Aug. 17, 1937. V. A. BROWNING 2,090,340

REPEATING FIREARM

Filed May 3, 1933 5 Sheets-Sheet 1

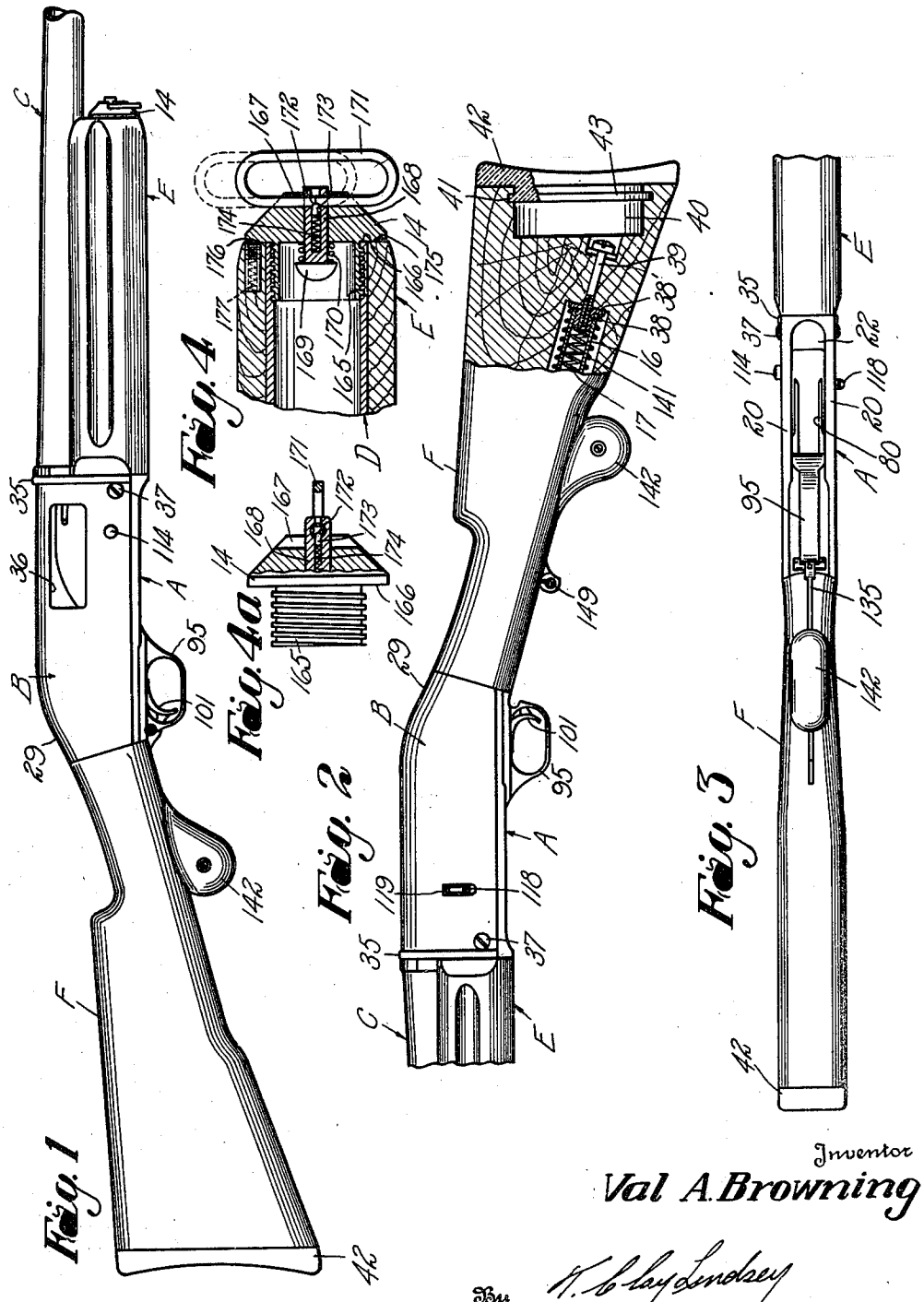


Fig. 1

Fig. 4

Fig. 4a

Fig. 2

Fig. 3

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REPEATING FIREARM

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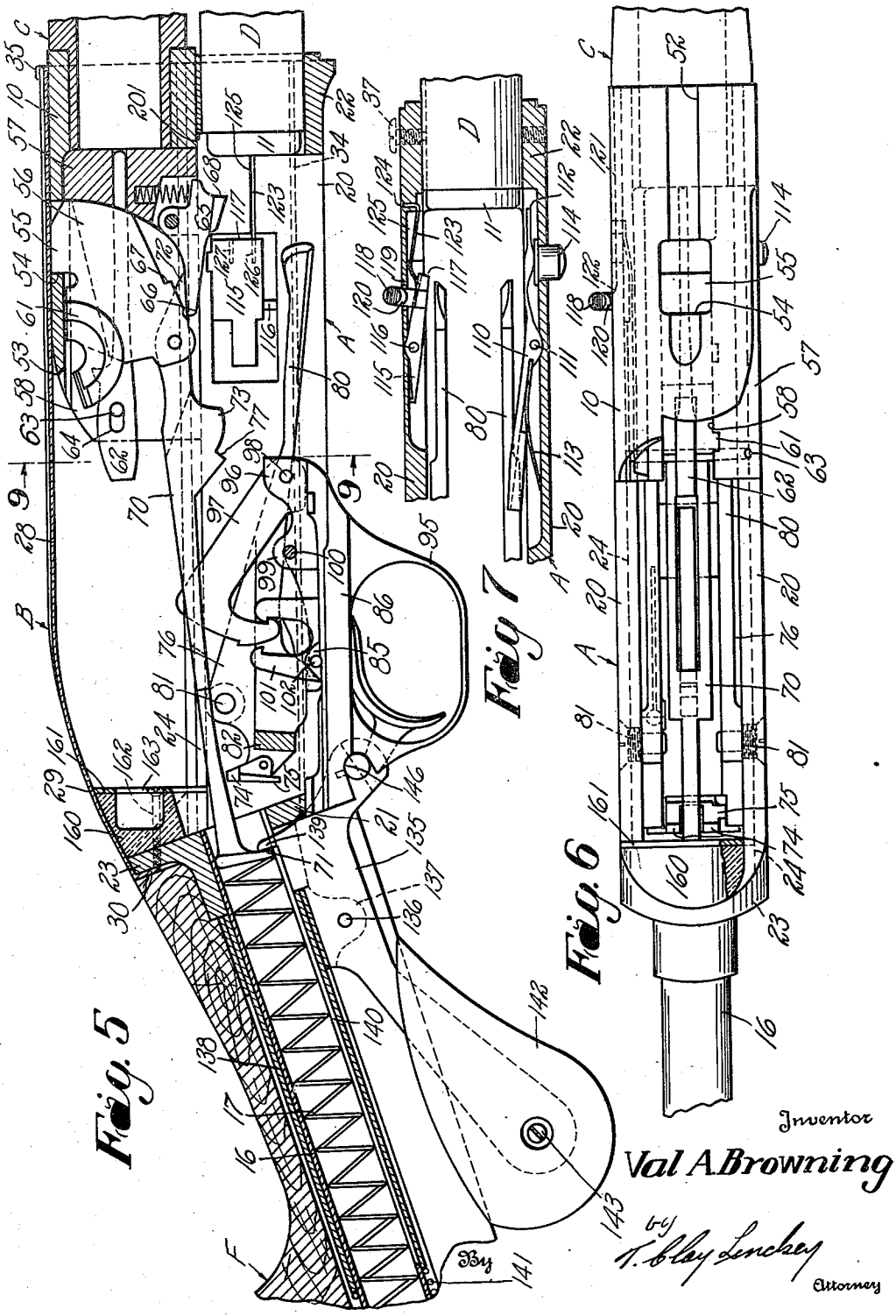


