March 1, 1960 C. H. BENSON 2,926,446

FIREARM FIRING MECHANISM

Filed March 31, 1958 2 Sheets-Sheet 1

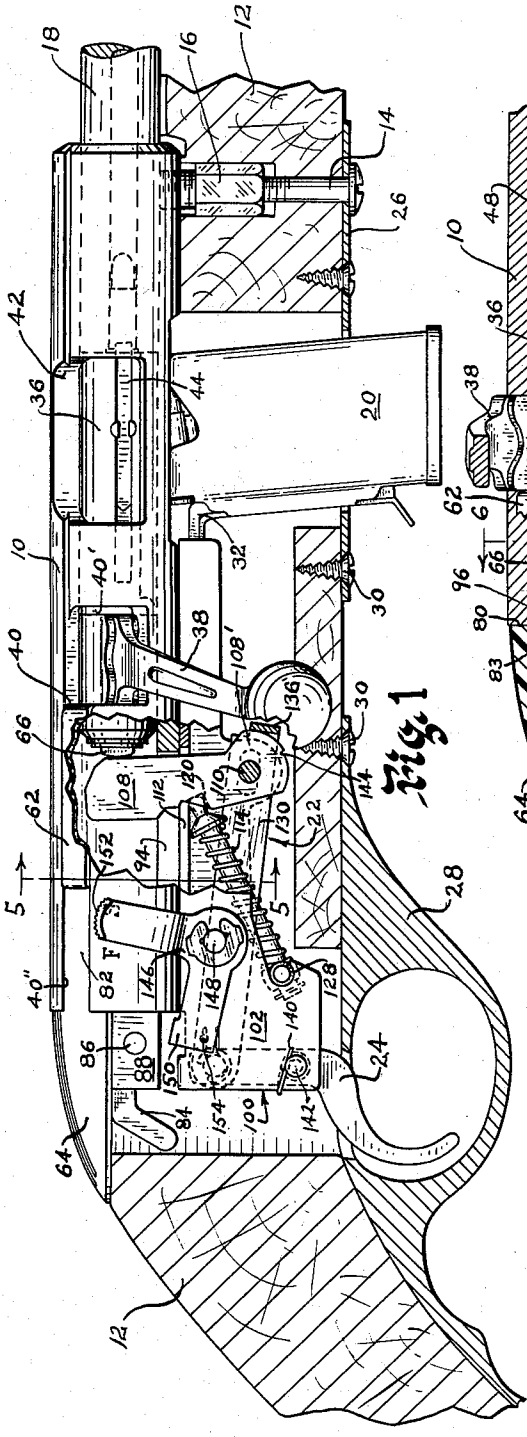


Fig. 1

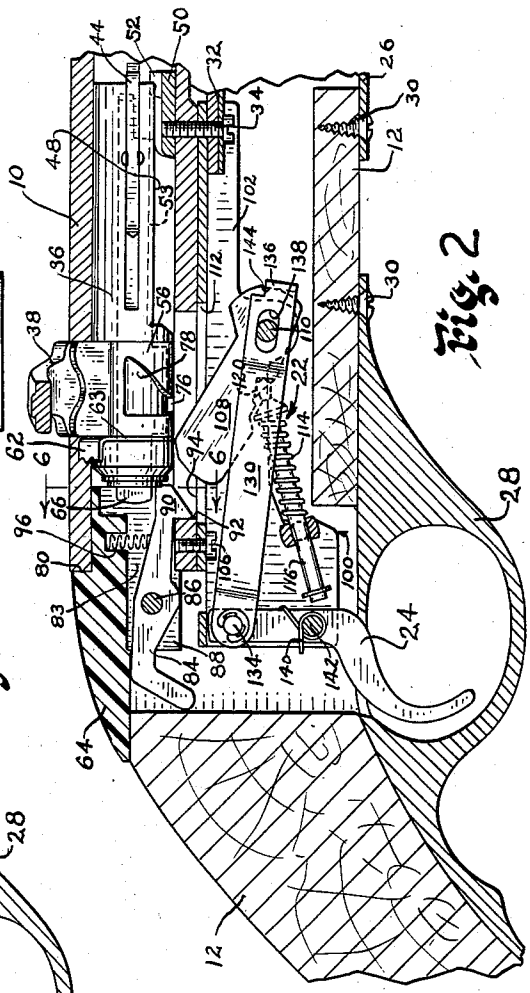


Fig. 2

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March 1, 1960 C. H. BENSON 2,926,446

