March 1, 1938. E. G. REISING 2,109,578

FIREARM

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Fig. 1.

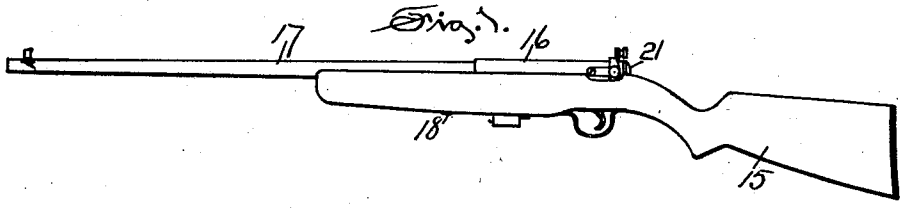


Fig. 2.

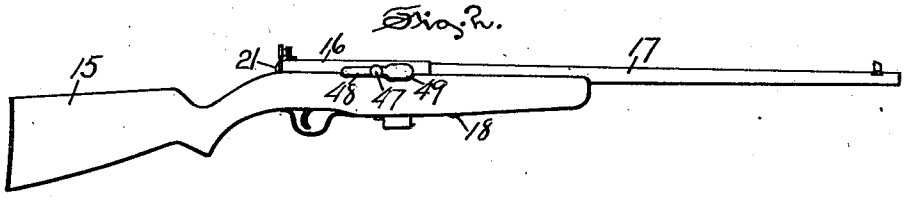


Fig. 3.

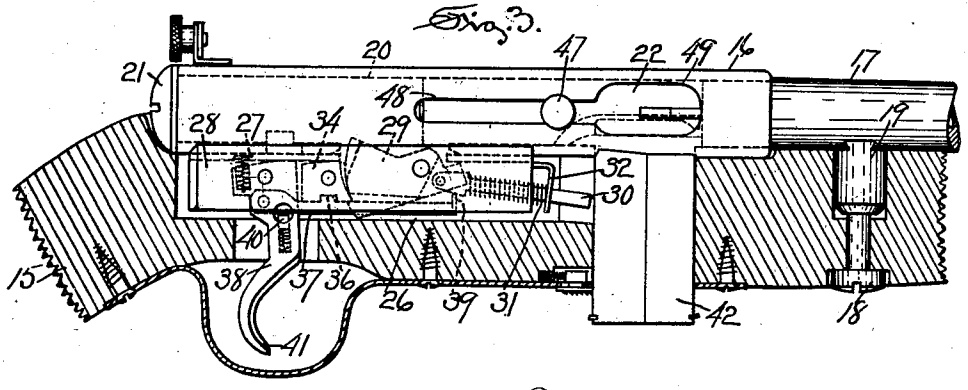
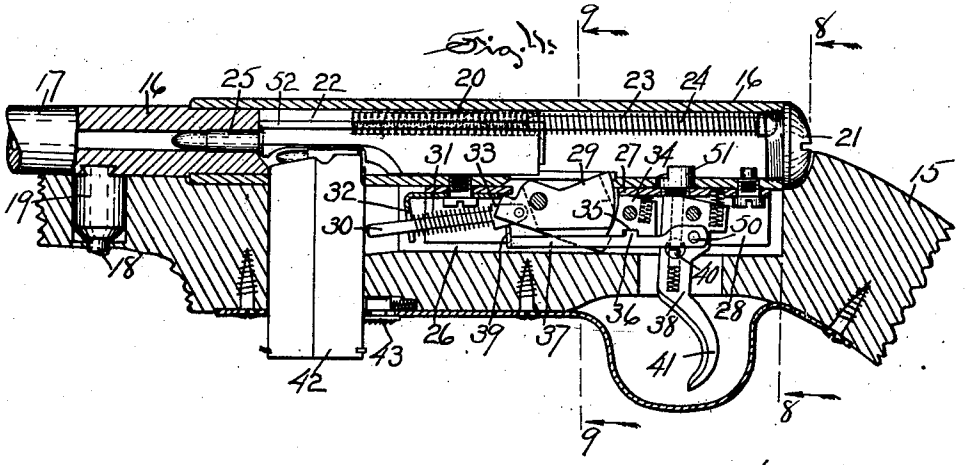


Fig. 4.



