July 3, 1945. C. E. SIMPSON 2,379,461

FIREARM

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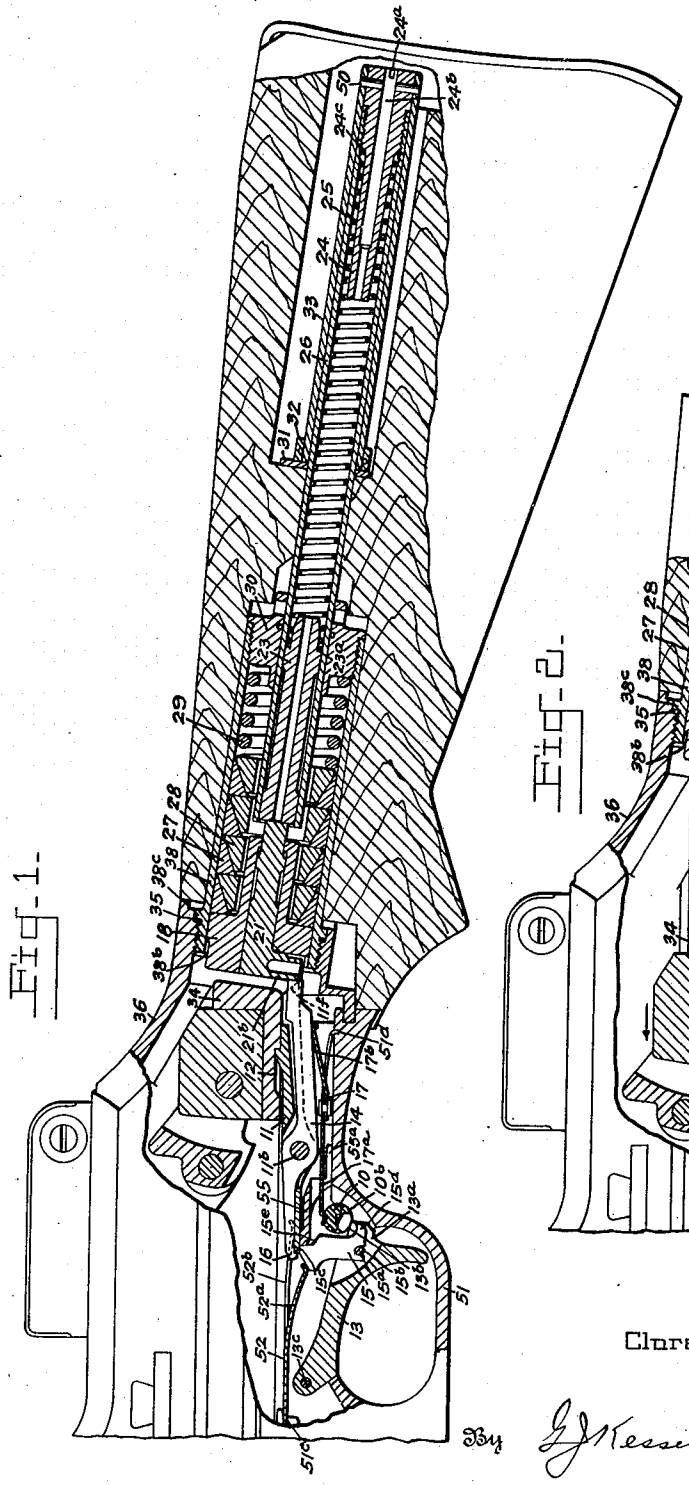


Fig. 1.

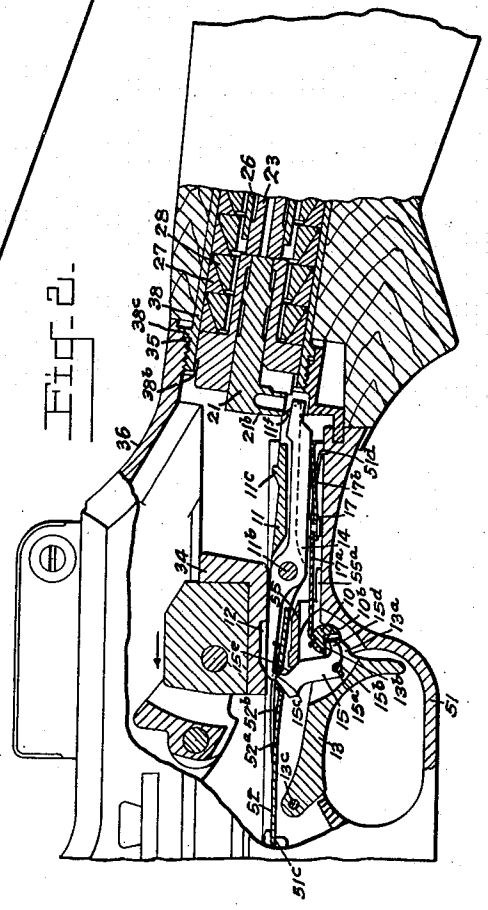


Fig. 2.