FIREARM FIRING MECHANISM

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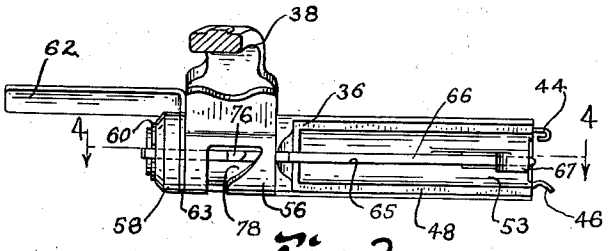


Fig. 3

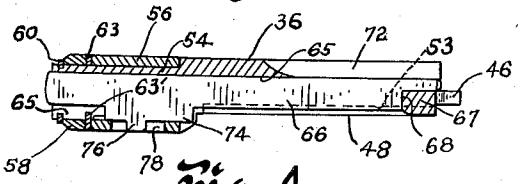


Fig. 4

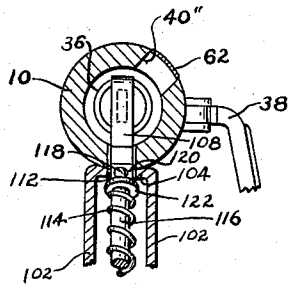


Fig. 5

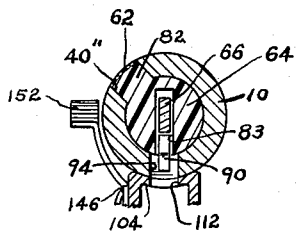


Fig. 6

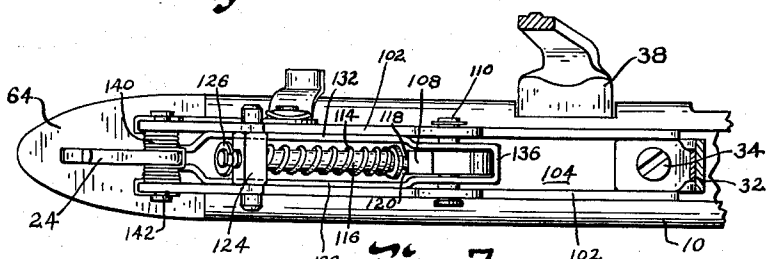


Fig. 7

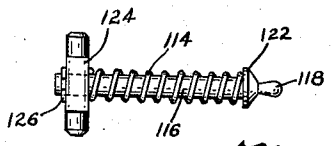


Fig. 8

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United States Patent Office 2,926,446
Patented Mar. 1, 1960

2,926,446

FIREARM FIRING MECHANISM

Carl H. Benson, New Haven, Conn., assignor to O. F. Mossberg & Sons, Inc., New Haven, Conn., a corporation of Connecticut

Application March 31, 1958, Serial No. 725,238

5 Claims. (Cl. 42—69)

This invention relates to firearms, and it relates more particularly to small arms, such as rifles for hunting and target shooting.

Most hunters and shooters possess a natural desire to take good care of their guns and to know every detail of the construction and operation of the mechanism. A desirable characteristic, therefore, of most sporting guns is their facility to be taken apart for cleaning and inspection and to be reassembled without the need for special tools.

A primary object of the present invention is, therefore, to provide a gun which may be rapidly and easily disassembled and reassembled by anyone of ordinary mechanical skill using only a conventional screwdriver.

The present trend in sporting gun designs is toward a smooth, streamlined appearance in which the rear of the receiver curves gracefully into the butt-stock, such as in the so-called hammerless arms. However, in bolt-action guns, the bolt is ordinarily removable through the rear of the receiver which is provided with a receiver cap or bolt-stop, characteristically threaded into the open end of the receiver in order to retain the bolt in the receiver when it is unlocked and retracted during use. Such a construction does not lend itself well to a streamlined design at the rear of the receiver because of the fact that the receiver comes to an abrupt end at the rear.