Fig. 5

Fig. 7

Fig. 6

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REPEATING FIREARM

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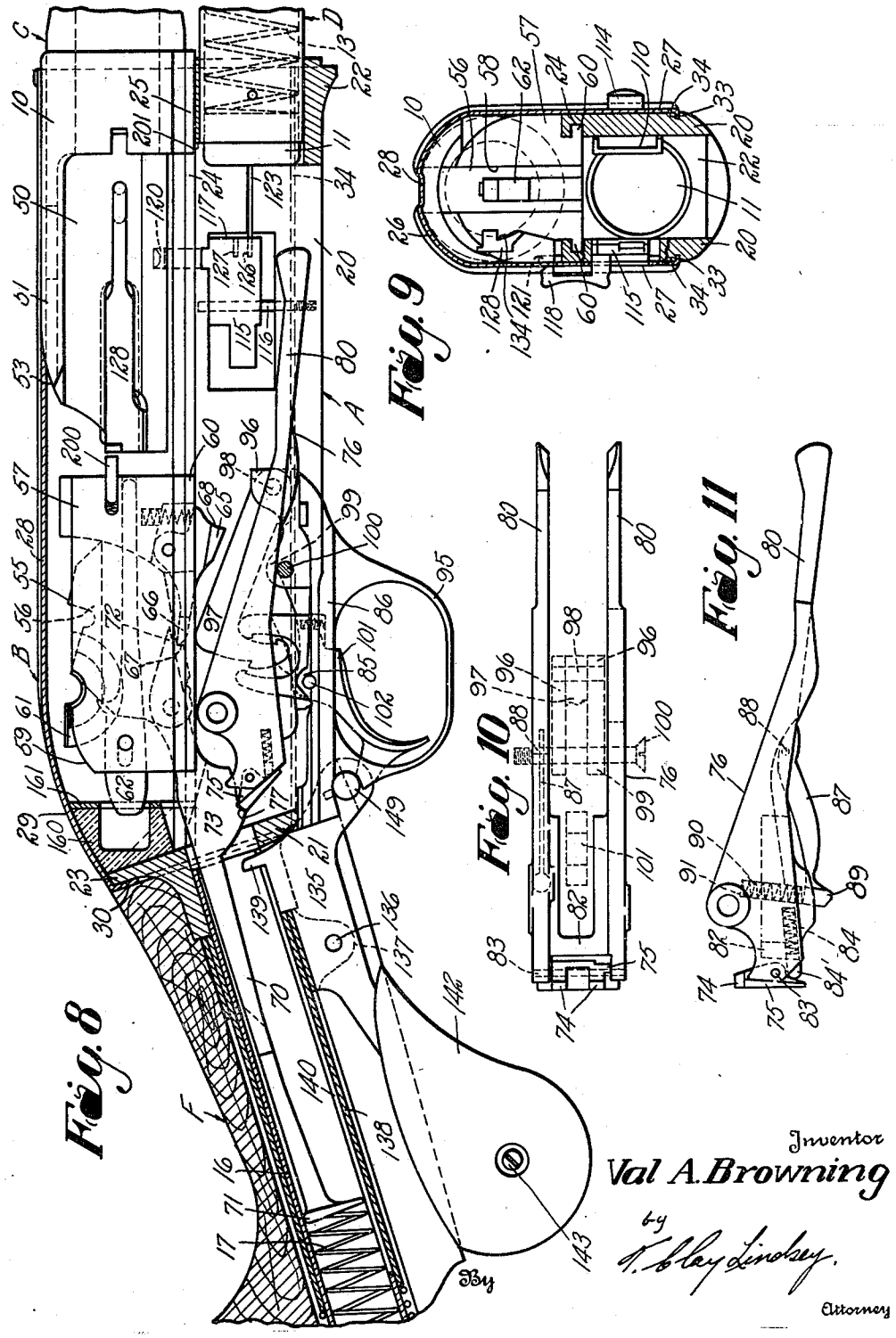


Fig. 8

Fig. 9

Fig. 10

Fig. 11

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REPEATING FIREARM

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Fig. 12

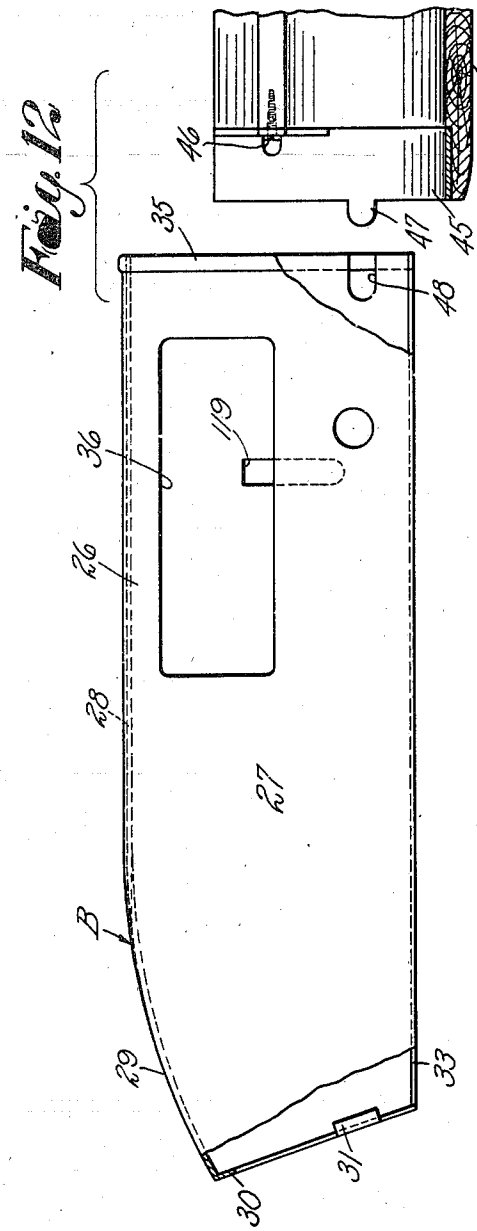


Fig. 14

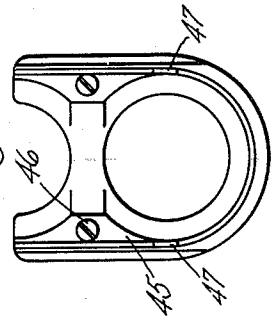


Fig. 15



Fig. 16

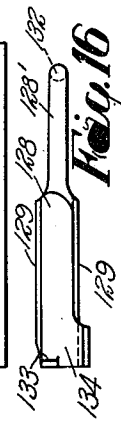
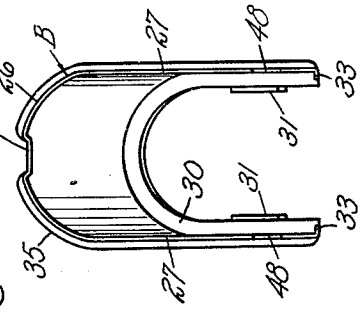


Fig. 17



Fig. 13



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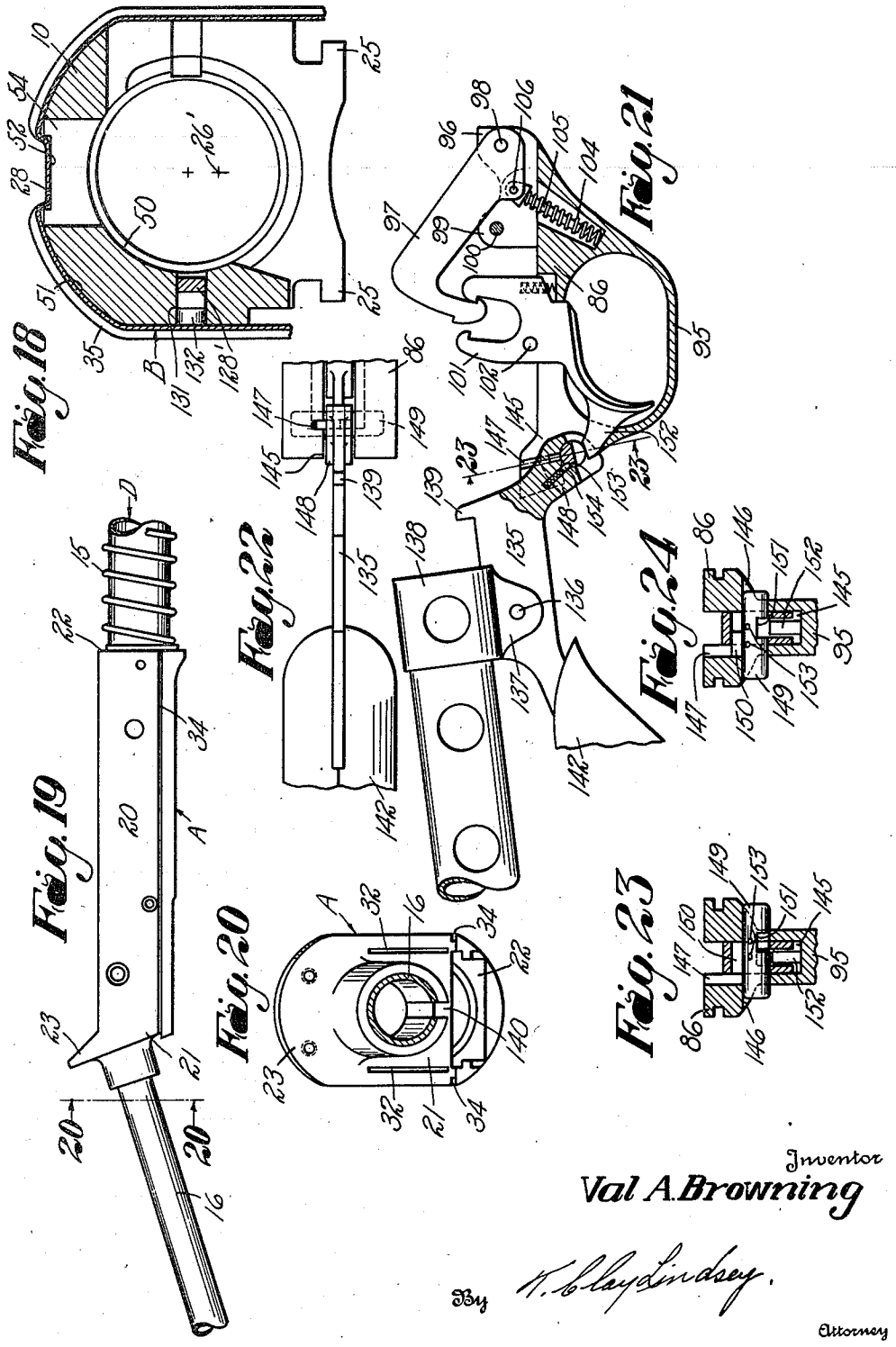
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Aug. 17, 1937. V. A. BROWNING 2,090,340