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FIREARM

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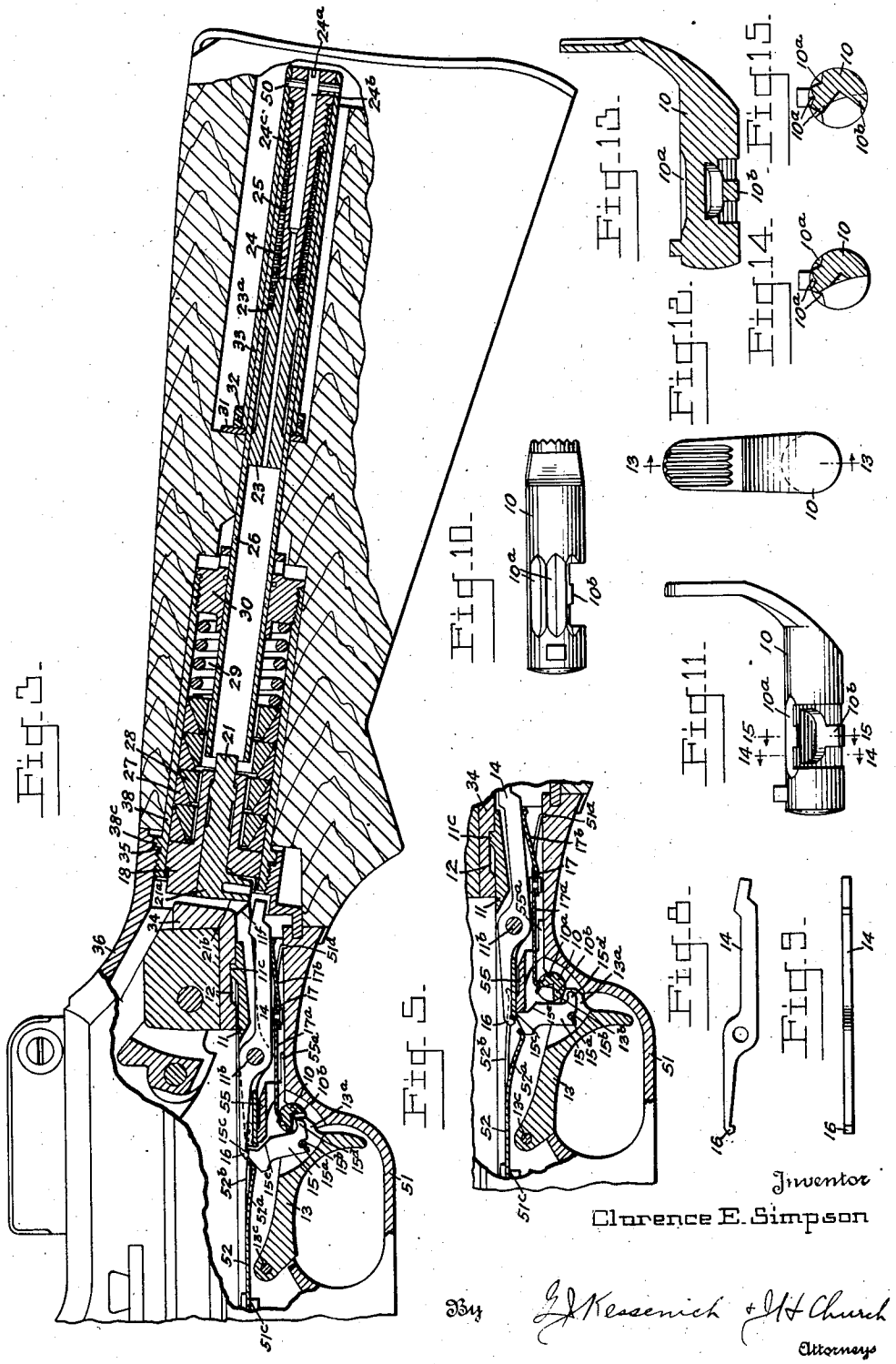


Fig. 4.

Fig. 5.

Fig. 10.

Fig. 13.

Fig. 12.

Fig. 11.

Fig. 14. Fig. 15.

Fig. 8.

Fig. 9.

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FIREARM

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Fig. 4.