A further specific object of the invention is to provide a bolt-action gun having a receiver cap, hereinafter usually referred to as the bolt-stop, which is capable of being quickly removed from the receiver yet is streamlined in appearance and blends into the receiver and stock without any outward sign of how it is removed in order to disassemble the gun.

Another object of the invention is to provide a hammer spring which is preloaded before it is assembled in the firing mechanism thereby facilitating such assembly. In addition, the gun is so designed as to make positioning of the hammer spring almost automatic, in that it is only necessary to insert one end of the spring in generally the right location and then to snap the other end thereof into position with the fingers.

Still another object of the invention is to positively lock the firing pin at all times when the bolt is unlocked, so that a cartridge can not be accidentally fired when the bolt is unlocked.

With these and other objects and advantages in mind, one specific embodiment of the invention will be described in connection with the accompanying drawings, in which

Fig. 1 is a side view of the action assembled with the stock, which is shown in section, the receiver and underframe being partially broken away to show the parts in the positions which they assume when the gun is not cocked;

Fig. 2 is a side view of the rear portion of the receiver taken along a vertical central section thereof and showing the firing mechanism, the parts being in the positions which they assume when the bolt is fully retracted against the bolt-stop;

Fig. 3 is a detail view of the underside of the bolt;

Fig. 4 is a longitudinal section taken on line 4—4 of Fig. 3, looking in the direction of the arrows;

Fig. 5 is a cross-sectional view taken on line 5—5 of Fig. 1 and looking in the direction of the arrows, with the stock removed;

Fig. 6 is a cross-section through the receiver only, taken on line 6—6 of Fig. 2 looking in the direction of the arrows;

Fig. 7 is a bottom view of the rear portion of the action removed from the stock; and

Fig. 8 is a detail view of the hammer spring assembly.

The invention is specifically disclosed in connection with a bolt-action rifle in which a box magazine is used. However, it will of course be understood that certain aspects of the invention are applicable in many other types of guns, such as semi-automatics, pump guns and the like, some of which may employ a tubular magazine in place of the box magazine shown.

With reference to the drawings, the receiver **10** is of generally cylindrical shape and is supported throughout its length in a butt-stock **12**, desirably made of wood in the usual manner. A single take-down bolt **14** extends upwardly from the underside of the forearm section of the butt-stock **12** and is threaded into a nut **16**, which projects down from the front end of the receiver **10** into a recess in the butt-stock. The take-down bolt **14** securely fastens the action of the gun in the butt-stock **12**, which is suitably hollowed-out to provide adequate supporting surfaces for the receiver. The barrel **18** extends forwardly from the receiver **10** and is secured thereto by conventional means.

Rearwardly of the take-down bolt **14**, the stock **12** is formed with a deep central groove to provide space for the cartridge magazine **20** and for the firing mechanism, indicated generally at **22**, which will be described more fully hereinafter. Openings are cut through to the underside of the butt-stock **12** for the magazine **20** and trigger **24**, respectively. A reinforcing plate **26** around the opening for magazine **20** and the usual trigger guard **28** are fastened to the butt-stock **12** by means of screws **30**. Magazine **20** is removably mounted on a bracket **32** fastened to the underside of receiver **10** by means of a screw **34** (Fig. 2).

The inside of the receiver **10** is in this instance cylindrically shaped to receive a generally cylindrical bolt **36** guided therein for reciprocal movement to and from breech-closing position. Bolt **36** is actuated by means of a bolt-lever **38**, which extends through an L-shaped slot **40** in the receiver. The usual ejection port **42** is provided in one side of the receiver adjacent the cartridge chamber, so that after an empty cartridge is withdrawn from the chamber by the bolt, it can be ejected from the receiver.

In addition, bolt **36** is provided with conventional extractor claws **44**, **46**, claw **44** being hook-shaped in order to positively engage the rim of the cartridge. Claw **46** is provided with a cartridge engaging portion bent inwardly so as to grasp the cartridge yet permit ejection to occur. The underside of the forward two-thirds of bolt **36** is shaped to provide a cut-away portion **48** which rides over an ejector plate **50**, thereby preventing bolt **36** from turning about its axis in the receiver. An upstanding lug-portion **52** at the front of plate **50** and to the left of the center line of the receiver, as viewed from the rear, slidingly fits into a longitudinal slot or space **53** in the underside of bolt **36**. As bolt **36** is retracted to the position shown in Fig. 2, the forward edge of lug **52** engages the lower left side of the head of the empty cartridge and ejects it upwardly and to the right, as viewed from the rear of the gun through the ejection port **42**. Ejector plate **50** threadedly receives screw **34** and is held in place thereby when screw **34** is turned up tight. Plate **50** is prevented from accidentally twisting

about screw 34 due to the fact that its under surface is round to match the cylindrical inner surface of the receiver 10.