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Fig. 5.

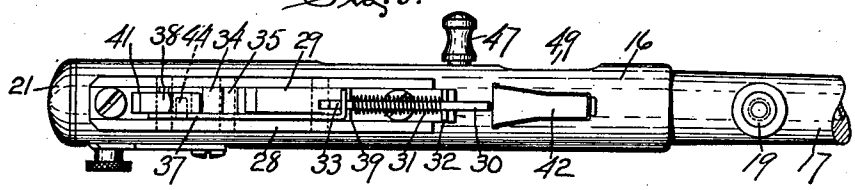


Fig. 6.

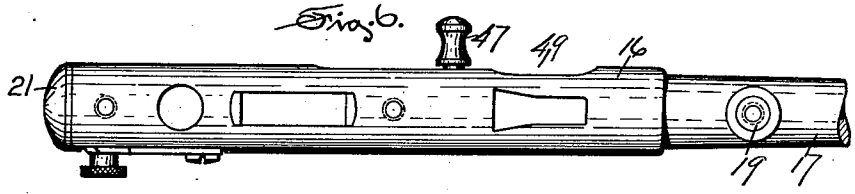


Fig. 7.

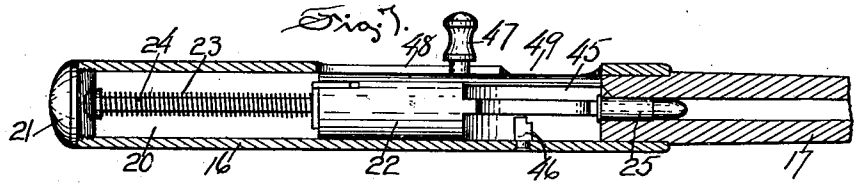


Fig. 8.

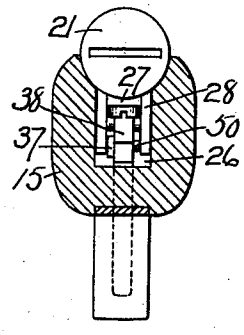
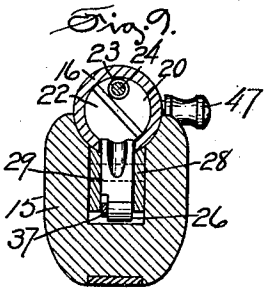


Fig. 9.



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Patented Mar. 1, 1938

2,109,578

UNITED STATES PATENT OFFICE

2,109,578

FIREARM

Eugene G. Reising, Hartford, Conn.

Application December 3, 1935, Serial No. 52,672

16 Claims. (Cl. 42—69)

My invention relates more particularly to that class of firearms which are supported against the shoulder in the act of firing, and an object of my invention, among others, is the production of a firearm of this type that shall be simple in construction, particularly efficient in operation, and one that may be produced at a minimum cost.

One form of a firearm embodying my invention and in the construction and use of which the objects herein set out, as well as others, may be attained is illustrated in the accompanying drawings in which

Figure 1 is a side view of my improved firearm.

Figure 2 is a similar view but looking at the opposite side of the device.

Figure 3 is a detail view on enlarged scale in central vertical section through the stock, the parts in the center being shown in full.

Figure 4 is a view similar to Fig. 3 but with the inner parts also cut in central lengthwise section.

Figure 5 is a bottom view of the receiver with the parts located thereon, the rear end of the barrel being shown and the stock being removed.

Figure 6 is a similar view but showing the parts removed from the receiver.

Figure 7 is a bottom view of the same parts in a lengthwise horizontal plane passing through the axis of the barrel.

Figure 8 is a view in cross section on a plane denoted by the dotted line 8—8 of Fig. 4.