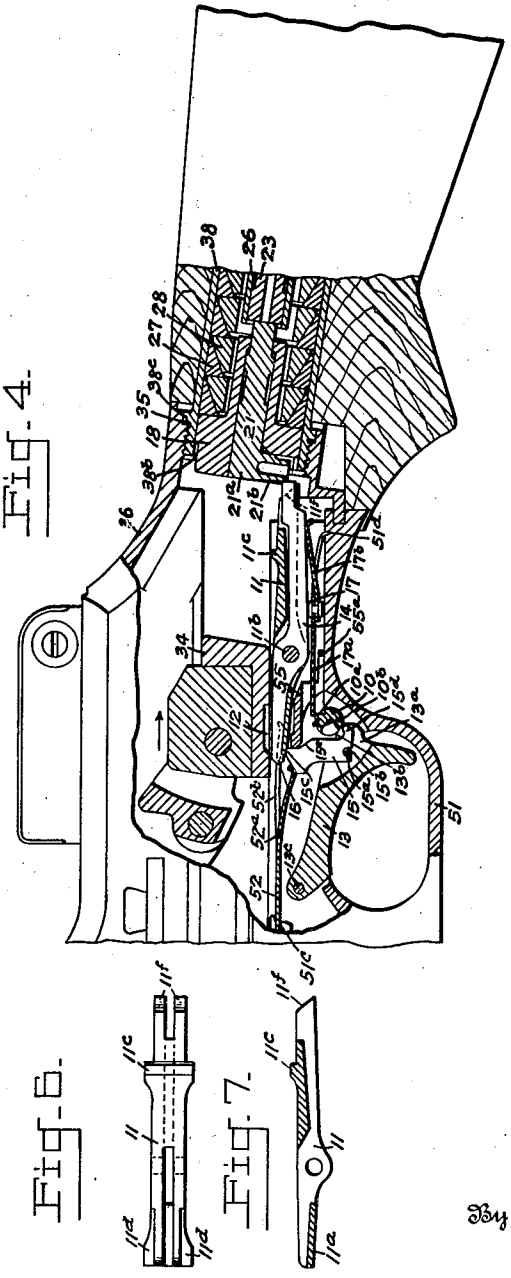


Fig. 16.

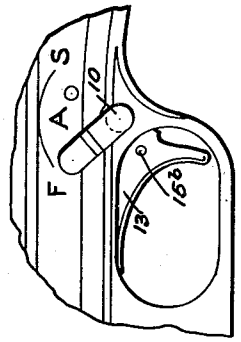


Fig. 18.

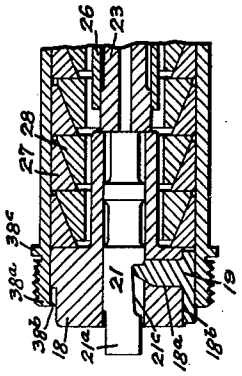


Fig. 17.

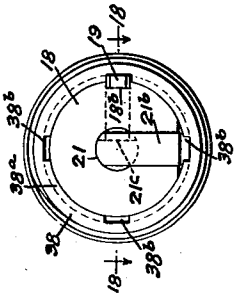


Fig. 6.

Fig. 7.

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2,379,461

UNITED STATES PATENT OFFICE

2,379,461

FIREARM

Clarence E. Simpson, Springfield, Mass.

Application August 21, 1941, Serial No. 407,715

22 Claims. (Cl. 42—3)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to an automatic firearm.

An object of this invention is to provide a firearm which might be fired at two different rates.

Another object of this invention is to provide a firearm which may be set in three positions, namely: (1) rapid rate automatic fire, (2) medium rate automatic fire, and (3) safety.

Another object of this invention is to provide a rate reducing mechanism in the Browning machine rifle which is similar to the one described in the Browning Patent 1,393,022.

Another object of this invention is to provide a rate reducing mechanism in a firearm so as to decrease the normal rate of fire from a value approximately 600 shots per minute to a value approximately 350 shots per minute.

The specific nature of the invention as well as other objects and advantages thereof will clearly appear from a description of a preferred embodiment as shown in the accompanying drawings in which:

Figs. 1 to 5 are fragmentary elevational views of the operating section of a gun in partial longitudinal section.

Fig. 6 is a plan view of the sear 11.

Fig. 7 is a section through the center of the sear 11.

Fig. 8 is a side view of the sear release stop lever 14.

Fig. 9 is a plan view of the sear release stop lever 14.

Fig. 10 is a plan view of the change lever 10 with the portion adapted to be manipulated by hand extending perpendicular to the plane of the paper.

Fig. 11 is a side view of the change lever 10 shown in Fig. 10.

Fig. 12 is an end view of the change lever shown in Fig. 10.

Fig. 13 is a view taken along line 13—13 in Fig. 12.