The rear section of bolt 36 is of reduced diameter to provide a journal portion 54 (Fig. 4), on which rotatably fits a bearing ring 56 at the base of bolt-lever 38. The outside diameter of bearing ring 56 is equal to the diameter of bolt 36 so that it will fit inside receiver 10 and permit the bolt-lever 38, which is rigid with ring 56, to be rotated on bolt 36 into and out of bolt-locking position in the lateral portion 40' of slot 40 in receiver 10. When bolt-lever 38 is raised to its upper position it is in line with the longitudinal portion 40'' of slot 40, so that by pulling rearwardly on bolt-lever 38, the bolt will slide back to the position shown in Fig. 2. A collar 58 fits over the end of reduced portion 54 of the bolt rearwardly of bolt-lever 38, and a split washer 60 is sprung into a circumferential groove in the bolt to hold both the bolt-lever and collar in place. A cover plate 62, having a laterally extending mounting ring 63 surrounding bolt 36 and interposed between collar 58 and bearing ring 56 of bolt-lever 38, is keyed to bolt 36 and extends rearwardly thereof within the longitudinal portion 40'' of slot 40 in the receiver. Cover plate 62 bridges the space within slot 40'' between the bolt-stop or receiver cap 64 at the rear of the receiver and the bolt 36 when the latter is in battery position. Due to the fact that its mounting ring 63 is keyed against rotation on bolt 36 by means of an inwardly extending lug 63' on ring 63, which fits in a longitudinal groove 65 (Fig. 4) in bolt 36, cover plate 62 acts also as a guide when inserting the bolt into the open end of the receiver during assembly of the gun. The cut-away portion 48 of the bolt will, therefore, line up properly with ejector plate 50 as bolt 36 is moved forwardly into position in the receiver.

The firing pin 66 is in this instance a flat, generally rectangular member which slides in groove 65 cut in the underside of bolt 36. Groove 65 extends longitudinally of the bolt from the rear face thereof to within a short distance from its front end, leaving an abutment 67 at the front end of the bolt. The lower corner of the forward tip of firing pin 66 is cut away to form a stop-shoulder 68 which is engageable with the rear surface of abutment 67, in order to limit the forward movement of the firing pin. A second longitudinal groove 72 is cut in the upper side of bolt 36 from its front face rearwardly far enough to intersect with slot 65 and thus to provide an opening through the front of the bolt for the tip of the firing pin. The front end of the firing pin is, therefore, supported on the upper side of abutment 67. The rear portion of the firing pin is supported in the ring 56 of the bolt-lever 38 and either projects, or is capable of being projected, rearwardly of bolt 36 a short distance where it is in a position to be struck by the hammer when the gun is fired. The lower edge of firing pin 66 has a stepped portion 74 adjacent the area where it engages ring 56. From the lower edge of portion 74 a lug 76 projects downwardly into a slot 78 formed therefor in the lower side of ring 56. Slot 78 is formed so as to permit rotation of ring 56 with respect to the bolt within the limits necessary to allow bolt-lever 38 to move from the bolt-locking position shown in Fig. 1 to the unlocked position shown in Fig. 2. Moreover, slot 78 is wide at one end and narrow at the other, so that when the bolt-lever is locked, as shown in Figs. 1 and 3, the lug 76 on the firing pin is located in the wide portion of slot 78 where the firing pin is free to move. When the bolt-lever 38 is lifted to unlock the bolt, the inclined front edge of slot 78 engages lug 76 moving the firing pin rearwardly and causing its tip to be withdrawn behind the front face of the bolt. Lug 76 is then located in the narrow portion of slot 78 as shown in Fig. 2 so that the firing pin is positively prevented from coming in contact with the cartridge, even though the hammer may accidentally release and strike the firing pin. Furthermore, even if the bolt is inadvertently slammed closed with considerable force, the firing pin is prevented from coming in contact with the cartridge. The gun is therefore completely safe as long as the bolt is unlocked.