REPEATING FIREARM

Filed May 3, 1933 5 Sheets-Sheet 5



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Patented Aug. 17, 1937 2,090,340

UNITED STATES PATENT OFFICE

2,090,340

REPEATING FIREARM

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Application May 3, 1933, Serial No. 669,184

18 Claims. (Cl. 42—4)

This invention relates to firearms, and the improvements thereof have particular adaptation in automatic shot guns of the type wherein the barrel and breech mechanism are locked together and recoil in unison upon explosion of a shell; the fired shell is ejected through the side of the barrel extension and receiver, and a cartridge is automatically transferred from the magazine below the barrel to the barrel extension by a cartridge carrier located within the receiver behind the magazine.

The aim of the invention is to provide a firearm having various features of novelty and advantage. More particularly, objects of the invention are to improve the shape and outline of the gun so as to give it a pleasing appearance and a better and more comfortable "feel", to reduce the size of the receiver portion or frame and minimize the weight, thus further improving the "feel" of the gun and facilitating aiming thereof; to simplify the construction and arrangement; to reduce the cost of manufacture; to facilitate assembly, repair, cleaning and care of the gun; to improve the mechanical operation; increase the strength, durability and reliability of the several mechanisms and to reduce the liability of breaking and jams; and to facilitate manual cocking of the gun and reduce the number of protuberances or projections extending from the sides of the receiver.

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 an elevational view of the right hand side of a firearm constructed in accordance with the present invention;

Fig. 2 is a similar view of the left hand side of a firearm with a portion of the butt stock in section, the cocking piece being shown in retracted position;

Fig. 3 is an elevational view looking at the bottom of the gun;

Fig. 4 is a detail view in section showing the arrangement for securing the forearm to the magazine;

Fig. 4*a* is a view similar to Fig. 4 but showing the parts in different positions;

Fig. 5 is a sectional view taken generally longitudinally and vertically through the receiver and shows the parts in their normal or firing positions;

Fig. 6 is a top plan view of what is shown in Fig. 5 with the cover of the receiver and the butt stock removed;

Fig. 7 is a sectional view taken horizontally through the forward end of the receiver frame and shows the carrier latch and the combined cartridge stop and cut-off in top elevation;

Fig. 8 is a view similar to Fig. 5 but showing the operating parts in elevation and the breech bolt in retracted or withdrawn position;

Fig. 9 is a transverse vertical sectional view through the receiver, the same being taken substantially on line 9—9 of Fig. 5;

Fig. 10 is a plan view looking at the top of the detached cartridge carrier;

Fig. 11 is a side elevational view thereof;

Fig. 12 is a view showing the detached receiver cover in side elevation and the rear end of the forearm in vertical section;

Fig. 13 is an elevational view looking at the front end of the detached cover;

Fig. 14 is a rear view of the detached forearm;

Fig. 15 is a detail view showing the groove in the barrel extension which accommodates the ejector;

Fig. 16 is a detached view showing the ejector in side elevation;

Fig. 17 is an edge view of the ejector, the full lines indicating its condition before being assembled on the barrel extension, and the dotted lines indicating its condition when mounted in the barrel extension and moved to its rearmost position relative thereto;

Fig. 18 is an enlarged detail view showing the barrel extension and associated receiver cover in vertical transverse section, the section being taken on a plane passing through the locking opening in the top wall of the extension;

Fig. 19 is a side elevational view of the receiver frame, the forward end of the recoil tube, and the rear end of the magazine;

Fig. 20 is a view looking at the rear end of the receiver frame, this view being taken substantially on line 20—20 of Fig. 19;

Fig. 21 is a detail view of the trigger plate, parts carried thereby, and the cocking piece, the cocking piece being shown as locked to the trigger plate;

Fig. 22 is a view looking at the top of the parts shown in Fig. 21;

Fig. 23 is a detail sectional view taken substantially on line 23—23 of Fig. 21 and shows the

safety in "on" position with respect to the trigger; and

Fig. 24 is a view similar to Fig. 23 but showing the safety pin in "off" position and in which position the trigger may be pulled and the cocking piece is secured against actuation.

In the present illustrative disclosure, I have shown the improvements of the present invention incorporated in a gun of the type illustrated in the patent to John M. Browning No. 659,507 granted October 9th, 1900 and, in order to simplify the description of the structure shown in the accompanying drawings and more clearly explain the advantages of my improvements, reference may be frequently had to said patent; also to the John M. Browning Patents Nos. 689,283 and 710,094, respectively granted December 17th, 1901 and September 30th, 1902.

In accordance with the present invention, my improved firearm has a receiver comprising a frame part A and a casing or cover part B and, as this receiver constitutes an important feature of the present invention, the structure thereof will be described more in detail hereinafter, and the advantages of the arrangement will be pointed out as the description proceeds. The letter C designates a barrel having a barrel extension 10 slidably mounted in the upper portion of the receiver. Located below the barrel and secured to the forward front wall of the receiver frame is the usual magazine D within which is a follower 11 backed up by a spring 13. The magazine is housed within a forearm E which is secured in place by a screw 14 threaded into the forward end of the magazine. About the magazine D is a spiral action spring 15 which may be associated with the barrel in the manner disclosed in the said John M. Browning patents, the purpose of this spring being to return the barrel and barrel extension to their normal or forward positions. The letter F designates the stock of the gun into which extends a tube 16 which houses a recoil spring 17 for returning the breech bolt to its forward or operative position after the breech bolt is released from retracted position, as hereinafter described more in detail.

Referring now more specifically to the construction of the receiver, the frame portion A thereof (see Figs. 5, 9, 19 and 20) has a pair of spaced parallel side walls 20 extending slightly above the top of the magazine and connected at their rear ends by a rear wall 21 and at their front ends by a front wall 22. The front wall is apertured so as to receive the rear end of the magazine D, and the rear wall is apertured so as to receive the front end of the tube 16. The rear wall 21 extends above the top of the side walls so as to provide an abutment 23 in the line of movement of the barrel extension and breech bolt, and in order to strengthen and brace this abutment, the same is extended around so as to merge into the side walls. The frame is open at its top and its bottom. The side walls, adjacent their upper ends and on their inner faces, have grooves 24 adapted to receive ribs 25 on the breech of the barrel extension whereby the barrel extension is guided in its movements in the receiver.

The cover B of the receiver is preferably formed from a single piece of sheet metal cut to shape and pressed and bent to the form illustrated in Figs. 12 and 13. This cover is generally U-shape in transverse section and has a transversely curved top wall 26 and straight, flat side walls 27, the lower portions of the latter of which straddle the frame and are in close engagement with the external faces of the side walls of that frame. The top of the cover is positioned sufficiently above the frame to provide in the top of the receiver a space for accommodating the breech bolt and barrel extension in their sliding movements. The top wall 26 is transversely curved so that the center longitudinal portion of that top wall is closer to the axis of the barrel than are the portions to either side of the longitudinal center, for the purpose hereinafter described more in detail; in the present instance, the wall 26 being curved about an axis 26' (see Fig. 18) positioned vertically below the axis of the barrel. This top wall, along its longitudinal center portion, has a depressed rib 28 so as to form a sighting groove, the bottom of which is but very little higher than the top of the barrel. The rear upper end of the cover curves gradually downwardly and rearwardly, as at 29, and merges into the top surface of the butt-stock so that abrupt shoulders are eliminated, a pleasing streamline appearance is given to the gun, and aiming is facilitated.