Fig. 14 is a view taken along line 14—14 in Fig. 11.

Fig. 15 is a view taken along line 15—15 in Fig. 11.

Fig. 16 is a fragmentary elevational view of a portion of the gun in the region of the trigger guard.

Fig. 17 is an end view of Fig. 18, and

Fig. 18 is a sectional view taken along line 18—18 in Fig. 17.

In Fig. 1, the firearm mechanism is illustrated in condition for firing fully automatic at the medium rate, with the bolt cocked and the trigger not pulled. Fig. 2 shows the firearm mechanism of Fig. 1 just after the trigger has been pulled while Fig. 3 shows the condition of the mechanism of Fig. 1 when the bolt has returned to counterbattery position after firing of a cartridge and the actuator of the delay mechanism is in its rearward position.

In Fig. 4, the firearm mechanism is illustrated in condition for firing fully automatic at the high rate, at a point after the trigger has been pulled and the bolt is returning to its counterbattery position.

In Fig. 5, the firearm mechanism is illustrated in the "Safe" condition.

Reference will be had to the accompanying drawings wherein like numerals designate like parts and the operation and description of the parts of the rifle will be described under the following headings:

1. Description of parts in the rifle stock.
2. Description of sear and trigger mechanism.
3. Operation of rifle when fired at medium rate (Figs. 1–3).
4. Operation of rifle when fired at high rate (Fig. 4).

Description of parts in the rifle stock

The main operative parts in the stock for producing a delayed action so that the rifle may be fired at a medium rate are: the sear release 21, stop 24, and the spring biased actuator 23. These parts are operated only when the rifle is fired at the medium rate. The buffer cups 27, cones 28 and spring 29 are well known components in the Browning rifle; their only function is to serve as a buffer for checking the rearward movement of the slide and these components have no bearing on the mechanical functioning of the rate reducing mechanism but are operative in absorbing at least some of the slide recoil energy when the rifle is fired at all settings.

The buffer tube 38 is held on the rifle receiver 36 by cooperating screw threads in those elements at one end of the tube 38 and the other end of the tube is partially closed by the buffer nut 30 which is screwed on the last mentioned end. The buffer nut 30 is rigidly fastened to the inner actuator guide tube 26 by means of a brazed connection or by mechanical means with an end of tube 26 extending within and concentric to the buffer tube 38; the other end of tube 26 is screw threaded. The buffer spring 29 which is disposed in buffer

tube 38 serves to hold buffer friction cups 27 in engagement with buffer cones 28 so that some of the rifle slide recoil may be taken care of in a manner well understood in the art. The buffer 18 is adapted to abut the foremost friction cup and is adapted to be struck by the slide in its rearmost position.

The buffer tube 38 has the sear release 21 centrally disposed therein as well as a key 19 (Figs. 17, 18). A circular shoulder 38*a* having four equally spaced slots 38*b* therein is formed integral with the buffer tube and serves to confine the buffer 18 within the buffer tube.

The sear release 21 has a longitudinal portion 21*a* and a portion 21*b* perpendicular thereto. The longitudinal portion has a groove 21*c* formed therein within which the key 19 extends. The cylindrical shaped buffer 18 has a square shaped axially extending hole 18*a* and a longitudinally extending square shaped groove 18*b* within which the key 19 is disposed. Four slots 38*b* are provided in the circular shoulder 38*a* as a matter of convenience in aligning the parts but only one of those slots is used for the passage of the key 19; the particular aperture chosen being that one which allows portion 21*b* of the sear release 21 to abut the rifle sear 11 in the final assembly. Shims 35 of various thicknesses are provided and are to be disposed between the shoulder 38*c* on the buffer tube 38 and the receiver 36 so that the portion 21*b* of the sear release 21 might be more accurately positioned with respect to the rifle sear 11.

The stock is held on the receiver by the sleeve assembly composed of sleeve 33, collar 32 and stop 24. The only component in this assembly essential to the function of the rate reducing mechanism is the stop 24. The washer 31 prevents the stock retaining sleeve assembly from unscrewing. The collar 32 may be fastened to the sleeve 33 by brazing or by mechanical means. The stop 24 has a screw threaded portion which is adapted to engage the screw threaded portion on the actuator guide tube 26. The stop 24 is fastened to the sleeve 33 by a pin 50 passing through holes in those two elements but it is understood that other fastening means may be used. The stop 24 has a slot 24*a* within which a mechanical tightening tool may be inserted and a hollow portion 24*b* which vents the interior of tube 26 and lightens the stop 24.