The bolt-stop 64, mentioned briefly hereinbefore, is a plug-like member that fits in the open rear end of the receiver and is latched thereto for ready removal whenever it is desired to remove the bolt. The front portion of bolt-stop 64, which is desirably made of a tough plastic material such as "Tenite No. 2," is cylindrically shaped to fill the inside of receiver 10. The rear portion is smoothly curved and rounded on its upper exposed surfaces to blend into the cylindrical receiver and stock, with a shoulder 80 formed between the front and rear portions thereof to limit the extent to which the bolt-stop can be inserted into the receiver. A raised portion 82, formed on one side of the front portion of the bolt-stop and extending forwardly from and even with the rear portion thereof, fits in the slot 40'' of the receiver as shown in Figs. 1 and 6. Cover plate 62 mounted on the bolt 36 slides over portion 82 in overlapping relation therewith so as to completely enclose the receiver in back of the bolt. In addition to its value from an appearance standpoint, portion 82 also positively locates bolt-stop 64 with respect to the receiver, so that it is always properly aligned with the receiver and stock.

A channel 83 (Fig. 2) is provided in the underside of bolt-stop 64 to receive a latch-lever 84 pivoted on a pin 86 supported in a rectangular portion 88 of the bolt-stop located rearwardly of the front cylindrical portion thereof. Rectangular portion 88 stops short of the rear end of the bolt-stop and one end of latch-lever 84 extends beyond portion 88 so that latch-lever 84 can be manually operated in order to release the bolt-stop. The front end of latch-lever 84 has a catch 90 adapted to engage a corresponding surface on the receiver 10, which in this instance may conveniently be the rear wall 92 of a slot 94 cut in the bottom of the receiver for a purpose to be described hereinafter. Latch-lever 84 is urged in a clockwise direction, as viewed in Figs. 1 and 2, by a spring 96 so that catch 90 is normally urged into latching relation with wall 92. It will be readily seen that by simply pulling down on the rear end of latch-lever 84 the catch 90 thereof is moved out of engagement with wall 92 and the bolt-stop 64 can be removed from the receiver. In order to do this, however, it is of course first necessary to separate the barrel and receiver of the gun from the stock 12 by removing the takedown bolt 14 at the front of the receiver.

If the spring 96 alone were relied upon to maintain the bolt-stop 64 latched to the receiver 10, the bolt-stop would very likely become unlatched accidentally when the bolt 36 is brought back sharply against it during a reloading operation. In the present arrangement, means are provided for assuredly preventing such accidental dislodging of the bolt-stop. To this end, channel 83, in which the latch-lever is located, is cut high enough at the front face of bolt-stop 64 to receive the rear end of firing pin 66 just above the catch 90 of latch-lever 84 in overriding relation therewith, whenever the rear of the bolt is in contact with the front face of the bolt-stop 64. It will be clearly seen from Fig. 2 that, because the firing pin 66 blocks the catch 90, this arrangement positively locks the bolt-stop 64 to the receiver and prevents accidental dislodging of the bolt-stop. Moreover, due to the fact that the firing pin is held in its rearmost position by the bolt-lever 38 whenever the bolt is retracted, firing pin 66 can not move forwardly in the bolt so that the rear of the firing pin would fail to override the latch-lever 84 in locking relation therewith. There accordingly exists a unique cooperative relationship between the latch means for the bolt-stop and the firing pin locking means.

Suspended below the receiver 10 is an under-frame 100, within which the firing mechanism 22 is mounted.

Frame 100 consists of a pair of spaced side walls 102 joined along their upper edges by an end wall 104. End wall 104 fits up against the underside of receiver 10 and is rigidly secured thereto by means of screw 34 at the front, and at the rear by means of a screw 106 (Fig. 2), which fits a threaded hole provided therefor in the receiver. The hammer 108 is pivotally mounted on a fixed pin 110 supported in side walls 102. A slot 112 is provided in end wall 104 of the underframe and coincides with slot 94 in the bottom of receiver 10. The opening thus provided permits the upper end of hammer 108 to swing up into the receiver and to strike the rear end of the firing pin 66 when the gun is fired.