The rear end of the cover B fits about the end wall of the receiver frame and is provided with an inturned marginal flange 30 which engages against the rear face of the receiver frame. Extending forwardly from the inner edge of this flange, at each side, is a lip 31, and these lips are adapted to take into grooves 32 (see Fig. 20) in the rear face of the receiver frame so as to prevent outward spreading of the cover at its rear end. The lower edge of each side wall of the cover is turned inwardly so as to provide a flange 33, and the receiver frame is provided at opposite sides and adjacent its bottom with grooves 34 respectively adapted to receive the flanges 33. The upper walls of these grooves form downwardly facing longitudinally extending surfaces beneath which said flanges 13 engage. About the forward edge of the receiver cover is a raised bead 35 through which the longitudinal groove in the top of the cover extends. The cover also has, in its right-hand side wall, a shell-ejecting opening 36. The side walls 27, at their front ends, are clamped against the side walls of the receiver frame by means of screws 37, (shown in Figs. 1 and 7) and which may also serve the purpose of preventing rotation of the magazine D with respect to the receiver frame. It is clear that the lips 31 prevent the side walls of the cover at their rear ends from spreading, and the screws 37 prevent the walls from spreading at their forward ends. The engagement of each flange 33 in a groove 34 forms a close joint between the cover and the frame and holds the cover against vertical movement with respect to the frame. The flange 30 engages against the rear face of the rear wall of the receiver frame and is clamped against that face by the forward end of the butt-stock F.

This butt-stock has a rearwardly and downwardly inclined bore for accommodating the tube 16. A screw plug 38 is screwed into this tube, and has a flanged head 38' extending laterally beyond the tube, as shown most clearly in Fig. 2. This screw plug has a threaded opening for receiving a bolt 39 which is employed for securing the butt-stock in place. When the bolt is turned up tight into the screw plug, the forward end of the butt-stock is urged against the flange 30 of the cover of the receiver. It is observed that this manner of securing the butt-stock in place is a very simple and economical one and that the rear end of the bolt 39 is readily accessible. The rear end of the

stock has a shallow chamber **40** provided with a circumferential groove **41** adjacent its rear edge. This chamber is closed by a shoulder or recoil pad **42** preferably made of rubber. The pad has a body portion fitting against the end of the stock and a boss portion projecting into the chamber **40**. The boss portion has a circumferential rib **43** corresponding generally in shape to the groove **41** and adapted to be received by that groove. With this arrangement, when it is desired to secure the shoulder pad in place, it is merely necessary to push it home to the position shown in Fig. 2, thereby engaging the rib **43** in the groove **41**. It is observed that no screws are necessary to hold the shoulder pad on the stock.

As shown in Figs. 12 and 14, the rear end of the forearm is internally rabbeted so as to receive a metal reinforcing strip or lining **45** which may be secured in place by screws **46**. Extending rearwardly from this reinforcing strip are a pair of ears or lugs **47** which are adapted to engage in internal notches **48** in the forward ends of the side walls of the cover B. These notches are adjacent the screws **37**. With this arrangement, the rear end of the forearm is suitably strengthened, and the engagement of the lugs in the notches prevents the rear end of the forearm from spreading.

Referring now to the barrel extension **10**, the same is generally similar to that shown in the John M. Browning Patent No. 659,507 but has certain features of novelty and advantage over that old structure, these improvements being permissible in view of the two-part construction of my receiver. In the present instance, the barrel extension has a top wall and a left-hand side wall, the extension being open at its right-hand side so as to permit ejection of the fired shells through the ejection opening **36** in the cover B, and the extension being open at its bottom so as to receive cartridges from the magazine. As shown in Fig. 18, the internal surface **50** of the barrel extension has a truly cylindrical surface, the axis of which is coincident with the axis of the barrel. The top surface **51** of the barrel extension corresponds in transverse curvature to that of the top wall **26** of the receiver cover. As previously stated, the top wall **26** of the cover is curved about an axis **26'** positioned vertically below the axis of the barrel and, therefore, the surface **51** is struck about the same axis. With this arrangement, it will be observed that the top wall of the extension gradually increases in thickness from its central longitudinal portion towards its side portions. The top surface of the extension has a central longitudinally extending groove **52** adapted to accommodate the depressed rib **28** of the cover B. The outside surface of the side wall of the extension is flat and lies closely adjacent to the left-hand flat side wall of the cover. The rear portion **53** of the top wall of the barrel extension is gradually curved downwardly and rearwardly so as to correspond generally to the curved portion **29** of the top wall of the receiver cover. Formed in the top wall of the barrel extension is a rectangular locking opening **54** adapted to receive the locking lug **55** of the locking block **56** which is carried by the breech bolt **57**, as shown in Fig. 5.

It may be well to here state that the removable cover B permits of the described construction of barrel extension, and this construction is not capable of use in connection with a one-piece receiver such as is shown in said Browning Patent No. 659,507 and which has, up to the present time, been universally employed in guns of this type. Referring to said Browning patent, it will be seen that the only practical and commercial way of providing a space in the receiver for accommodating the barrel extension is to bore the receiver, and the external surface of the barrel extension must, therefore, be made truly cylindrical about the axis of the barrel to correspond to the bore in the receiver. The wall of the barrel extension must be relatively thick in order that it has sufficient strength to resist the strains to which it is subjected upon firing of the gun, it being understood that when a cartridge is fired, the breech bolt is forced back very violently and, due to the engagement of the locking block with the barrel extension, the barrel extension is drawn back in unison with the breech bolt. Therefore, the wall of the extension about the locking opening **54** must be relatively thick which means that the top surface of the extension must extend considerably above the top level of the barrel and the top portion of the receiver is relatively high and wide. It follows that the front sight must be elevated considerably above the barrel, and this is objectionable for well known reasons. With my arrangement, the removable cover of the receiver, since it is made of sheet metal and may be easily bent and pressed to the desired shape, may have its top wall curved about an axis other than the axis of the barrel, thus permitting the top wall of the barrel extension to be thinner at its center portion and gradually increase in thickness away from the center portion so as to give strength at the points where the utmost strength is desirable. More particularly, referring to Fig. 18, it will be seen that the thickness of the top wall of the extension at the corners of the locking opening **54** is very substantial, and the portion of the extension to the right-hand side of that opening is of sufficient thickness to prevent breaking under strains upon recoil of the breech bolt and barrel extension. Incidentally, it is noted that the groove **52** is of less width than the locking opening so that the thickness of the barrel extension wall at the corners of the locking opening is not reduced by providing the groove. Now, since the central portion of the top wall of the extension may be of lesser thickness, the top of the receiver cover is brought down more closely to the top of the barrel, thus giving a more harmonious and pleasing appearance to the gun and permitting the front sight to be lowered. This arrangement also allows for a more pleasing and gradual curve at the rear end of the receiver cover, permitting that curved portion to be merged into the surface of the butt-stock.

The breech bolt mechanism is generally similar to that disclosed in the John M. Browning Patent No. 710,094. The breech bolt **57** has a vertical slot **58** open at the top and the bottom and extending to the rear end of the bolt. The bolt also has ribs **60** along its lower corners which are slidably mounted in the grooves **24** of the receiver frame. The rear end of the top of the bolt is curved downwardly and rearwardly, as at **59**, so as to clear the curved portion **29** of the cover B. The slot **58** in the breech bolt accommodates the locking block **56** which may be supported for swinging movement by segmental ribs **61** formed on the block and engaging in corresponding grooves in the bolt. The firing pin **62** extends through an opening in the forward end of the bolt and is supported at its rear end by a pin **63** carried by the bolt. The firing pin has an elongated slot **64** for accommodating the

pin 63. The pin 63 limits the extent of movement of the firing pin. Pivoted to the underside of the breech bolt is a locking lever or latch 65 having a nose 66 adapted to engage a locking notch 67 in the locking block so as to hold the latter in its inoperative or down position, as shown in Fig. 8. The forward end of this locking lever has a shoulder 68 which constitutes a secondary cartridge stop, the same as in said Browning Patent No. 710,094. Pivoted to the lower rear corner of the locking block is a link 70, the rear end of which has a head 71 projecting into the forward end of the tube 16. The forward end of the recoil spring 17 acts against this head and thus the spring normally urges the breech bolt to its forward position shown in Figs. 5 and 6. The forward end of the link 70 has a nose 72 overlying the rear end or nose 66 of the locking lever 65 so that, as the breech bolt moves forwardly and the link assumes a more horizontal position, the forward end of the link will disengage the locking lever from the locking block, as fully explained in said Browning Patent No. 710,094. The link 70 has a pair of spaced depending webs 73, the under surfaces of which constitute cams for engaging teeth 74 on a dog or sear 75 pivoted in the rear end of the cartridge carrier, designated generally by the numeral 76 and shown most clearly in Figs. 10 and 11. These webs have forwardly facing notches 77 in which the dog 75 is adapted to engage to hold the link and breech bolt in the retracted position shown in Fig. 8.