Figure 9 is a view in section on a plane denoted by the dotted line 9—9 of Fig. 4.

In the accompanying drawings the numeral 15 denotes the stock of my improved firearm, 16 the receiver and 17 the barrel secured to the receiver in any suitable manner. The rear end of the barrel is seated in a groove in the stock in a manner common to devices of this class, and it is secured in place as by means of a screw 18 through the under side of the stock and engaging a lug 19 having a dovetail shaped end engaging a dovetail shaped groove formed crosswise of the barrel, and as shown in Fig. 3 of the drawings. The receiver is a tubular piece of metal having a bore 20 of uniform diameter extending entirely through it forming a breech bolt chamber which is closed at its rear end as by means of a cap 21 which may be screwthreadedly engaged with the inner walls of the chamber. A breech bolt 22 is located for reciprocating movement in said chamber and a breech bolt closing spring 23 extends into a hole in the rear end of the breech bolt, a breech bolt strut 24 extending into said hole for a short distance and backwardly therefrom, its opposite end being seated in a recess in the cap 21. A firing pin of any ordinary type is located in the breech bolt for contact with cartridges 25 located in the breech of the barrel 16, and as shown in Fig. 4 of the drawings.

An action housing is secured to the under side of the receiver, said housing being located in a chamber 26 in the stock 15. This housing is of inverted trough shape and comprises a base 27 and sides 28, fastening screws being passed through the base and threadedly engaged with the under side of the receiver, the outside of the base being curved to fit the curved under surface of the receiver.

A hammer 29 is pivotally mounted upon a pin supported in the sides 28, and a hammer strut 30 is pivotally secured at one end in a notch in the hammer, said strut supporting a hammer spring 31 which thrusts at one end against a shoulder on the strut and at its opposite end against a retainer 32 which is secured within the housing 27 projecting from the front end thereof and having its end bent downwardly and notched to receive the strut 30 and as shown in Fig. 4 of the drawings. One of the screws which secures the housing 27 to the receiver may also be employed for securing the retainer 32 in place. A stop lug 33 projects forwardly from the lower end of the hammer to engage against the inner part of the base 27 of the housing to limit the backward movement of the hammer.

A sear 34 is pivotally mounted on a pin supported in the sides 28 of the housing, said sear being spring pressed with its lower edge into engagement with a notch in the hammer 29, said sear having a notch 35 to receive a lug 36 projecting from one side of a disconnector 37 pivotally mounted at its rear end on the trigger 38. A disconnecting lip 39 extends upwardly from the front end of the disconnector into position to engage the rear end of the hammer strut 30 which operates, when the hammer is thrust forward by its spring, to disconnect the lug 36 from the notch 35. A spring pressed plunger 40 engages the disconnector to press it normally upward for engagement of the lug 36 with the notch 35.

The trigger 38 is pivotally mounted in the sides 28, the trigger being spring actuated to force the finger piece 41 normally forward. A magazine 42 of any ordinary form and construction is employed to support cartridges for delivery into the breech of the barrel by the action of the breech bolt in a manner common to devices of

this class, and a magazine catch of any desired form may be employed for releasably holding the magazine in place, such catch being shown at 43 in Figure 4. The spring which acts upon the disconnector forms a rest for a plunger 40 seated upon said spring, said parts being located in a hole in the trigger and said plunger is thrust against a lip 44 projecting laterally from the lower edge of the disconnector 37, and as shown in Figure 4 and in dotted lines in Figure 5 of the drawings. Said lip projects into a hole extending laterally into the trigger and overlies the end of said plunger, thereby effecting pressure upwardly on the disconnector.

A firing pin 52 of flat shape is located in a slot extending longitudinally along the side of the breech-bolt and as shown in Figure 4 of the drawings.

An extractor 45 of any ordinary form is secured to the side of the breech bolt to withdraw the cartridges from the barrel and against an ejector 46 also of common construction. A cocking handle 47 is secured to the breech bolt and projects outwardly through a slot 48 extended from the ejecting opening 49 in the side of the receiver and as shown in Figs. 3 and 7 of the drawings.