The hammer spring, which exerts sufficient striking force on hammer 108, comprises the assembly shown in detail in Fig. 8. This assembly consists of a pre-compressed or pre-loaded coil spring 114 through which extends a guide-rod 116. A ball 118 is provided at one end of guide-rod 116 and arranged to fit into a retaining surface or socket 120 in the back edge of hammer 108. Just to the rear of ball 118 is formed a flange 122, which is integral with guide-rod 116 and has a frusto-conical surface on its front side for a purpose which will be more apparent hereinafter. Spring 114 is compressed between the back side of flange 122, which forms an abutment therefor, and a cross-pin 124 having an aperture in its central rectangular portion through which guide-rod 116 freely passes. Pressure is maintained on spring 114, when this assembly is removed from the firing mechanism, by means of a split washer 126 which is sprung into a circumferential slot in guide-rod 116 at a point only slightly outward of cross-pin 124, in the uncocked position, as shown in Fig. 1. Consequently, when the hammer spring is removed from the gun in the manner to be described hereinafter, cross-pin 124 is prevented by washer 126 from being forced off the end of guide-rod 116, washer 126 forming a removable abutment against which cross-pin 124 is pressed by spring 114. Spring 114 is accordingly maintained in a partially compressed or preloaded condition when the hammer spring assembly is not in place in the firing mechanism. On the other hand, due to the positioning of washer 126 on the guide-rod 116, washer 126 does not interfere with the normal function of spring 114 so that pressure is always exerted by the hammer spring on hammer 108 when the hammer spring assembly is in place in the firing mechanism.

The lower edges of side walls 102 of under-frame 100 are provided with notches 128, best seen in Fig. 1, designed to receive and retain the outer cylindrical ends of cross-pin 124 of the hammer spring assembly. With the hammer uncocked (Fig. 1), it is necessary to compress spring 114 only slightly more from its pre-loaded condition, in order to insert cross-pin 124 into notches 128. Consequently, it is a simple matter to install the hammer spring assembly by placing the ball end 118 thereof in the socket 120 of the hammer and compressing spring 114 only enough to slip cross-pin 124 into notches 128 by applying pressure with the fingers on both ends of cross-pin 124 simultaneously. Installation of the hammer spring assembly is likewise facilitated by providing means for guiding the ball end 118 of the assembly into engagement with socket 120. To this end, the conically shaped surface on flange 122 is arranged to engage the edges of slot 112 in wall 104 as the end 118 of the hammer spring assembly is inserted between the side walls 102 of the frame in the general direction of socket 120 at the back of the hammer. Flange 122 then slides forwardly along slot 112 until the ball end 118 contacts the hammer at socket 120 or just above it. If the ball 118 does not come directly into engagement with socket 120 but above it, as in the case of the assembly specifically shown in the drawings, it will drop into the socket as soon as the hammer is cocked the first time. This arrangement has the further advantage that by letting

the ball end 118 rest above socket 120 with flange 122 still engaging the sides of slot 112, the amount which the spring must be compressed in order to snap the cross-pin 124 into notches 128 is reduced somewhat. When the hammer is then cocked by unlocking bolt 36 and retracting it, spring 114 is compressed and the ball 118 is forced into socket 120 where it is firmly retained until the gun is disassembled again. It will accordingly be noted that this arrangement greatly facilitates the usually difficult task of assembling and disassembling the hammer spring, and provides a rapid and extremely simple assembly operation which, in fact, does not even require the use of any tools at all. It will be noted that while slot 112, which helps guide the hammer spring into place, is in this instance actually in the wall 104 of the underframe rather than in the receiver, from a practical standpoint this slot may be considered as being in the receiver itself.