The cartridge carrier 76, which has a pair of forwardly extending arms 80, is pivoted on screws 81 extending through the side walls of the receiver frame A. The arms are connected at their rear ends by a cross portion 82. The dog 75 is pivoted on a pin 83 and is located between the side walls of the carrier. The dog is normally urged to the position shown in Figs. 5 and 11 by a spring 84 acting through a plunger 84'. It will be observed that this dog is centrally disposed between the sides of the carrier so that, when the dog is in the link holding position shown in Fig. 8, the recoil spring 17 gives a direct thrust against the dog and carrier at right angles to the pin 83, any tendency of the spring to cant the carrier or throw it to one side being eliminated. As hereinafter explained more in detail, after the gun has been fired and as the barrel extension moves into its normal or forward position, shown in Fig. 8, the carrier is released and the recoil spring, through the dog 75, will turn the carrier so as to move a cartridge into the barrel extension and, as the breech bolt advances into the barrel extension, it will wipe against the arms of the carrier so as to move the carrier back to the normal or receiving position shown in Fig. 5. In order to complete the swinging movement of the carrier in both directions and to hold the carrier in both its normal and operated positions, I provide a wedge-shaped cam 85 on the trigger plate 86 and a lever 87 on the carrier. This lever is pivoted to one of the carrier arms, as at 88, and has a nose 89 engaging the wedge-shaped cam 85. Behind the free end of the lever is a coiled spring 90 positioned in a recess 91 in the carrier, see Fig. 11.

It will be observed that the upper end of the spring 90, which is acting on the carrier just forwardly of the pivot 81, tends to swing the carrier upwardly about that pivot. The lower end of the spring engages the lever 87 at its free end and normally tends to move the free end of the lever downwardly with respect to the carrier. When the forward end of the carrier swings upwardly to deliver a cartridge to the barrel extension, the spring 90 is compressed as the nose 87 rides up the rear edge of the cam 85 and, after the nose has passed the high point of that cam, the spring forces the nose down along the forward edge of the cam. The force of the spring and the camming action between the nose and the cam is transmitted through the lever 87 to the pivot 88, which is considerably in advance of the pivot of the carrier. Due to this arrangement, the force of the spring is advantageously modified to exert greater power during the raising movement of the forward end of the carrier. This permits the spring 90 to be properly counterbalanced with respect to the recoil spring and the spring 84', while at the same time insuring sufficient leverage force to raise the carrier, together with the shell supported on the forward end thereof.

The trigger plate 86 is suitably supported between the side walls of the receiver frame and closes the rear portion of the opening in the bottom of the receiver frame. It has an integral trigger guard 95. It also has, at its forward end, a pair of lugs 96 between which is pivoted the hammer 97 on a pin 98. Rearwardly of the ears 96 are a pair of spaced ears 99 through which extends a screw 100 and which screw also extends through the side walls of the receiver frame so as to secure the trigger plate in place. The hammer is of the usual construction. The trigger 101 is pivoted to the trigger plate, as at 102, and is of the usual construction so need not be described in detail. It will be observed from Figs. 5 and 10 that the connecting portion 82 of the carrier is positioned behind the trigger and that the arms 80 of the carrier, when in lowered position, straddle the upper portion of the trigger, the ears 96, the ears 99, and the hammer. The construction and arrangement of the carrier and its relation to the trigger mechanism are of advantage in that the weight of the carrier forwardly of its pivot is greatly reduced, thereby throwing a lesser burden on the carrier raising means and thus providing a smoother and more positive action of the gun. The lugs 99, through which the anchoring screw 100 extends, may be made sufficiently strong to insure against breaking without interfering with the action of the carrier. The main spring 104 for throwing the hammer forwardly when released is mounted in a novel manner which makes for simplicity in construction and assembly and permits of the carrier being constructed as described. As shown most clearly in Fig. 21, this main spring is supported in a bore extending downwardly and rearwardly through the trigger plate and into the forward upper portion of the trigger guard. The spring acts through a plunger 105 which is pivoted at its upper end, as at 106, to the hammer rearwardly of the pivot for the hammer. The anchoring pin 100 is rearwardly of this main spring, leaving the forward end of the trigger plate free to form a substantial abutment against which the carrier stops when lowered.

Located in a recess in the right-hand wall of the receiver frame is the carrier latch 110, which is shown as being of the regular construction and, therefore, need not be described in detail. It is sufficient to say that it is pivoted on a vertical pin 111 and has its rear end adapted to extend over the right-hand arm of the carrier

so as to lock the carrier in its lower or receiving position. The forward end 112 of the latch constitutes a cartridge stop for preventing a shell from coming out of the magazine when the carrier is in other than lowered or receiving position. The spring 113 normally urges the latch into locking position with respect to the carrier. A push button 114 is mounted in an opening in the receiver so that the carrier latch may be disengaged manually from the carrier as, for example, when it is desired to load the magazine.

It has been the practice in guns of this sort to provide in the receiver a cartridge stop which is controlled in its movements by the sliding movement of the barrel extension and to provide an additional and separate instrumentality, termed a cut-off, for positively preventing shells from coming from the magazine, the cut-off being manually movable into and out of operative position at will. The cut-off is used when it is desired to directly load the barrel, thus cutting out the automatic feature of the gun. In accordance with the present invention, I so construct and arrange the cartridge stop that it not only serves its usual automatic function but also serves as a cut-off. This combined cartridge stop and cut-off is designated by the numeral 115, and is located in a recess in the left-hand wall of the receiver frame, see Figs. 7, 8 and 9. It is in the form of a plate pivoted on a vertical pin 116 and having its forward end in the form of a shoulder 117 against which the rim of a shell is adapted to engage when the shell is partially out of the magazine. The pivoted plate has an outwardly offset finger or thumb piece 118 positioned for sliding movement in a vertical slot 119 in the receiver cover. At the upper end of this thumb piece is an inwardly extending lug 120 which, when the device is used as an automatic cartridge stop, cooperates with the barrel extension so that when the barrel extension is in its forward or normal position, the abutment or stop face 117 is in the recess and out of the path of movement of the cartridge. The barrel extension has, in its left-hand wall and at its forward end, a clearance groove 121, at the rear end of which is a bevel or cam surface 122. The cartridge stop is mounted on the pin 116 for vertical movement into and out of upper and lower positions. A spring 123 serves to normally urge the cartridge stop into operative position and, also, holds that stop in either its upper position or its lower position. This spring is in the form of a thin, resilient wire having an out-turned forward end 124 engaging in a hole in the receiver frame. The body or central portion of the spring is located in a groove 125 in the receiver frame, and the rear end of the spring is bowed inwardly so as to engage the outer face of the cartridge stop. This face is provided with two parallel vertically spaced apart grooves 126 and 127. When the cartridge stop is in its uppermost position, the spring engages in the lowermost groove 126, and the lug 120 is in the range of movement of the bevel or cam 122 on the barrel extension so that the device acts as an automatic cartridge stop in the usual manner. When the parts of the gun are in their normal positions, shown in Fig. 5, the lug 120 engages the side of the barrel extension rearwardly of the clearance groove 121 so that the cartridge stop is held in the recess and out of the path of the cartridge in the magazine. The outermost shell in the magazine engages the stop face 68 of the locking lever or latch 65. Now, when the gun is fired, the breech bolt and barrel extension will move rearwardly and, after the initial movement of the barrel extension, the clearance groove comes opposite the lug on the cartridge stop, thus permitting the cartridge stop to move inwardly and stop the cartridge which heretofore has been engaging against the stop face 68 of the locking lever 65. The barrel extension and breech bolt will continue to move rearwardly in unison until they have reached their retracted positions, whereupon the barrel extension is released from the locking block, and the action spring 15 will return the barrel to its normal forward position. Just before the barrel reaches its normal forward position, the bevel 122 will engage the cartridge stop so as to withdraw the latter, whereupon the cartridge, which has been held by that stop, will ride back onto the carrier and engage the carrier latch, thereby moving the carrier latch out of latching position and bringing the forward end 112 of the latch into cartridge-stopping position. This sequence of operations is generally similar to that performed in firearms of the type disclosed in said Browning patents. When it is desired to render the magazine feature of the gun inoperative, the carrier stop is moved to its lower position where the bowed end of the spring 123 will engage in the uppermost groove 127, and in this position the lug 120 is below the clearance slot 121 so that it will not be operated upon by the barrel extension as the latter recoils and moves forwardly. The cartridge stop now acts as a positive magazine cut-off. It will thus be observed that with this arrangement, a separate cut-off instrumentality is eliminated, making for simplicity and economy in construction and lightness in weight.

