

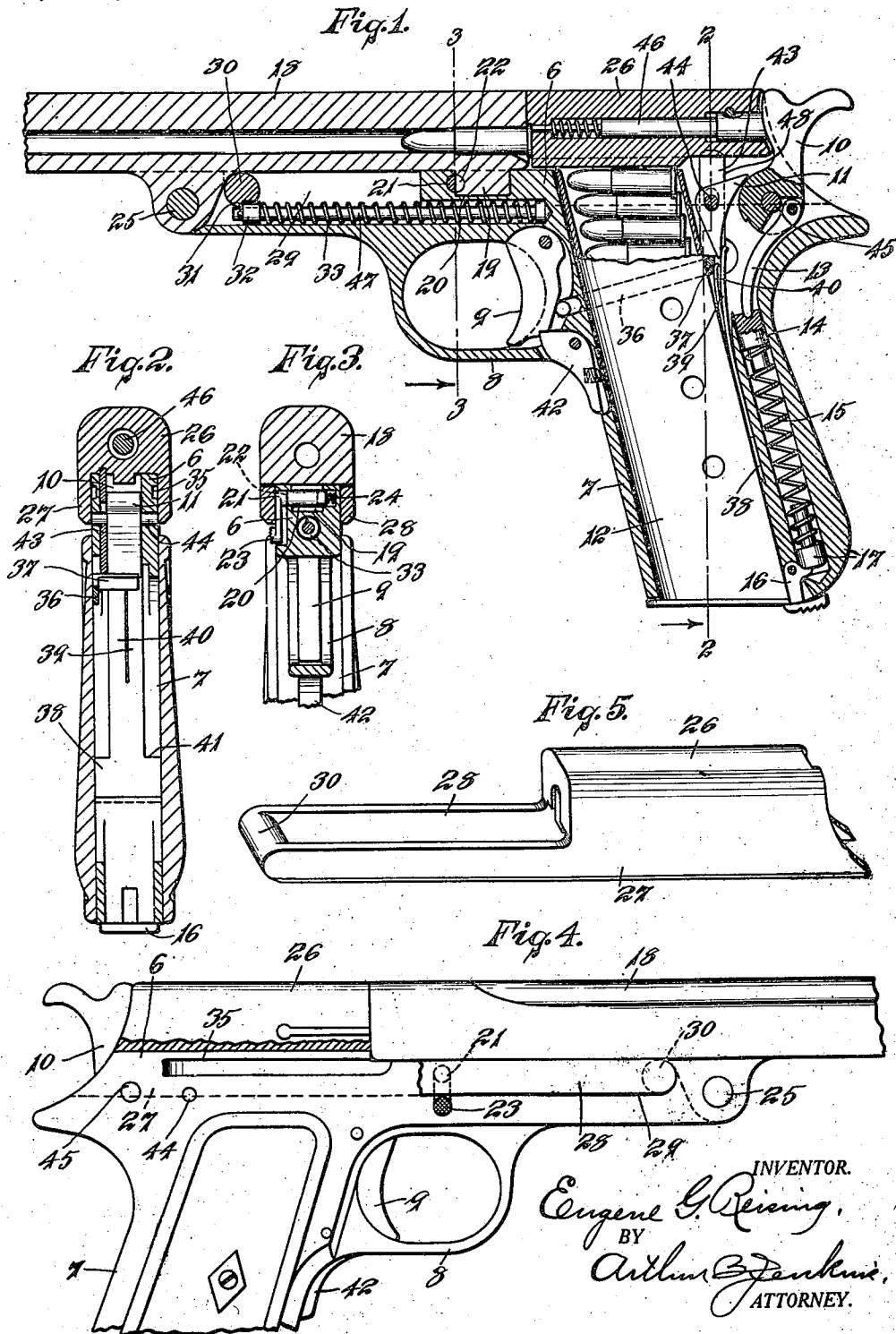
E. G. REISING.

FIREARM.

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1,395,141.

Patented Oct. 25, 1921.



UNITED STATES PATENT OFFICE.

EUGENE G. REISING, OF EAST HARTFORD, CONNECTICUT.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EUGENE G. REISING, a citizen of the United States, and a resident of East Hartford, in the county of Hartford and State of Connecticut, have invented a new and Improved Firearm, of which the following is a specification.

My invention relates to that class of firearms that are supported on the person when being fired, and an object of my invention, among others, is to so construct such a firearm that it shall be especially simple in construction and effective in operation.

One form of 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 view in central vertical section through a firearm embodying my invention, the front end of the barrel being broken off.

Fig. 2 is a cross sectional view on plane denoted by dotted line 2—2 of Fig. 1.