A circular shoulder 24*c* is provided on stop 24 for one end of coil spring 25; the other end of spring 25 abuts the circular shoulder 23*a* of actuator 23 with the result that the actuator 23 is biased in engagement with the sear release 21. In the medium firing rate position and when the trigger is depressed (Fig. 2) the sear release 21 projects a small amount beyond the buffer 18 and is adapted to be struck by the rifle slide near the end of its recoil stroke; the impact is transmitted to the actuator 23 which is thus caused to move against the stop 24 (Fig. 3) and then the spring 25 returns the actuator 23 to abutting position with the sear release 21. The time of flight of the actuator 23 determines to a large extent the rate at which the rifle is fired in the medium rate arrangement.

It is noted that the shape of groove 21*c* (Fig. 18) in the sear release 21 is such that there is practically no frictional engagement between the sear release 21 and key 19 when the sear release is in its rearmost position. The shape of groove 21*c* was chosen to afford proper form for heat treatment of the component 21.

Description of sear and trigger mechanism

The trigger 13 is pivoted to the trigger guard by trigger pin 13*c*. The connector 15 fits loosely in the trigger, the lower notch 15*a* riding on the connector pin 15*b* which is held in the two parallel oppositely disposed walls 13*a* of trigger 13. The upper edge 15*c* of the connector comes in contact with the surface 11*a* (Fig. 7) on the front end of the sear 11 when the trigger is raised by pulling it. The sear 11 is pivoted near the rear end of the trigger guard 51 by the sear pin 11*b* which passes through holes (not shown) in the trigger guard. The rear end of the sear is provided with a nose 11*c* which engages the sear notch 12 in the side 34. The under surface 11*a* of the front end of the sear engages the connector edge 15*c* when it is raised by the action of the trigger by pulling it. The sear spring 52 is held in grooves 51*c* in the trigger guard. This spring is of the leaf type, the middle tongue 52*a* bearing against the connector 15 holding this latter part in position. To outside tongues 52*b* of the sear spring bear downward against the forward ends 11*d* of the sear.

The change lever 10 extends laterally through the trigger guard, being held in place by the front tongue 17*a* of the change lever spring 17. This tongue also engages in notches 10*a* around the shaft of the change lever, thus holding the change lever in the various positions. The handle of the change lever extends upward along the left side of the receiver on which is marked the positions: "F" for medium rate of fire, "A" for rapid rate of fire, and "S" for safety (Fig. 16). The cuts and lugs on the underside of the change lever shaft control the action of the trigger and connector, thus giving the classes of fire mentioned. The change lever spring 17 is held in the trigger guard by means of grooves 51*d*. The sear release stop lever 14 which is assembled on the sear abuts the rear tongue 17*b* of this spring.

The change lever 10 is a cylindrical bar which has three shallow longitudinal slots 10*a* cut on top of the bar, as the handle is held vertically; the side of the bar is slotted in such a way as to leave a little tongue of metal 10*b* in the center and at the lower edge of the slot. The trigger 13 has two spaced walls 13*a* through which the connector pin 15*b* passes and which are adapted to straddle the tongue 10*b* and move with respect thereto when the lever is set on "F" or "A"; when the lever is set on the "S" position the upper edges 13*b* of the walls 13*a* abut against the solid portion of the lever bar and prevent movement of the trigger.

When the lever 10 is set in the "A" position (rapid rate of fire) and the trigger is pulled the head 15*c* of the connector is raised and cannot be tipped forward; the tongue 10*b* on the change lever engages the toe 15*d* of the connector as the trigger is pulled and prevents the connector from rotating.

When the change lever 10 is in the "F" position (medium rate of fire) the tongue 10*b* on the change lever does not engage the toe 15*d* of the connector, and the head 15*c* of the connector can be tipped forward. When the trigger is squeezed, at first the head of the connector rises and thereby depresses the sear nose 11*c* so that the slide is allowed to go forward. If the squeeze of the trigger is continued the cam surface 15*e* on the connector rides on the free end of arm 55, and the head 15*c* of the connector is cammed forward against the pressure of the center leaf 52*a* of the sear spring 52. The other

end of the arm 55 is fastened to the trigger guard at 55a.

In the Browning automatic rifle the cam surface 15e on the connector is commonly referred to as the sear carrier ramp and a cam projection on the sear carrier (not shown) engages the surface 15e to produce the functions ascribed to the arm 55.