Reference will now be had to the ejector carried by the barrel extension and which has various features of novelty and advantage. This ejector, as shown in Figs. 16 and 17, comprises a strip of metal having a body portion 128 provided along its upper and lower edges with ribs 129 adapted to slidably engage in channels cut in the upper and lower walls of a recess or groove 130 in the inner surface of the side wall of the barrel extension. The groove in the barrel extension is extended forwardly in somewhat narrowed form, and this narrowed portion of the groove receives a forwardly extending tongue or tang 128' of the ejector. The wall of the extension at the forward end of the groove 130 has a short slot 131 which receives a stud 132 extending outwardly from the forward end of the spring tang. The tang, as shown in Fig. 17, is curved outwardly so that, when the ejector is inserted into the groove 130, this tang will frictionally engage against the wall of the groove and thus there is a drag on the ejector. The ejector has, at its rear end, an inwardly projecting ejecting shoulder 133 against which the rim of the shell, as it is withdrawn from the shell chamber, is adapted to engage. When the ejector is in its foremost position with respect to the barrel extension, the rear end of the ejector projects only slightly beyond the rear end of the barrel extension. From Fig. 9, it will be observed that the inner face 134 of the ejector adjacent the rear end of the latter is curved or inclined inwardly, and this face is beneath a horizontal plane passing through the axis of the barrel so that there is a ledge, so to speak, lying beneath the rim of the shell at the side of the shell. With this arrangement, it will be observed that the ejector may be very economically made and easily assembled and, when assembled, it

will not be detached from place under the shocks to which it is subjected. To assemble the ejector in the groove of the barrel extension, it is merely necessary to align the forward end of the ejector with the groove 130 and then force the ejector forwardly and, when the stud comes opposite the slot 131, the tang will flex outwardly and move the stud 132 into the slot. The ends of the slot constitute stops for limiting the extent of the ejector. When the breech bolt is manually withdrawn from operative position, the usual extractor 200 on the forward right hand side of the breech bolt will engage in front of the rim of the shell and draw the shell rearwardly until the other side of the rim engages the ejecting shoulder 133, whereupon the forward end of the shell, having cleared the breech, will be swung to the right and the shell will be ejected. When the gun is fired, the barrel and breech bolt recoil together and then the barrel moves forwardly. During this forward movement, the ejector shoulder will strike the left hand side of the shell and, as the extractor 200 is engaging the right hand edge, the shell will be ejected. In either event, it is of advantage to have the sliding ejector under frictional drag in order to take care of shells of different lengths in the most expeditious manner and to avoid possibility of jams. For example, if an unfired shell is being manually withdrawn from the shell chamber, this action is naturally slower than would be the case if the gun were fired and the shell is relatively shorter than a fired shell would be due to the crimp at the forward end of the shell. In this case, the rim of the shell will engage the ejecting shoulder with the ejector in its foremost position so that the shell is removed as quickly as possible leaving ample time for the next shell to be delivered to the magazine without jamming. If the shell which is being extracted is a longer one, as would be the case if the same had been fired, the rim will engage the ejecting shoulder and the ejector will be caused to move rearwardly a sufficient distance to permit the forward end of the shell to clear the breech. It will be understood that, when the barrel is moved to full retracted position, the rear end of the ejector will engage the buffer thereby causing the ejector to move to its foremost position shown in Fig. 8. As previously stated, the inner face of the ejector, adjacent the ejecting shoulder, is directed downwardly and inwardly below the horizontal plane of the barrel, this arrangement being of advantage in that the rim of the shell may rest on this surface being held thereagainst by the extractor so that the rim of the shell will not drop down from engagement with the ejecting shoulder.

It is frequently desired, in guns of this sort, to manually cock the gun, that is, to manually move the breech bolt to retracted or withdrawn position and to cock the hammer, and it has been the practice to provide for this purpose a sliding handle carried by the breech bolt and having a finger piece extending laterally from the gun and through a longitudinal slot in the receiver. This projecting finger piece is objectionable in that it forms a protuberance likely to catch on clothing, twigs or leaves and quite liable to damage gun cases. The projecting finger piece, together with the slot in the receiver, mars the appearance of the gun, and dirt and water may find access to the interior of the gun through the slot. In order to eliminate these and other disadvantages to the operating handle, as heretofore constructed, I provide an improved arrangement whereby the gun may be manually cocked by operating a handle conveniently located on the under side and adjacent the forward end of the butt stock, this handle preferably being in the form of a pistol grip. The butt stock, at its forward end and under the tube 16, is longitudinally slotted so as to accommodate a cocking piece or plate 135 which is secured, as by means of a pin 136, between a pair of ears 137 depending from a sleeve 138 slidably surrounding the tube 16 which houses the recoil spring. The plate 135 has a lug 139 adapted to engage the forward face of the head 71 of the link, and the tube 16 is longitudinally slotted, as at 140, so as to accommodate this lug. Behind the sleeve 138 and surrounding the tube 16 is a light coiled spring 141, the rear end of which abuts against the overhanging head of the screw plug 38. As shown most clearly in Fig. 2, this screw plug serves three functions— it forms an abutment for the rear end of the recoil spring 17; it forms an abutment for the rear end of the spring 141, and it serves as an anchor for the forward end of the bolt 39 which secures the butt stock in place. The cocking piece 135 extends down into a kerf in the pistol grip 142 and the pistol grip is connected to the plate as by means of the screw 143. The upper face of the pistol grip conforms closely to the under side of the butt stock. The cocking piece and pistol grip close or cover the slot in the butt stock.

When it is desired to manually retract the breech bolt, it is merely necessary (the hereinafter described safety having been moved to "on" position) to grasp the pistol grip and draw it rearwardly from the position shown in Fig. 1 to that illustrated in Fig. 2. When this is done, the link, due to the engagement of the lug 139 in front of the head 71, is drawn rearwardly; the locking block is disengaged from the barrel extension; the breech bolt is drawn rearwardly, and the recoil spring 17 is compressed. The carrier dog or sear locks the breech bolt in retracted position. When it is desired to release the breech bolt, the carrier latch is disengaged from the carrier by manually pressing in the push button 114, whereupon the recoil spring 17 will move the breech bolt to its normal or forward position and the spring 141 will return the cocking piece, together with the pistol grip, to its forward position. It will be observed that the pistol grip constitutes a handle for the cocking piece, and this grip is very conveniently positioned so that it can be readily grasped when it is desired to manually cock the gun.

In order to lock the cocking piece, together with the pistol grip secured thereto, in its foremost position shown in Fig. 5, and to prevent pulling of the trigger when that piece is in that position but unlocked, I provide an arrangement which constitutes locking means for the cocking piece and a safety for the trigger. Referring particularly to Figs. 22 to 24, inclusive, the rear end of the trigger plate 86 and the rear upper portion of the trigger guard are slotted, as at 145, and the trigger guard to either side of the slot and immediately below the trigger plate has a rearwardly facing notch 146. The left hand wall of the slot 145 is provided with a groove 147. The forward end of the cocking piece 135 has a head 148 adapted to be received by the slot 145. This head has a transverse opening in which is adapted to slide a safety pin 149 having a radially extending lug or spline

150, the left hand end of which is adapted to engage in the groove 147. The pin, diametrically opposite the lug, has a notch 151 which, when the pin is in locking position (see Fig. 24) for the cocking piece and in "off" position with respect to the trigger, is registered with a finger 152 extending rearwardly from the trigger. The under side of the head 148 of the cocking piece is slotted or notched to accommodate this finger. In order to hold the safety pin in its "off" position of Fig. 24 and in its "on" position of Fig. 23, the pin 149 has a pair of longitudinally spaced apart notches 153 in which is adapted to selectively engage the end of a spring pressed plunger 154 carried by the cocking piece, as shown most clearly in Fig. 21. With the arrangement described, when the pin is in the position shown in Fig. 23, the lug 150 is disengaged from the groove 147 so that the cocking piece may be drawn backwardly to cock the gun. While the parts are in this condition, however, the trigger cannot be pulled because the unnotched portion of the pin 149 is opposed to the end of the finger 152. Therefore, before the gun can be fired, it is necessary to push the safety pin to the left, that is, to the position shown in Fig. 24, and thus bring the notch 151 over the finger 152. When the piece is so moved to the left, the lug 150 is engaged in the groove 147 so that the cocking piece is locked against movement, thus rigidly holding the pistol grip in its foremost position.