Fig. 3 is a cross sectional view on plane denoted by dotted line 3—3 of Fig. 1, the lower part of the handle being broken off.

Fig. 4 is a view in side elevation of the right hand side of my improved firearm, the lower part of the handle and the front end of the barrel being broken off and parts being broken away to show construction.

Fig. 5 is a perspective view of the breech-bolt.

While my invention is not limited to any particular species of firearm yet it is especially adapted for use in that type commonly called a pistol. Such a device has been selected by me for the purpose of illustration and description of my invention herein.

The upper part of the frame of my improved pistol comprises a receiver 6, and the lower part of the frame comprises a handle 7 and a trigger guard 8. The device is also provided with the usual trigger 9, hammer 10, sear 11, magazine 12, hammer strut 13, strut seat 14, and main spring 15, all of which may be constructed in any suitable and convenient manner.

In my improved device there is a spring seat 17 to receive the thrust of the main spring 15 at its lower end, this spring seat resting against a magazine catch 16, in the form of a lever pivotally mounted in the lower end of the handle, one end of said

lever receiving said spring seat and the other end having a lip to engage the magazine under thrust of the main spring and a thumb piece by means of which the lever may be operated.

The pistol shown herein is of the "break down" type, the barrel 18 being secured to the front end of the receiver and having a lug 19 at its rear end adapted to be received in a recess in the top of the receiver. A locking groove 20 is formed across the front face of said lug to receive a barrel lock 21 in the form of a pin having on one side a barrel releasing groove 22 of a width substantially that of the lug 19 and into which groove said lug is adapted to pass. Said pin may be longitudinally moved in the receiver to locate a part of the body of the pin next to the releasing groove within the locking groove 20 to thereby lock the barrel against swinging movement on the frame or receiver. A thumb piece 23 is secured to the end of the barrel lock and projects through a recess in the side of the receiver to a point where it is accessible from the outside for the purpose of operation. Said lock is seated against a lock operating spring 24 located in a recess in the receiver. From this description it will be seen that pressure upon the thumb piece 23 will move the barrel lock against the force of the spring 24 and into position to register the releasing groove 22 with the lug 19, in which position the barrel may be swung on its pivot that secures it to the frame.

A breech-bolt is slidably mounted on the receiver, said bolt comprising a body 26 having retaining flanges 27 depending from opposite sides thereof and breech-bolt retaining bars 28 projecting forwardly from said flanges and underlying the side edges of the rear end of the barrel that overhangs the receiver to an extent substantially equal to the thickness of said bars, the cross sectional dimensions of the body of the breech-bolt being substantially equal to the cross sectional dimensions of the barrel at its rear end whereby the upper part of the structure is smooth. The upper part of the receiver is cut-away for a portion of its length to form a slideway 29 for a cross piece 30 that is located in said slideway and is rigidly secured at its opposite ends to the retaining bars 28. This cross piece has a shoulder 31 to receive the thrust of a breech-bolt closing

spring seat 32 against which a breech-bolt closing spring 33 thrusts, the opposite end of said spring being located in a recess opening from the rear end of the slideway 29.

5 Grooves 35 may be formed in opposite sides of the upper part of the receiver if desired, said grooves being located underneath and therefore closed by the flanges 27. These grooves may be employed, if desired, to contain a small quantity of lubricant as an aid to free sliding movement of the breech-bolt.

10 A trigger bar 36 is pivotally attached to the trigger and extends rearwardly along one side of the magazine and a sear bar 37 projects at an angle from the rear end of the trigger bar and in position to contact with the lower end of the sear 11. A compound spring comprises a base 38 and sear and sear bar springs 39—40 extending therefrom, the latter to rest in contact with the sear bar 37 and the former to rest in contact with the sear 11. The sear spring structure is of inverted T-shape, the ends of the base 38 projecting beyond the springs 41 located in the rear wall of the magazine chamber, the lower edges of said grooves being undercut to receive the beveled lower edge of the base, as shown in Figs. 1 and 2 of the drawings.

30 From this construction it will be seen that the spring structure may be readily secured in place by inserting the beveled edge of the base into said undercut grooves and then forcing the base and springs backwardly from within the magazine chamber. The pressure of the sear bar and sear upon the springs will retain the spring structure in position and against any liability of disengagement when the magazine is not in place, and the magazine when in position will assist in retaining the spring structure in place.