A sear 130 comprises an elongated member having spaced parallel side arms 132 (Fig. 7) which are pivoted at one end to the trigger 24 on pivot pin 134 (Fig. 2). Side arms 132 extend inside of side walls 102 of the underframe 100 of the gun and around hammer spring 114 and hammer 108. A cross-reach 136 connects the opposite ends of side arms 132, which are supported at this end on the pivot pin 110 of hammer 108 in slots 138 that are elongated longitudinally of the sear. The side arms 132 are bent inwardly at both ends so that they are spaced more closely together at both ends of the sear than along the mid-portion thereof. The end sections adjacent the trigger 24 and hammer 108, therefore, lie fairly close to these members, while on the mid-section the arms lie as close as possible to the inner side of side walls 102 in order to provide room for the hammer spring assembly. This arrangement prevents lateral movement or twisting of the sear, as well as interference of the various parts, one with the other, while at the same time avoiding the use of intricate parts which would be difficult to manufacture and assemble.

Cross-reach 136 of the sear 130 is normally urged into engagement with the cylindrically shaped base portion 108' of the hammer by means of the trigger spring 140 which surrounds the pivot pin 142 by which trigger 24 is pivotally mounted in frame 100. Trigger 24 is continuously urged in a clockwise direction by spring 140, which is desirably formed of two coiled sections of several turns each lying on opposite sides of the trigger, these being connected by a loop passing around one side of the portion of trigger 24 above the pivot 142. The ends of the spring pass around the adjacent side walls 102, respectively, of the under-frame 100 to maintain the spring under torsion. This arrangement can be assembled while the spring is unstressed before the sear 130 is connected to the pivot pin 110 for the hammer. In this condition, the trigger can be pivoted counterclockwise as viewed in the drawings far enough to unstress the spring and facilitate assembly. The specific trigger spring employed here has the advantage not only of easy assembly, as has been mentioned, but also of acting as spacers on either side of the trigger to keep it centered on its pivot pin 142.

A sear notch 144 is provided on the periphery of the cylindrical base portion 108' of the hammer, so that when the hammer is pivoted back by the bolt 36, the upper inside edge of cross-reach 136 engages in notch 144 to cock the hammer. When the trigger 24 is pulled to fire the gun, sear 130 is moved forwardly longitudinally, disengaging cross-reach 136 from the sear notch 144 on the hammer and permitting the hammer to swing against the firing pin 66 with great force under the pressure exerted by the hammer spring 114

A safety device is provided for the purpose of locking the firing mechanism at all times when the gun is not actually being fired. This comprises a bell-crank member 146 pivoted on a stud 148 on the side wall 102, with the horizontal arm of the member 146 having a stop-lug

150 extending through a slot in the frame 100 adjacent the upper end of trigger 24. The vertical arm of member 146 extends up alongside of the receiver and is provided with an outwardly turned finger lug 152 by which to manipulate the safety device from one position to the other. With the safety lever pivoted as far as it will go forward exposing the letter "F" on the side of the receiver, the stop-lug 150 is lifted to a position permitting the upper end of trigger 24 to be moved forward so as to fire the gun. When the hammer is cocked, the safety lever can be moved back exposing the letter "S" on the side of the receiver and moving the stop-lug 150 into position in front of the upper extremity of trigger 24 positively preventing it from being actuated. The gun cannot, therefore, be fired until the safety is released. In order to retain the safety device in either its safe or firing positions, a detent 154 is provided at the outer end of the horizontal arm of member 146, and depressions are formed in the side wall 102 at each of the desired positions of the safety member 146 so that when the detent 154 is in engagement with either of these depressions, the safety lever will be resiliently held in that position.

What is claimed is:

1. In a firing mechanism for a firearm, having a frame and a hammer movably mounted on said frame, the combination therewith of a hammer spring assembly comprising a coil spring, a guide-rod extending longitudinally through the coils of said spring and urged into engagement with a retaining surface on the hammer, said guide-rod having an abutment adjacent its hammer-engaging end against which one end of said spring is seated, a cross-piece slidably mounted on said guide-rod and bearing against the opposite end of said spring with said spring with said guide-rod extending beyond said cross-piece, said frame having a pair of retaining notches in which the ends of said cross-piece are removably supported in spaced relation with the retaining surface on the hammer such that, when the hammer is uncocked, said spring is under compression and said cross-piece is urged by said spring into engagement with said retaining notches, said guide-rod being provided with a removable abutment located outwardly of said cross-piece so as to be spaced therefrom in the uncocked position, whereby the movement of said cross-piece in that direction is limited by said removable abutment in order to maintain said spring under compression when said hammer spring assembly is removed from the firing mechanism.