The disconnector is pivotally attached to the trigger by means of a pin 50 which projects on opposite sides of the trigger. One end of this pin abuts one side 28 of the housing to retain the trigger against lateral movement within said housing. The disconnector is pivotally mounted on the opposite projecting end of said pin. A breech bolt stop 51 is employed for limiting backward movement of the breech bolt.

In accordance with the provisions of the patent statutes I have described the principles of operation of my invention, together with the device which I now consider to represent the best embodiment thereof; but I desire to have it understood that the device shown is only illustrative and that the invention may be carried out by other means and applied to uses other than those above set out.

I claim:—

1. A firearm including a stock, a circularly shaped receiver mounted on said stock, an action housing comprising a closed top side and an oppposite open bottom side, said closed side constituting a base which is curved to closely fit and which is removably secured to the under side of said receiver and enclosed in said stock, and firing mechanism including a hammer, sear and trigger secured to and held in said housing.

2. A firearm including a stock, a receiver mounted on said stock, a breech bolt in said receiver and enclosed therein, an action housing comprising a closed top side and an oppposite open bottom side, said closed side constituting a base which is curved to closely fit and which is removably secured to the receiver, firing mechanism in said housing, and a lug secured to and projecting upwardly from said housing into the receiver and into the path of movement of the breech bolt to limit its rearward movement.

3. A firearm including a stock, a receiver mounted on said stock, a breech bolt mounted for sliding movement in said receiver, an inverted trough-shaped housing comprising a closed top side and an opposite open bottom side, said closed side constituting a base which is curved to closely fit and which is removably secured to the under side of the receiver and enclosed in said stock, and firing mechanism mounted in said housing and operating in connection with said breech bolt.

4. A firearm including a stock, a receiver mounted on said stock, a breech bolt mounted for sliding movement in said receiver, an inverted trough-shaped housing comprising a closed top side and an opposite open bottom side, said closed side constituting a base which is curved to closely fit and which is removably secured to the under side of the receiver and enclosed in said stock and comprising substantially parallel sides and open ends, and firing mechanism mounted in said housing and operating in connection with said breech bolt.

5. A firearm including a stock, a receiver mounted on said stock, a breech bolt mounted for sliding movement in said receiver, an inverted trough-shaped housing removably secured to the under side of the receiver and enclosed in said stock, a retainer secured to said housing and projecting forwardly thereof, and firing mechanism located in said housing and comprising a hammer with a hammer strut projecting through said retainer, and a spring on said strut thrusting against said retainer.

6. A firearm including a stock, a receiver mounted on said stock, a breech bolt slidably mounted in said receiver, an inverted trough-shaped housing comprising a closed top side and an opposite open bottom side, said closed side constituting a base which is curved to closely fit and which is removably secured to the under side of the receiver engageable with the bottom of said housing and having an opening in its base, and firing mechanism mounted in said housing and including a hammer operating through said opening, said hammer having a stop lug, and means to engage said lug to limit the backward movement of the hammer.

7. A firearm including a receiver, a breech bolt slidably mounted in said receiver, and firing mechanism mounted underneath said receiver and including a hammer, a sear to engage said hammer, said sear and hammer being wholly movable independently of each other, a trigger for operating said sear, a member pivotally attached at one end to the trigger and having a lug engageable with said sear, and means operable by the hammer to engage said member to disengage it from said sear.

8. A firearm including a receiver, a breech bolt slidably mounted in said receiver, and firing mechanism mounted under said receiver and including a hammer, a sear to engage the hammer, a trigger for operating said sear, a disconnector pivotally attached at one end to the trigger and having a lug engageable with said sear and a disconnecting lip at its forward end, and a hammer strut bearing the hammer spring and engageable with said lip in the firing movement of the hammer to disconnect said lug from the sear.