In order to absorb the shocks incident to the rearward movement of the barrel and breech bolt and thereby reduce the strains to which the receiver and other parts of the gun are ordinarily subjected, there is provided on the upwardly extending portion of the rear wall of the receiver frame, a buffer which includes a block 160 of fibrous material and a metallic face plate 161, these parts being secured in place by screws 162. The face plate and buffer member are centrally recessed or apertured, as at 163, so as to accommodate the rear end of the firing pin, as shown most clearly in Fig. 8.

Referring to Figs. 1, 4 and 4*a*, it will be observed that the forearm E is held in place upon the magazine D by the nut or screw 14 having an externally threaded sleeve portion 165 which is screwed into a complementary internal thread at the forward end of the magazine. The screw 14 also has an enlarged head having a rearwardly facing shoulder 166 against which the forward end of the forearm is adapted to engage. The forward end of the head is tapered so as to give a pleasing appearance and avoid abrupt shoulders. The forward end of the head has a diametrically extending groove 167. The head of the screw has a central opening in which is slidably mounted a stem 168 having a button 169 between which and the rear face of the head is interposed a compression spring 170. The numeral 171 designates an elongated strap loop preferably formed of a length of heavy wire square in cross section. The ends of the wire are brought into abutting relation midway between the ends of the loop, and these ends are chamfered so as to provide a V notch 172. The stem 168 has a bore in which is mounted a plunger 173 behind which is a spring 174, and the forward end of this plunger is adapted to engage the loop. The shoulder or face 166 of the head of the screw has angularly spaced apart recesses 175 in which is adapted to selectively engage a ball 176 behind which is a spring 177. The bullet catch, comprising the ball 176 and the spring 177, is located in a bore in the outer end of the forearm and serves the usual function of holding the screw against accidental rotation. When the loop or ring is not in use, it is preferably given the position shown in Fig. 1 and wherein one side of the loop engages lengthwise in the groove 167 and the loop lies in a vertical plane. Due to the fact that the wall of the ring has flat sides and the plunger 173 is engaging against one of these flat sides, the loop is held in this position and against rattling. When it is desired to use the loop, and the groove happens to be horizontally disposed, the loop is swung to the full line position shown in Fig. 4. In the event that the groove is not horizontally disposed, the loop is pulled forwardly so as to disengage it from the groove and is then turned about a horizontal axis so that the loop will lie in a horizontal plane. It is resiliently held in this position due to the springs 170 and 174. In either of the latter cases, the plunger 173 engages in the notch 172 so that the loop is held centrally against longitudinal movement and also against swinging movement about the axis of the wall having that notch. The loop also serves the purpose of a tool for screwing and unscrewing the screw 14 into and out of place with respect to the magazine and forearm. When the side of the loop is engaged in the groove 167, as shown in Fig. 4, the screw may be turned by turning the loop. In order to get a greater leverage, the loop may be moved longitudinally to the dotted line position shown in that figure.

It will be observed, from the foregoing description taken in connection with the accompanying drawings, that various features of novelty are incorporated in my improved gun which make for a better and more pleasing appearance, economy in manufacture, and reliability in operation. By providing a receiver having a frame for the operating parts and a cover for housing both the barrel extension and the breech mechanism throughout the length of travel of these instrumentalities, various benefits and advantages are obtained, including improvement in appearance, lessening of weight, economy in manufacture, and ease of assembly, repair and cleaning. It has been pointed out that, with this construction of receiver, the top thereof may be brought down more closely to the top of the barrel, the front sight may be lowered, and the rear end of the receiver cover may be gently curved downward so as to merge into the surface of the butt stock, thus giving an harmonious and rather flowing streamline effect in side outline to the gun. The receiver may be made shorter and narrower and with flat sides, thus further improving the appearance and reducing the weight of the gun and generally improving the "feel" thereof and facilitating aiming. The sides of the cover conceal all but the lower edges of the side walls of the frame and, therefore, hide the screws and pins which ordinarily extend through the receiver. Economy in manufacture is obtained, it being observed that the costly and laborious operation of boring the receiver so as to accommodate the barrel extension is avoided, and finishing of the side walls of the receiver is greatly facilitated since these walls are flat. Also, since the cover backs up the screws carried by the frame, such for example, as the screws 81, the use of lock screws in connection therewith is avoided. The operating parts may be very easily and quickly assembled in the receiver frame be-

fore attaching the cover, and this makes it possible to simplify the construction of the parts and cheapen their manufacture and, at the same time, improve the mechanical operation. The parts may be very easily cleaned, as access may be readily had thereto by removing the cover, and repair, when necessary, is facilitated. It will be observed from Fig. 5 that the rear edge 20f of that portion of the front wall of the receiver above the magazine opening is in advance of the rear edge of that wall below the opening, this being of advantage as it permits of the expeditious loading of long cartridges into the cartridge chamber of the barrel. This rear edge may be cut forwardly at practically no additional expense since the frame of the receiver is open at its top throughout its length.

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 barrel having a barrel extension provided with one side wall and a top wall, the opposite side wall being open to permit the ejection of cartridges, said extension being open at its bottom to receive cartridges, the under surface of said top wall being transversely curved about the axis of said barrel and the upper surface of said top wall being formed so that said top wall gradually increased in thickness away from its central longitudinal portion, said top wall having a locking opening and said upper surface having a longitudinally extending groove of lesser width than said opening; a receiver having a frame provided with side walls slidably supporting said barrel extension and located below the axis of said barrel, said receiver also having a removable cover provided with side walls coextensive in length to, straddling, and arising from the side walls of said frame and a top wall, said top wall of the cover being curved correspondingly to the top wall of said barrel extension and having a depressed rib engaging in said groove; a breech bolt supported by said frame and adapted to be received by said barrel extension, a locking block carried by said bolt and adapted to engage in said locking opening, a magazine carried by said frame and located beneath said barrel, and a cartridge carrier within said frame.

2. In a firearm of the character described, a receiver having a frame provided with parallel side walls, a front wall and a rear wall, said receiver also having a removable generally U-shaped cover provided with a transversely curved top wall and flat side walls straddling said frame, the lower edges of said side walls of the cover having flanges and the side walls of said frame having, adjacent their lower edges, grooves receiving said flanges, said cover also having an inturned flange at its rear edge engaging the rear face of the rear wall of the frame; a barrel having a barrel extension located in said cover and supported by said frame, a breech mechanism slidably supported by said frame and adapted to cooperate with said barrel extension, a magazine carried by the front wall of said frame, a pivoted cartridge carrier within said frame rearwardly of said magazine, and a butt stock between the forward end of which and the rear face of said frame said inturned flange of the cover is clamped.

3. In a firearm of the character described, a receiver having a frame provided with parallel side walls, a front wall and a rear wall having grooves in its rear face, said receiver also having a removable generally U-shaped cover provided with a transversely curved top wall and flat side walls straddling said frame, the lower edges of said side walls of the cover having flanges and the side walls of said frame having, adjacent their lower edges, grooves receiving said flanges, said cover also having an inturned flange at its rear edge engaging the rear face of the frame, said inturned flange having forwardly extending lips engaging in said grooves in the rear face of said frame, a barrel having a barrel extension located in said cover and supported by said frame, a breech mechanism slidably supported by said frame and adapted to cooperate with said barrel extension, a magazine carried by the front wall of said frame, a pivoted cartridge carrier within said frame rearwardly of said magazine, and a butt stock between the forward end of which and the rear face of said frame said inturned flange of the cover is clamped.

4. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in said receiver, breech mechanism mounted for reciprocation in said receiver, a rearwardly extending link connected to the breech mechanism, a recoil spring urging said link forwardly, a magazine, a trigger and a hammer in the rear lower portion of the receiver, a cartridge carrier pivoted in said receiver beneath said breech mechanism and having a pair of forwardly extending arms on opposite sides of said trigger and hammer and a connecting portion between the rear ends of said arms, said connecting portion being rearwardly of the pivot for said carrier and rearwardly of the trigger, and a pivoted dog carried by the rear end of said carrier and adapted to cooperate with said link.

5. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver, a breech bolt mounted for reciprocation in the receiver, a locking member carried by said breech bolt and adapted to interlock with said barrel extension, a rearwardly extending link connected to said locking member, a recoil spring urging said link forwardly, a magazine, a cartridge carrier pivoted in said receiver and having forwardly extending arms adapted to receive cartridges from the magazine and deliver them to the barrel extension, and a dog pivoted to the rear end of said cartridge carrier and adapted to interlock with said link to hold the breech bolt in retracted position, said dog being centrally disposed between the sides of the carrier whereby, when the dog is engaged with said link, a direct longitudinal thrust is exerted against the dog at right angles to the axis of pivot of the carrier.

6. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver, breech mechanism mounted for reciprocation in the receiver, a trigger plate mounted in the bottom of the

receiver, a hammer pivotally mounted adjacent the forward end of said trigger plate, said trigger plate having a pair of spaced lugs rearwardly of the pivot for the hammer, a trigger pivoted in said plate rearwardly of said lugs, a fastening member extending through said lugs, and a carrier pivoted in said receiver rearwardly of said trigger, said carrier having a pair of spaced arms adapted, when in normal position, to straddle said trigger, hammer and lugs, said carrier having a cross portion connecting said arms rearwardly of the trigger.

7. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver, breech mechanism mounted for reciprocation in the receiver, a magazine, a trigger plate carried by the lower rear portion of the receiver, a hammer pivoted to said trigger plate, said trigger plate having a downwardly extending bore located rearwardly of the hammer pivot and forwardly of said trigger, a main spring accommodated by said bore and bearing against said hammer, a trigger pivoted in said trigger plate rearwardly of the hammer, and a cartridge carrier pivoted in said receiver rearwardly of said trigger and beneath said breech mechanism, said cartridge carrier having a pair of arms on opposite sides of said trigger and hammer and a cross portion connecting said arms rearwardly of the trigger.

8. In a firearm of the character described, a receiver, a barrel extension in the receiver, a breech bolt, a magazine, a trigger plate, a cartridge carrier pivoted in the receiver and adapted to receive cartridges from the magazine and deliver them to the barrel extension, a wedge-shaped cam on said trigger plate, a lever pivoted to said carrier forwardly of the pivot for said carrier and having a nose on its rear free end cooperating with said cam, and a spring in said carrier bearing at its upper end against the carrier forwardly of the pivot thereof and bearing at its lower end against the lever above said nose.

9. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in said receiver, breech mechanism mounted for reciprocation in said receiver, a magazine below the barrel, a cartridge carrier for receiving cartridges from the magazine and delivering them to the barrel extension, and a member located in said receiver behind said magazine and constituting a cartridge stop and magazine cut-off, said member having two positions in one of which it is under the control of said barrel extension and in the other of which it is out of the control of said barrel extension.

10. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver, a magazine, a carrier for receiving cartridges from the magazine and delivering them to the barrel extension, and a combined cartridge stop and magazine cut-off device mounted in said receiver rearwardly of said magazine, said device being laterally movable into and out of cartridge holding position and being mounted for movement into and out of upper and lower positions, and means on said barrel extension for moving said device out of cartridge holding position when said device is in its upper position, said device being out of the control of said barrel extension when said device is in its lower position.

11. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver, a magazine, a carrier for receiving cartridges from the magazine and delivering them to the barrel extension, a combined cartridge stop and magazine cut-off member pivoted in said receiver on a vertical axis and movable vertically into upper and lower positions, a spring for normally urging said member into cartridge holding position and for holding said member in each of its vertically adjusted positions, and a cam on said barrel extension adapted to cooperate with said member when said member is in its upper position, said member being out of the control of said cam when the member is in its lower position.

12. In a firearm of the character described, a receiver having an opening in its side wall, a barrel having a barrel extension mounted for reciprocation in the receiver, a magazine, a carrier for receiving cartridges from the magazine and delivering them to the barrel extension, a member constituting a combined cartridge stop and magazine cut-off pivoted in said receiver on a vertical axis and for vertical movement into upper and lower positions, said member having a finger piece extending through said opening in the receiver, a cam on said barrel extension adapted to cooperate with said finger piece to swing said member out of cartridge holding position when said member is in its upper position, and a spring carried by said receiver for urging said member into cartridge holding position, said member having a pair of vertically spaced apart grooves adapted to selectively receive said spring whereby said spring will hold said member in its upper and lower positions.

13. In a firearm of the character described, a butt stock, a receiver at the forward end of the butt stock, a barrel having a barrel extension mounted for reciprocation in the receiver, a breech bolt mounted for reciprocation in the receiver, a locking block carried by the breech bolt, a rearwardly extending link associated with the locking block, a recoil spring in said butt stock for urging said link forwardly, a trigger mechanism, cocking means for manually moving said link rearwardly to thereby disengage the locking block from the barrel extension and to retract the breech bolt, and common means for locking said cocking means against actuation and for preventing actuation of the trigger when the cocking means is unlocked.

14. In a firearm of the character described, a butt stock, a receiver at the forward end of the butt stock, a barrel having a barrel extension mounted for reciprocation in the receiver, a breech bolt mounted for reciprocation in the receiver, a locking block carried by the breech bolt, a rearwardly extending link associated with the locking block, a recoil spring in said butt stock for urging said link forwardly, a trigger mechanism, cocking means for manually moving said link rearwardly to thereby disengage the locking block from said barrel extension and to retract the breech bolt, and a safety device for said trigger provided with means for locking said cocking means against actuation when the safety is in "off" or "unsafe" position with respect to the trigger, said cocking means being operable from normal position when said safety device is in "on" position.

15. In a firearm of the character described, a butt stock, a receiver at the forward end of the butt stock, a barrel having a barrel extension mounted for reciprocation in the receiver, a breech bolt, a locking block carried thereby, a

rearwardly extending link associated with said locking block, a recoil spring in said butt stock behind said link, trigger mechanism having a trigger plate and a trigger, means associated with the butt stock for manually cocking the firearm and including a cocking piece mounted for longitudinal movement from a forward to a retracted position, and a safety device carried by said cocking piece and having means adapted to interlock with said trigger plate when the safety device is in "off" position with respect to the trigger.

16. In a firearm of the character described, a butt stock, a receiver at the forward end of the butt stock, a barrel having a barrel extension mounted for reciprocation in the receiver, a breech bolt, a locking block carried thereby, a rearwardly extending link associated with said locking block, a recoil spring in said butt stock behind said link, trigger mechanism having a trigger plate and a trigger, means associated with the butt stock for manually cocking the firearm and including a cocking piece mounted for sliding movement in the forward lower portion of the butt stock, a safety pin carried by the forward end of said cocking piece and laterally movable into and out of "off" position, and interengaging means between said safety pin and trigger plate for securing said cocking piece in forward position and against actuation when the safety pin is in "off" position with respect to the trigger, said interengaging means being disengaged when said safety pin is in "on" position with respect to the trigger.

17. In a firearm of the character described, a receiver, a barrel having a barrel extension mounted for reciprocation in the receiver, a recoil spring tube inclined downwardly and rearwardly from the rear end of said receiver, a butt stock having a bore receiving said tube and abutting at its forward end against the rear end of said receiver, a breech bolt, a locking block carried thereby, a link associated with said locking block and extending into said tube, a spring in said tube behind said link, a screw plug threaded into the rear end of said tube and constituting an abutment for the rear end of said spring, said screw plug having a threaded opening and a head extending laterally beyond said tube, means for manually cocking the firearm including a sleeve slidably mounted about the forward end of said tube, a spring about said tube between said sleeve and the head of said screw plug; and a screw extending forwardly from the rear end of the butt stock and threaded into the opening of said screw plug for securing said butt stock in place.

18. In a firearm, a frame having side walls, a front wall and a rear wall, the frame being open above said side walls, a barrel supported by said frame, a cartridge carrier carried by the frame, a breech block supported by said frame and extending above said side walls thereof, and a removable sheet metal cover substantially housing said frame and including a U-shaped sheet metal member substantially coextensive in length to said frame, said cover having a top wall and depending side walls extending below the top edges of and straddling the side walls of the frame, the side walls of the cover being in close engagement with the side walls of the frame, said side walls of the cover having on their lower edges inturned flanges and said frame having longitudinally extending surfaces beneath which said flanges are adapted to engage, said cover also having on its rear edge inturned flanges adapted to lie behind said rear wall of the frame.

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