figs. 6 and and it has a finger piece 122, the neck of which accommodated by a slot 123 in the side wall of e receiver. The rear end of this operating slide s a pair of spaced lugs 124 (see Fig. 4) proding a groove therebetween for the reception of e rib 115 provided on the link 57. On the forard end of the breech block is the usual extractor 5 which, when the breech block moves rearardly, draws the fired shell with it in the ordiary manner.

Carried by the breech block is a supplemental rtridge stop 130, the movement of which into id out of operative position is controlled by a lative movement between the breech block and e barrel extension. In the present illustrative sclosure, this cartridge stop is in the form of a ver accommodated by a groove 131 in the under de of the breech block. The lever is pivoted, as 132, and, when the parts are in the position own in Fig. 2, the forward end 133 of the lever ojects downwardly into the path of movement the shell within the magazine. The rear end the lever is in the form of a tail 134 disposed at angle to the front arm of the lever, and behind is tail is a leaf spring 135 normally urging the ver into the inoperative position shown in Fig.

The tail 134 of the lever is adapted to wipe ong the cross piece or member 88 of the barrel tension.

The operation of the firearm is briefly as llows: Assuming that the parts are in the rmal or firing position shown in Fig. 2 and it is sired to fire the gun, the trigger is pulled as to release the forward trigger notch 37' om the hammer, whereupon the hammer 40 is leased so as to strike the rear end of the firing n, the latter being thereby advanced slightly om the position shown in Fig. 2. (It may here stated that the trigger has the rear trigger otch 37'' adapted to cooperate with a rear ammer notch in order to make the gun semiutomatic in a manner well understood.) When ie shell is fired, the breech block is moved arwardly and, due to the fact that the locking ock is in the locking relation shown in Fig. 2 ith respect to the cross piece 88 of the barrel tension, the barrel will move backwardly or coil with the breech block. As the breech block id barrel move rearwardly, the cross member 88 ill wipe against the hammer and thereby bring ie hammer to a position where the rear trigger otch 37'' engages the rear hammer notch so ng as the trigger is held pulled. Also, the link 7 will be moved rearwardly thereby placing the mpression spring 20 under compression and, as is link is moved rearwardly, its rear end moves downwardly due to the downward inclination of the tang 19. This means that the forward end of the link is turned or rocked counterclockwise about the pin 114, reference being had to Fig. 2. Also, upon rearward movement of the link 57, the lower end of the rib 115 will wipe along the carrier sear thereby depressing the latter. As the breech block is brought to the full retracted position shown in Fig. 1, the lever 57 swings to a position where the nose 112 engages the shoulder or abutment 93 of the breech block. The breech block and barrel having completed the recoil movement, the rebound of the barrel, together with the spring 18, will throw the barrel forwardly to the position shown in Fig. 1 but, due to the engagement of the carrier sear with the projection 116 of the link 57 (as shown in Fig. 1), this link cannot move forwardly with the barrel and, since the breech block is connected to the link through the locking block and pin 114, the breech block will be held back in retracted position. Now, owing to the fact that the link is held back by the carrier sear and the barrel is urged forwardly, on initial forward movement of the barrel it tends to carry the breech block forwardly with it, which means that the pin 114 will ride up the slots 113, thereby moving the locking block upwardly out of engagement with the cross piece 88, thus freeing the barrel for forward movement. The incoming shell from the magazine actuates the carrier latch 66, as hereinafter described more in detail, whereupon the rear end of the carrier will swing downwardly, and the forward end of the carrier will swing upwardly so as to transfer the shell which has been deposited on the plate 51 into the barrel extension and in front of the now advancing breech block. When the rear end of the carrier thus moves downwardly, the carrier sear 53 is released from the tooth 116 and thereafter the spring 20 urges the link 57 and the breech block forwardly so that the shell, which has been fed into the barrel extension, is forced into a barrel. During this forward movement of the link, the nose 112 thereof is in engagement with the abutment 93. As the breech block completes its forward movement, the nose of the link is disengaged from the abutment 93, thus permitting the locking block to swing downwardly to the locking position shown in Fig. 2.

If it is desired to retract the breech block without firing the gun, this may be manually done by pushing rearwardly on the finger piece of the operating slide 120. On initial rearward movement of this slide, the link 57 is moved rearwardly with respect to the breech block, whereupon the locking block is moved upwardly from locking position with respect to the cross piece 88 of the barrel. Then, of course, the link, breech block, and locking block are moved backwardly in unison to the position shown in Fig. 1.