The upper edge 15c of the connector disengages the surface 11a of the sear and the two outside leaves 52b of the sear spring depress it, and the sear nose 11c is thereby raised up in the path of the slide and engages the slide notch 12 when the slide moves back; thus if there were no other means in the rifle only one shot could be fired. The only function of the change lever 10 in the "F" position is the limiting of the upward travel of the trigger when its upper rear surfaces of spaced walls 13a strike the top of the slot in the change lever, which in this position is turned down. The forward end 16 of the sear release stop lever projects beyond and lays on the front end of the sear 11 so that when the connector 15 slips off the surface 11a of the sear, the sear release stop lever 14 will be engaged at 16 by the connector and rotated whereby the sear release 21 will be released; the sear release 21 would then be free to move as long as the trigger is depressed. The sear release stop lever 14 is centrally mounted within the sear 11 with the forward end of the stop lever projecting beyond and lying on the upper surface of the sear and with the rearward end of the stop lever biased against the underside of sear 11 by the spring 17b; the rearmost end of the stop lever is adapted to abut the release 21 so as to prevent axial movement thereof.

In the "A" position the end of connector 15 is prevented from rotating by cooperation of tongue 10b on the change lever 10 with toe 15d on the connector 15 so that in that position the connector 15 is prevented from coacting with the stop lever with the result that the sear release 21 is prevented from operating; the sear 11 which carries the stop lever 14 is moved somewhat as the trigger is pulled in the "A" position but that movement is not sufficient to cause disengagement of the stop lever 14 with sear release 21.

Operation of rifle when fired at medium rate

With the lever 10 set at the "F" position the rifle is placed in the "ready to fire" position by retracting slide 34 by hand until the sear 11 engages the notch 12 in slide 34.

Upon pressing the trigger 13 the spaced walls 13a on the trigger pass up in the slot of the change lever 10, straddling its tongue 10b, and carries the pivoted connector 15 upwards into engagement with the surface 11a on the sear so that the sear 11 is pivoted about the sear pin 11b out of engagement with the notch 12 in slide 34; slide 34 then moves forward. Further movement of the trigger will cause the upper edge 15c of the connector 15 to slide off the sear surface 11a against the action of the connector spring 52a and engage the outer end 16 of the sear release stop lever 14 whereby disengagement of the stop lever from the sear release 21 is produced and the sear 11 is allowed to engage the notch 12 in slide 34 when it returns in recoil. At the end of the recoil stroke initially the slide 34 strikes the sear release 21 causing it to impart an impact to the actuator 23 and finally the slide 34 strikes the buffer 18 which imparts the remainder of the kinetic energy of the slide to the cups and cones 27, 28 in a manner well understood in the art; then, as the slide moves forward the sear nose 11c engages the notch 12 in the slide and arrests further motion of the slide but in the meantime the actuator 23 moves down the tube 26 against the action of spring 25, hits the stop 24 and is moved forward by the compressed spring 25 which causes the actuator to strike sear release 21 and causes it to ride up on the cam face 11f of the sear, depressing it and thus causing the sear nose 11c to be disengaged from the notch 12. The slide is then free to move forward but only after its motion had been delayed a time interval represented by the time of travel of the actuator 23 from its forward position to its rearmost position and back to its forward position. As long as the trigger is depressed the sear release stop lever 14 will be disengaged from the sear release 21 and it will cause the slide to be released after each rearward movement of the slide. When the trigger is released the sear release 21 is prevented from moving by the sear release stop lever 14 which is biased into position by means of spring 17b.

Operation of rifle when fired at high rate

When full automatic fire is desired, it may be obtained by setting the lever 10 corresponding to the "A" position on the receiver and pulling the trigger. At this setting the sear release mechanism in the rifle stock is made inoperative and the sear nose 11c is positively held from engagement with the slide by the connector 15. Upon pressing the trigger the connector 15 moves upward and is prevented from pivoting by the change lever bar tongue 10b which engages the toe 15d of the connector. As long as the trigger is depressed sear nose 11c will be held out of engagement with the slide notch 12 and since the operation of sear release 21 is not necessary to the functioning of the rifle in this arrangement sear release 21 is held against movement by the sear release stop lever 14. The slide having no obstructions in its path will then be capable of moving as long as the trigger is depressed; when the trigger is released sear nose 11c will engage the slide notch 12 and arrest the motion of the slide.

It will be noted that when the gun is set in the slow firing position it may at any time be immediately converted to rapid fire by relaxation of the trigger and back to slow fire by increased pressure on the trigger.

I claim:

1. In a firearm, a buffer enclosing member, a sear release having a body portion with a groove therein and a projection, a spring pressed buffer projecting out of one end of the member and having a hollow portion adapted to hold said body portion which extends substantially parallel to the direction in which the buffer is adapted to move, and a key passing through the member and buffer and adapted to have one of its ends in the sear release groove.