9. A firearm including a receiver, a breech bolt mounted for sliding movement in said receiver, an inverted trough-shaped housing secured to the under side of the receiver, a hammer mounted on a pivot supported in the sides of the housing and engageable with a sear, the sear mounted on a pivot supported in the sides of the housing, a trigger mounted on a pivot supported in the sides of said housing, a disconnector pivotally attached to the trigger at one end and having a lug engageable with said sear and a disconnecting lip at its front end, and a strut for the hammer spring, said strut having a head secured to said hammer and engageable with said

lip in the firing movement of the hammer to disengage said lug from the sear.

10. A firearm including a receiver, a breech bolt slidably mounted in said receiver, and firing mechanism acting in connection with said breech bolt, said firing mechanism including a hammer pivotally mounted underneath the receiver, a pivotally mounted sear engageable with said hammer, said sear and hammer being wholly movable independently of each other, a pivotally mounted trigger for operating said sear, and a disconnector pivotally attached to the trigger at one end and having a lug to engage said sear for operation thereof, and means operable by the hammer for disconnecting said lug from said sear.

11. A firearm including a receiver, a breech bolt slidably mounted in said receiver, and firing mechanism acting in connection with said breech bolt, said firing mechanism including a hammer pivotally mounted underneath the receiver, a pivotally mounted sear engageable with said hammer, a pivotally mounted trigger for operating said sear, said hammer and sear being mounted for movement wholly independently of each other and said hammer being cut away on one side at its lower edge, and a disconnector pivotally attached to the trigger at one end and having a lug to engage said sear for operation thereof, said disconnector passing along the cut away portion of said hammer, and means operable by the hammer for disconnecting said lug from said sear.

12. A firearm including a receiver, a breech bolt slidably mounted in said receiver, a firing mechanism including a hammer pivotally mounted underneath said receiver, a sear pivotally mounted under said receiver and engageable with said hammer, a trigger pivotally mounted under said receiver to operate said sear, a disconnector pivotally attached to said trigger and engageable with said sear and operable by said hammer, a lip bent from said disconnector, and a spring actuated plunger located in a hole in said trigger and thrusting against said lip to actuate said disconnector.

13. A firearm including a receiver, a breech bolt slidably mounted in said receiver, and firing mechanism including a hammer pivotally mounted underneath said receiver, a sear pivotally mounted under said receiver and engageable with said hammer, a trigger pivotally mounted under said receiver to operate said sear, a disconnector pivotally attached to said trigger and engageable with said sear and operable by said hammer, a lip bent laterally from the edge of said disconnector, and a spring actuated plunger located in a hole in said trigger and thrusting against said lip to actuate said disconnector.

14. A firearm including a receiver, a breech bolt mounted for sliding movement in said receiver, and firing mechanism including a hammer, a sear engageable with said hammer, said hammer and sear being mounted for movement wholly independently of each other, a trigger for operating said sear, the trigger opening being greater in width than said trigger, a projection on opposite sides of said trigger to limit its sidewise movement to engage the wall of said opening, and a disconnector pivotally supported by said trigger at one end and operatively connected with said sear and with said hammer.

15. A firearm including a receiver, a breech bolt mounted for sliding movement in said receiver, and firing mechanism including a hammer, a sear engageable with said hammer, a trigger for operating said sear, a pin projecting on opposite sides of said trigger, one projecting end acting as a stop to limit sidewise movement of the trigger, and a disconnector pivotally mounted on the other end of said pin and operatively connected with said sear and with said hammer.

16. A firearm including a receiver, a breech bolt slidably mounted in said receiver, an inverted U-shaped housing comprising a closed top side and an opposite open bottom side, said closed side constituting a base which is curved to closely fit and which is removably secured to the under side of the receiver and having an opening in its base, and firing mechanism mounted in said housing and including a hammer operating through said opening, said hammer having a stop lug engageable with the bottom of said housing, and means to engage said lug to limit the backward movement of the hammer.

EUGENE G. REISING.