40 A safety lever 42 is pivotally mounted in a recess in the front edge of the handle, the upper end of said lever projecting into the inclosure within the trigger guard to engage a notch in the trigger, as shown in Fig. 1 of the drawings, a spring underlying the safety lever forcing it into engagement with the trigger except when said lever is manually operated to release it from the trigger. The lower end of this lever is in convenient position to receive pressure of the fingers of a hand grasping the handle so that when the handle is so grasped in the ordinary manner the safety lever will of necessity be operated to release it from the trigger.

50 A trigger bar disengaging slide 43 is mounted in the receiver with one end located in a recess in the under side of the breech-bolt, as shown in dotted lines in Fig. 1, and the other end resting upon the sear bar 37. When the breech-bolt is forced backwardly, this slide is forced downwardly to locate the sear bar below the sear and thus permit the

latter free movement to quickly engage the hammer when the latter is forced backwardly. This slide 43 is held in place by a sear pin 44 that projects through a slot in the slide.

70 The retaining flanges 27 on the breech-bolt extend below the upper end edges of the sear pin 44 and the hammer pin 45, which pins are thereby locked in place by said flanges, and the entire firing mechanism is consequently locked in place by the manually operable barrel lock 21. When said lock is operated to release the barrel, the latter may be swung with its rear end upwardly and the breech-bolt may be lifted out of place. When the breech-bolt is in place the sear and hammer pins are locked in place.

80 The breech-bolt is provided with a firing pin 46 of any ordinary form and construction and arranged to be struck by the hammer when the latter is released for firing action.

90 The spring seat 32, in the preferred form of my invention, comprises a collar slidably mounted on a spring supporting rod 47, said collar being prevented from moving off the end of the rod in any suitable manner, as by a pin passed through the rod, and the opposite end of the rod may be provided with any suitable means, as a head, to receive the thrust of the spring. This provides a structure that serves its purpose as a breech closer and at the same time one that may be readily removed from the firearm without any liability of the spring escaping from its fastenings.

100 The disengaging slide 43 is made from a very thin plate of sheet metal that may be stamped to shape, and in order that such a slide may be employed a shallow recess 48 is formed in the side of the chamber in the frame containing the sear and hammer, said slide being slotted to receive the sear pin 44 upon which the slide is mounted. The slide thus has simply a vertical movement, the recess forming a slideway and preventing any turning movement of the slide on its pivot.

110 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.

I claim—

1. A firearm including a receiver, a barrel secured to the receiver at two points and having shoulders extending laterally beyond the sides of the receiver with their lower edges formed flat and in substantially a horizontal plane, said barrel and receiver being formed to provide a slot between said two

points of attachment of the barrel to the receiver, a breech-bolt slidably mounted on the upper edge of the receiver back of the barrel and having forwardly extending retaining bars with flat upper edges to engage the projecting sides of said barrel whereby the breech-bolt is wholly retained in place, a cross piece connecting the ends of said retaining bars and extending through said slot, and a breech-bolt closing spring located in said slot and pressing against said cross piece to close the breech-bolt.

2. A firearm including a receiver, a barrel movably secured to the receiver at one point and attached thereto at another point and having shoulders extending laterally beyond the sides of the receiver with their lower edges formed flat and in substantially a horizontal plane, said points being spaced one from the other with a slot between them, a breech-bolt slidably mounted on the upper edge of the receiver back of the barrel and having forwardly extending retaining bars with flat upper edges to engage the projecting sides of said barrel whereby the breech-bolt is wholly retained in place, a cross piece connecting the ends of said retaining bars and extending through said slot, and a bolt closing spring located in said slot and pressing against the cross piece to close the breech-bolt.

3. A firearm including a receiver, a barrel pivotally secured to the receiver at one point and detachably secured thereto at another point and having shoulders extending laterally beyond the sides of the receiver with their lower edges formed flat and in substantially a horizontal plane, said points being spaced one from the other with a slot between them, a breech-bolt slidably mounted on the upper edge of the receiver back of the barrel and having forwardly extending retaining bars, with flat upper edges to engage the projecting sides of said barrel whereby the breech-bolt is wholly retained in place, a cross piece connecting the ends of said retaining bars and extending through said slot, and a breech-bolt closing spring located in said slot and pressing against the cross piece to close the breech-bolt.

4. A firearm including a receiver, a barrel pivotally secured to the front end of the receiver and attached to the receiver at a point spaced from said pivot thereby providing a slot between said two points of attachment of the barrel to the receiver, said barrel having shoulders extending laterally beyond the sides of the receiver with their lower edges formed flat and in substantially a horizontal plane, a breech-bolt slidably mounted on the upper edge of the receiver back of the barrel and having forwardly extending retaining bars with flat upper edges to engage the projecting sides of said barrel whereby the breech-bolt is wholly retained

in place, a cross piece connecting the ends of said retaining bars and extending through said slot, and a breech-bolt closing spring located in said slot and pressing against the cross piece to close the breech-bolt.