2. The combination defined in claim 1, wherein said frame is provided with spaced parallel side walls between which said hammer spring assembly fits, said side walls being provided with said retaining notches.

3. In a firearm having a receiver and a bolt guided for reciprocal movement therein, the combination comprising a hammer pivotally mounted in a frame secured to the underside of said receiver, said receiver having an elongated slot in its underside extending longitudinally of said receiver and permitting said hammer to swing upwardly into the receiver in order to fire a cartridge, a hammer spring assembly comprising a coil spring and a guide-rod extending longitudinally through the coils of said spring, said guide-rod having a flange located adjacent one end thereof and a removable abutment adjacent the other end, a cross-piece slidably mounted on said guide-rod intermediate said flange and said abutment with said spring compressed between said flange and cross-piece, said hammer having a spring retaining surface against which the flanged end of said guide-rod is adapted to bear, said frame comprising a pair of spaced parallel side walls between which said hammer is mounted, said side walls being provided with retaining notches into which the ends of said cross-piece are adapted to snap when assembling the firearm by compressing said spring with the flanged end of said guide-rod bearing against said retaining surface on the hammer, said retaining surface being located substantially in line with said slot in the underside of the receiver and said flange on the guide-rod being at least as wide as said slot, so that when the flanged end of said guide-rod is inserted between the side walls of the frame in the general direction of the retaining surface on the hammer during assembly of the gun, it will be guided by said flange sliding along the edges of said slot into proper position with respect to the hammer.

4. In a firing mechanism assembly for a gun having a trigger pivoted to the frame of the gun, a hammer pivotally mounted on a pivot pin supported in said frame, and a trigger spring urging said trigger toward cocked position, a sear comprising an elongated member formed with two spaced, substantially parallel arms connected at one end by a cross-reach, said sear being pivoted adjacent the free ends of its arms to the trigger for substantially longitudinal movement upon actuation of the trigger, said arms being provided adjacent said cross-reach with oppositely disposed slots elongated longitudinally of said sear for mounting this end of the sear on the hammer pivot pin with the hammer mounted between said sear arms and with the base of the hammer located immediately adjacent said cross-reach such that said cross-reach is normally urged, under the influence of the trigger spring, into engagement with the base of the hammer, said hammer having a sear notch on its base at a point where it is engageable by said cross-reach upon cocking the hammer, while actuation of the trigger against the urge of the trigger spring causes the sear to move longitudinally so that said cross-reach moves out of contact with the base of the hammer permitting the latter to swing under the force of the hammer spring.

5. In a firing mechanism for a firearm having a trigger pivoted to the frame of the firearm, a hammer pivotally mounted on a pivot pin supported in said frame, and a trigger spring urging said trigger toward cocked position, the combination of a sear comprising an elongated member formed with a pair of spaced, substantially parallel arms rigidly connected adjacent one end by a cross-reach, said trigger being pivoted intermediate its ends with said sear hingedly connected adjacent the free ends of its arms to said trigger opposite the finger portion thereof for substantially longitudinal movement upon actuation of the trigger, said arms being provided adjacent said cross-reach with oppositely disposed slots elongated longitudinally of said sear for mounting this end of the sear on the hammer pivot pin with the hammer mounted between said sear arms and with the base of the hammer located immediately adjacent said cross-reach such that said cross-reach is normally urged into engagement with the base of the hammer, which has a sear notch at a point where it is engageable by said cross-reach upon cocking the hammer, while actuation of the trigger against the urge of the trigger spring causes the sear to move longitudinally such that said cross-reach is disengaged from said sear notch permitting said hammer to fall.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 2,926,446

March 1, 1960

Carl H. Benson

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 7, lines 34 and 35, strike out "with said spring".

Signed and sealed this 23rd day of August 1960.

(SEAL)
Attest:

KARL H. AXLINE
Attesting Officer

ROBERT C. WATSON
Commissioner of Patents

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 2,926,446 March 1, 1960

Carl H. Benson

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 7, lines 34 and 35, strike out "with said spring".

Signed and sealed this 23rd day of August 1960.

(SEAL)
Attest:
KARL H. AXLINE
Attesting Officer

ROBERT C. WATSON
Commissioner of Patents