2. The same as in claim 1, and the enclosing member has a plurality of holes through which the key may be inserted.

3. The same as in claim 1 and the end of the key and sear release groove are adapted to form a guide.

4. In a firearm, a buffer tube, a sear release, a spring pressed buffer having a hollow portion adapted to partially confine the sear release and projecting out of an end of the tube, a second smaller tube projecting into the other end of the

buffer tube, means for joining the two tubes, a sear release actuator in and adapted to move in the smaller tube, a stop in the second tube, and resilient means disposed between the actuator and the stop.

5. In a firearm, a buffer tube, a sear release having a groove, a spring pressed buffer extending beyond the end of the tube and having a hollow portion which is adapted to partially confine the sear release, and a fastener passing through the tube and buffer and into the sear release groove.

6. In a firearm, a buffer enclosing member, a sear release, a spring pressed buffer extending beyond the end of the buffer enclosing member and having a hollow portion which is adapted to partially confine the sear release, means for confining the buffer in the member, and means for allowing a limited movement between the buffer and the sear release.

7. In a firearm, a buffer enclosing member, a sear release, a spring pressed buffer extending beyond the end of the buffer enclosing member, a spring pressed sear release in the enclosing member and extending beyond the buffer, means for confining the buffer in the enclosing member, means for confining the sear release in the enclosing member, and means for allowing a limited movement between the sear release and the buffer.

8. In a firearm, a receiver, a stock having two large hollow portions separated by a smaller connecting hollow portion, a buffer tube disposed in one of the large hollow portions, a sear release, a spring pressed buffer having a hollow portion adapted to partially confine the sear release and projecting beyond one end of the tube, means for fastening the last mentioned end to the receiver, means for holding the buffer and sear release in the tube, a second smaller tube passing through the smaller connecting hollow portion and having one of its ends projecting into the buffer tube at its other end, means for fastening the last two mentioned tube ends, an actuator disposed in the second tube and adapted to abut the sear release, a plug in the other end of the second tube, resilient means disposed between the actuator and the plug, a sleeve surrounding the last mentioned end of the second tube and extending into abutting relation with the stock portion which defines the smaller hollow portion, means for fastening the sleeve to the plug, and means for fastening the plug to the second tube.

9. In a firearm, a slide, a sear cooperating therewith, a trigger for disengaging said sear from said slide, auxiliary means for disengaging said sear from said slide, said auxiliary means arranged to receive an actuating force from said slide, and a stop cooperating with said auxiliary means normally rendering said auxiliary means inoperative, said stop arranged to be positioned by the firing motion of said trigger to render said auxiliary means operative.

10. In a firearm, a slide, a sear cooperating therewith, a trigger for disengaging said sear from said slide, auxiliary means for disengaging said sear from said slide, said auxiliary means comprising a member mounted for reciprocating movement, said member arranged to be forced in one direction by said slide and to disengage said sear from said slide during its return movement, and a stop cooperating with said auxiliary means, said stop being positionable to prevent disengagement of the sear by said auxiliary means.

11. In a firearm, a slide, a sear cooperating therewith, a trigger unit for disengaging said sear from said slide, auxiliary means for disengaging said sear from said slide, said auxiliary means arranged to receive an actuating force from said slide, and a stop cooperating with said auxiliary means, said stop being positionable to prevent the disengagement of said sear by said auxiliary means, and adjustable means to control the firing position of said trigger unit, said sear and stop being so constructed and arranged that the trigger unit in one position disengages the sear and maintains said stop operative and in another position is free of the sear and renders said stop inoperative without influencing coaction between the slide and sear.

12. In a firearm, a slide, a sear cooperating therewith, a trigger unit for disengaging said sear from said slide, auxiliary means for disengaging said sear from said slide, auxiliary means comprising a member mounted for reciprocating movement, said member arranged to be forced in one direction by said slide and to disengage said sear during its return movement, a stop cooperating with said auxiliary means, said stop being positionable to prevent the disengagement of said sear by said auxiliary means, and adjustable means to control the firing position of the said trigger unit, said sear and stop means being so constructed and arranged that the trigger unit in one position disengages the sear and maintains the stop operative and in another position is free of the sear and renders the stop inoperative without influencing coaction between the slide and sear.

13. In a firearm, a slide, a sear cooperating therewith, a trigger unit for disengaging said sear from said slide, auxiliary means for disengaging said sear from said slide, said auxiliary means comprising a member mounted for reciprocating movement, said member arranged to be forced in one direction by said slide and to disengage said sear during its return movement, and a stop cooperating with said auxiliary means, said stop being positionable to prevent disengagement of the sear by said auxiliary means, said trigger unit being arranged to successively engage the sear and to engage and render the stop inoperative, being free of the sear when the stop is engaged, and means to limit the trigger motion to positions corresponding to said engagements.