The operation of the several cartridge stops is briefly as follows: When the gun is in normal position, shown in Fig. 2, and it is desired to fill the magazine, the carrier latch is disengaged from the carrier by pressing in on the button 69 and then the forward end 71 of this latch extends into the range of the magazine so as to prevent any of the shells from coming out of the magazine. The carrier plate can now be pushed upwardly so as to feed the shells into the magazine from beneath the plate. The cartridge stop 130 carried by the breech block now serves the function of preventing a shell in the act of being inserted into the magazine, from flying out before

it is latched by the end 71 of the carrier latch. The carrier latch is now released and the head of the rearmost cartridge in the magazine will engage against the forward end 133 of the lever 130. At this time, the barrel being forward, the secondary cartridge stop 72 is held in inoperative position, as shown in Fig. 11. On firing the gun, the barrel and breech block will be retracted, as previously described, which means that the lever 130 will be moved rearwardly thus permitting the rearmost shell to move back to the secondary cartridge stop 72 which, on initial rearward movement of the barrel section, has been released; that is, the surface 76' on the barrel extension has been moved from behind the lug 75 of that secondary cartridge stop. The breech block is locked by the sear 53 in rearmost position, as previously described. As the barrel initially moves forward from its rearmost position, shown in Fig. 1, the secondary catch is withdrawn, due to the cam 76, whereupon the shell which has been held by that catch will move backwardly and engage the inturned end 66 on the carrier latch and thus disengage that latch from the carrier. As soon as the carrier is released, the plate end 51 will be swung upwardly, due to the spring 20, so as to transfer the shell into the barrel extension immediately after the breech block has started its forward movement. As the carrier plate is moved upwardly, the plunger 59 will ride up the wedge-shaped nose 60 and, when it has passed the apex of that nose, the spring 61 behind the plunger is effective in insuring that the carrier plate will be moved upwardly to the desired extent. After the cartridge has been transferred to the barrel section and its forward end has been forced into the barrel, the advancing breech block engages the cam edge 58 on the carrier thereby starting the carrier downwardly and, after the latter has been moved by the breech block a predetermined extent, the plunger 59 passes rearwardly of the apex of the wedge-shaped nose 60, whereupon the spring behind the plunger 59 will complete the downward movement of the carrier. Then, of course, the carrier catch, which has been held outwardly by the carrier, is free to swing inwardly into locking position, as shown in Fig. 10. When the breech block is retracted manually, as previously described, the rearmost shell in the magazine will follow the cartridge stop 130 until that stop has been moved to the inoperative position shown in Fig. 1 and the shell will come to rest against the cross member 88 of the barrel extension. The carrier latch 66 may now be operated, whereupon the carrier will transfer the shell thereon into the barrel extension. It will be observed that, in the event the breech block is retracted manually only to a partial extent and then released, the cartridge stop 130 will force the rearmost cartridge back into the magazine.

It will be seen, from the foregoing description taken in connection with the accompanying drawings, that a gun constructed in accordance with the present invention has various features of novelty and advantage. These lend substantial simplicity to the structure and economy in manufacture. It is particularly observed that the locking block is located in the lower portion of the barrel extension and particularly the cross piece 88. This arrangement permits of a relatively narrow and low receiver. It will also be observed that the cartridge stop carried by the receiver is extremely simple in construction, arrangement and operation and in no way necessitates an increase in size of any of the other parts. This cartridge stop is also operated by the cross piece 88.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

I claim as my invention:

1. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver, a breech block movably mounted in the barrel extension, a pivoted locking block carried by the breech block and adapted to cooperate when in locking position with said barrel extension, whereby upon firing of the gun the barrel extension and breech block will move backwardly in unison, a spring pressed link behind the breech block and adapted to move the latter from retracted to normal position, said link having a cam slot and said locking block having a pin engaging in said slot, said slot and pin being arranged to cause the locking block to move to unlocking position upon initial forward movement of the barrel extension from retracted position.

2. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver, a breech block movably mounted in the barrel extension, a locking block pivoted to the breech block and adapted to cooperate with the barrel extension beneath the breech block, a spring pressed link adapted to move in an arc and having a nose adapted to move into and out of operative relation to the breech block, and a cam surface on said link cooperating with said locking block for raising the latter from locking position upon initial forward movement of the barrel extension.

3. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver and provided with an opening in its bottom wall and a cross piece behind the opening, a breech block adapted to move over said cross piece, a locking block pivoted to said breech block and having a shoulder adapted to engage said cross piece when the locking block is in locking position, a link behind said breech block and adapted to move in a curved path, a spring behind said link, said breech block having a rearwardly facing shoulder and said link having a nose adapted to engage said shoulder, said link also having a cam slot, and a pin adjacent the rear end of said locking block engaging in said slot, said slot being so arranged that upon forward initial movement of the breech block said locking block will be raised from locking position.

4. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver and provided with an opening in the bottom wall and a cross piece behind the opening, a breech block mounted for reciprocation in the barrel extension, a locking block pivoted to the breech block and adapted to cooperate with said cross piece to re-

strain said breech block against movement relative to said barrel extension, a trigger mechanism having a hammer, cam means for releasing said block and a surface on said cross piece adapted to move said hammer to cocked position when the barrel extension moves to retracted position.

5. In a firearm of the character described, a receiver, a barrel having a barrel extension provided with an opening in its bottom wall and a cross piece behind the opening, a breech block mounted for reciprocation over said cross piece, a locking block carried by the breech block and adapted to cooperate with said cross piece, and a cartridge stop movably carried by the breech block and moved by said cross piece to operative position as the breech block moves to normal position.