5. A firearm including a receiver, a barrel pivotally secured to the front end of the receiver and having shoulders extending laterally beyond the sides of the receiver with their lower edges formed flat and in substantially a horizontal plane, means for attaching the barrel to the receiver at a point spaced from said pivot, means for securing and releasing said latter means of attachment of the barrel to the receiver, said parts being formed to provide a slot between said points of attachment, a breech-bolt slidably mounted on the upper edge of the receiver back of the barrel and having forwardly extending retaining bars with flat upper edges to engage the projecting sides of said barrel whereby the breech-bolt is wholly retained in place, a cross piece connecting the ends of said retaining bars and extending through said slot, and a breech-bolt closing spring located in said slot to press against said cross piece to close the breech-bolt.

6. A firearm including a receiver, a barrel secured to the receiver at two points and having shoulders extending laterally beyond the sides of the receiver with their lower edges formed flat and in substantially a horizontal plane, said barrel and receiver being formed to provide a slot between said two points of attachment of the barrel to the receiver and the slot being provided with a groove in the bottom thereof, a breech-bolt slidably mounted in the upper edge of the receiver back of the barrel and having forwardly extending retaining bars with flat upper edges to engage the projecting sides of said barrel whereby the breech-bolt is wholly retained in place, a cross piece connecting the ends of said retaining bars above said groove, and a bolt closing spring located in said groove and pressing against the cross piece to close the breech-bolt.

7. A firearm including a receiver, a barrel secured to the receiver at two points, said barrel and receiver being formed to provide a slot between said two points of attachment of the barrel to the receiver, a breech-bolt slidably mounted on the upper edge of the receiver back of the barrel and having forwardly extending retaining bars, a cross piece connecting the ends of said retaining bars and extending through said slot and having a groove forming a shoulder therein, and a bolt closing spring located in said slot and having a spring seat resting in said groove in the retaining bar and thrusting against it to close the breech-bolt.

8. A firearm comprising firing mechanism including a sear, a trigger, a connection between said trigger and sear and in-

cluding a sear bar, and a compound spring having leaves engaging said bar and sear, and having a base removably secured in a recess in the wall of a magazine chamber in said firearm and partially retained in place by a magazine in said chamber.

9. A firearm comprising firing mechanism including a sear, a trigger, a connection between said trigger and sear and including a sear bar, and a compound spring having leaves engaging the bar and sear, and a base located in a recess in the wall of a magazine chamber in said firearm in position to be partially held by a magazine in said chamber, the lower edges of said recess being undercut to receive the beveled edge of said base.

10. A firearm including a frame having a magazine chamber therein and firing mechanism located in said frame, a spring projecting to engage a member of said firing mechanism, said spring having a base projecting laterally beyond the edges of the spring into parts of a recess in the wall of the magazine chamber in position to be partially held by a magazine in said chamber, the upper edges of said recesses being shaped to retain the base against upward movement and the lower edge of said recess being undercut to receive the beveled lower edge of the base.

11. A firearm including a frame, a breech-bolt movably mounted on the frame, a barrel movably attached to the frame and having shoulders extending laterally beyond the sides of said receiver with their lower edges formed flat and in substantially a horizontal plane to engage the flat upper edges of side bars extending rearwardly from the

breech-bolt to wholly secure it in place, and means for securing the barrel.

12. A firearm including a frame, a breech-bolt slidably mounted on the frame, a barrel pivotally mounted on the frame and having shoulders extending laterally beyond the sides of the receiver with their lower edges formed flat and in substantially a horizontal plane to engage the flat upper edges of side bars extending rearwardly from the breech-bolt in the closed position of the barrel to wholly hold said breech-bolt in place, and means for retaining the barrel in its locked position.

13. A firearm including a frame having a cut-away portion at its upper edge to form a slot, a spring located in said slot and thrusting against a seat, a breech-bolt slidably mounted on the frame and having a member with a shoulder to engage said seat at the upper side thereof, and a barrel movably attached to the frame covering said slot and engaging the member from the breech-bolt to retain the latter in place.

14. A firearm including a receiver having a chamber therein opening to the upper edge thereof, firing mechanism including a sear located in said chamber, a shallow recess located in the side wall of said chamber and forming a slideway extending to the upper edge of the receiver, a thin disengaging slide mounted in said slideway, a member to be operated by said slide to disengage it from said sear, and a breech-bolt mounted on the receiver to operate said slide, said bolt closing the upper part of said chamber and recess.

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