14. In a firearm, a slide having a recess, a sear cooperating therewith, spring means biasing said sear into engagement in said recess, a trigger unit for disengaging said sear from said slide, auxiliary means for disengaging said sear from said slide, said auxiliary means comprising a member mounted for reciprocating movement, said member arranged to be forced in one direction by said slide and to disengage said sear during its return movement, a stop cooperating with said auxiliary means, said stop being positionable to prevent disengagement of the sear by said auxiliary means, spring means biasing said stop into blocking engagement with said auxiliary means, said trigger unit being engageable with said sear in one firing position of the trigger unit to disengage said sear from said recess and maintain said stop in blocking engagement with said auxiliary means, said trigger unit being free of said sear in an advanced firing position and engageable with said stop to remove said stop from blocking engagement with said auxiliary means and means to selectively limit the motion of the trigger unit to either of said positions.

15. In a firearm, a slide having a recess, a sear cooperating therewith, spring means biasing said sear into engagement in said recess, a trigger unit effective in one firing position to disengage said sear from said slide, auxiliary means for disengaging said sear from said slide, said auxiliary means comprising a sear disengaging member mounted for reciprocating movement, said member arranged to be forced in one direction by said slide and to disengage said sear during its return movement, a stop cooperating with said auxiliary means, said stop being positionable to prevent disengagement of the sear by said auxiliary means, spring means biasing said stop into blocking engagement with said auxiliary means, said sear and stop each comprising centrally pivoted arms, one arm each of said stop and said sear arranged to be engaged by the trigger unit, said trigger engaging arm of said stop extending beyond said trigger engaging arm of said sear and angularly spaced therefrom so as to be actuable by the trigger unit in a more advanced firing position than that required to disengage the sear, a pivoted member in said trigger unit adapted normally to engage said sear arm, cam means for removing said pivoted member from contact with said sear arm by movement of the trigger unit to said more advanced firing position where the said arm of the stop is contacted by said pivoted member, and means to selectively limit the trigger unit motion to either of said positions.

16. The combination set forth in claim 15 wherein said sear and stop means have their pivotal mounting on a single shaft.

17. In a firearm, a slide, a sear cooperating therewith, a trigger for disengaging said sear from said slide, auxiliary means for disengaging said sear from said slide, said auxiliary means comprising a member arranged for reciprocating longitudinal motion in the general path of said slide, said member arranged to be forced in one direction by said slide, resilient means opposing the motion of said member, said auxiliary means arranged to disengage said sear upon the return of said member under the bias of said resilient means, and a stop cooperating with said auxiliary means normally rendering said auxiliary means inoperative, said stop arranged to be positioned by the firing motion of said trigger to render said auxiliary means operative.

18. In a firearm as in claim 15, buffer means for said slide, said sear disengaging member being mounted in said buffer for longitudinal motion in the general path of said slide, an inertia member mounted for reciprocating movement in said buffer and arranged to be actuated by said sear disengaging member, and spring means biasing said inertia member into contact with said sear disengaging member.

19. The combination as in claim 15 wherein the pivoted member in said trigger includes a projecting toe and the position limiting means comprises a bolt selectively rotatable into a plurality of positions and having an arcuate slot and a central boss in said slot arranged to engage said toe in one rotatable position of said bolt.

20. In a firearm, a slide, a sear cooperating therewith, trigger means having two firing positions, said trigger means operating to disengage said sear from said slide in one of said firing positions, auxiliary means for disengaging said sear from said slide, said auxiliary means being inoperative in said first trigger firing position, said auxiliary means arranged to be rendered operative by said trigger means in said second firing position and comprising a member mounted for reciprocating movement, said member arranged to be forced in one direction by said slide and to disengage said sear from said slide during its return movement.

21. In a firearm as in claim 10, buffer means for said slide, said sear disengaging member being mounted in said buffer for longitudinal motion in the general path of said slide, an inertia member mounted for reciprocating movement in said buffer and arranged to be actuated by said sear disengaging member and spring means biasing said inertia member into contact with said sear disengaging member.

22. In a firearm, a slide, a sear cooperating therewith, trigger means having two firing positions, said trigger means operating to disengage said sear from said slide in one of said firing positions, auxiliary means for disengaging said sear from said slide, said auxiliary means being inoperative in said first trigger firing position, said auxiliary means arranged to be rendered operative by said trigger means in said second firing position, said auxiliary means comprising a sear disengaging member mounted for reciprocating movement, said member arranged to be forced in one direction by said slide and to disengage said sear from said slide during its return movement, buffer means for said slide, said sear disengaging member being mounted in said buffer, an inertia member mounted for reciprocating movement in said buffer and arranged to be actuated by said sear disengaging member, and spring means biasing said inertia member into contact with said sear disengaging member.

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