6. In a firearm of the character described, a receiver, a barrel having a barrel extension provided with an opening in its bottom wall and a cross piece behind the opening, a breech block mounted for reciprocation over said cross piece, a locking block carried by the breech block and adapted to cooperate with said cross piece, a cartridge stop movably carried by the breech block and moved by said cross piece to operative position as the breech block moves to normal position, and trigger mechanism having a hammer arranged to be moved by said cross piece into cocked position upon rearward movement of the barrel extension.

7. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver and having an opening in its bottom wall provided with a cross piece, the inner surface of the top of said receiver being in close contact with said barrel extension and substantially in alinement with the upper surface of the barrel, a breech block mounted for reciprocation in the barrel extension, a locking block movable relative to and carried by the breech block and adapted for locking cooperation with said cross piece, a spring pressed link behind said breech block, a cartridge carrier having a pivoted sear adapted to lock said link in retracted position, and an operative connection between said link and locking block for raising the latter from locking position upon initial forward movement of the barrel extension.

8. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver, a breech block movably mounted in the barrel extension, and a cartridge stop movably carried by the breech block and operated by the barrel extension when the breech block is moved forwardly relative to the barrel extension.

9. In a firearm of the character described, a receiver, a barrel associated therewith, a magazine below the barrel, a shell chamber in the receiver behind said magazine, a trigger plate behind said shell chamber and having a pair of flanges fitting between the side walls of said receiver, said flanges having open bearings in their upper edges, and a pivoted cartridge carrier having trunnions located in said open bearings.

10. In a firearm of the character described, a receiver having internal longitudinally extending ribs, a barrel extension, a breech block, a magazine, a trigger plate, and a cartridge carrier for transferring shells from the shell chamber behind the magazine to said barrel extension, said trigger plate having a pair of side flanges provided with open bearings in their upper edges, said cartridge carrier having trunnions located in said open bearings and held in place therein by said ribs.

11. In a firearm of the character described, a receiver having a shell chamber, a barrel having a barrel extension above said chamber, a breech block, a cartridge carrier pivoted in said receiver and having a forward end portion adapted to transfer shells from the shell chamber to said barrel extension, means for rocking said cartridge carrier in one direction when the breech block is retracted, means for swinging the carrier back to normal position when the breech block is advanced, a trigger plate carried by the receiver and having a wedge-shaped cam, and a spring pressed plunger mounted on and carried by said carrier and arranged to cooperate with said cam to complete the movement of said carrier in both directions.

12. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in said receiver, a magazine located beneath said barrel, a shell chamber in said receiver behind said magazine, said barrel extension being provided with an opening in its bottom whereby the interior of the extension is adapted to communicate with said shell chamber for the passage of cartridges therethrough, said barrel extension also having a cross member at the rear of said opening, a breech block mounted for reciprocation in a straight line in said barrel extension, and a locking block pivoted to said breech block extending into said opening and having on its under side a rearwardly directed abutment adapted to interlock with said cross member whereby, upon firing of the gun, the barrel extension and breech block will recoil in unison.

13. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in said receiver and provided with an opening on its under side and a cross member rearwardly of the opening, a magazine located beneath said barrel, a shell chamber in said receiver behind said magazine, said shell chamber being open at its top whereby a shell may be delivered from the shell chamber to said barrel extension through said opening in the bottom of the latter, a pivoted cartridge carrier in said receiver for receiving cartridges from the magazine and delivering them from the shell chamber to said barrel extension, a breech block mounted for reciprocation in said barrel extension, and a locking block pivoted to said breech block extending into said opening and having, adjacent its rear end, a rearwardly directed abutment adapted to interlock with said cross member forming the rear end of said opening whereby said barrel extension and breech block will recoil in unison upon firing of the gun and throughout substantially the length of travel of said breech block.

14. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver and provided with an opening in its bottom, a magazine below said barrel, means for receiving cartridges from the magazine and delivering them to the barrel extension through said opening, a breech block mounted for reciprocation in said barrel extension, said barrel extension having a forwardly facing shoulder located beneath said breech block, and a locking block pivoted to said breech block and adapted, when in locking position, to project therebeneath, said locking block having a rearwardly directed abutment adapted

to engage said shoulder whereby upon firing of the gun said barrel extension and breech block will recoil in unison.

15. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in said receiver and provided with an opening in its bottom and a forwardly facing shoulder rearwardly of said opening, a breech block mounted for reciprocation in a straight line in said barrel extension, a locking block pivoted adjacent its forward end to said breech block and having a rearwardly facing shoulder adapted to engage said first shoulder when said locking block is in locking position, a link, a spring behind said link, and a connection between the forward end of said link and the locking block constructed and arranged to raise the rear end of said block and thereby disengage said shoulders upon initial forward movement of said barrel extension and breech block from retracted position.

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