

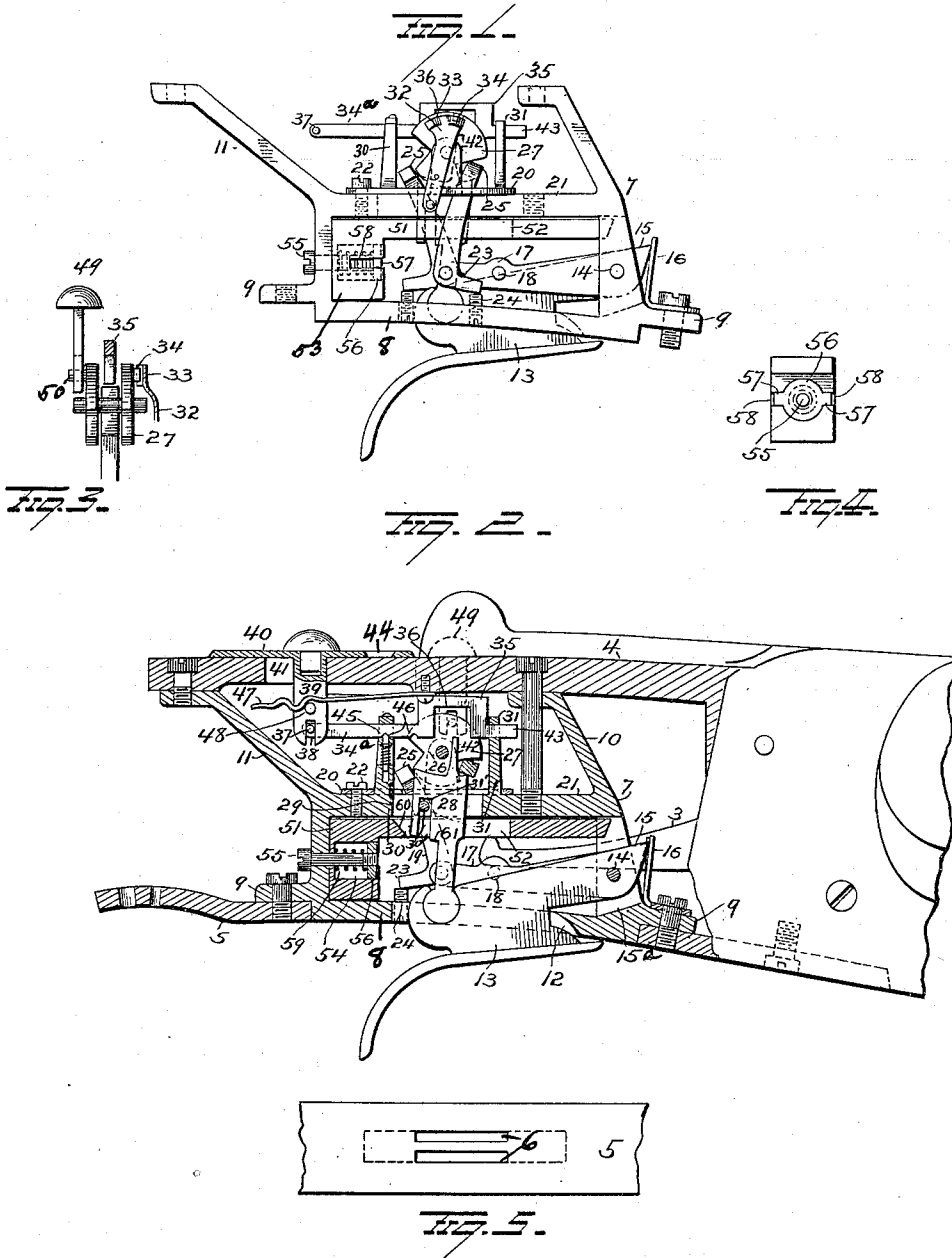
A. H. WORREST.

FIREARM.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ALFRED H. WORREST, of Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Firearms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to fire arms and more particularly to improvements in double-barrel guns,—one object of the invention being to provide simple and efficient means whereby an ordinary double barrel gun employing double trigger and firing means can be converted into a single trigger double barrel gun.

A further object is to provide a single trigger mechanism for a double barrel gun, which shall be complete within itself and capable of being inserted bodily into the gun, so as to operate the sears and not dependent for its operation, upon any other part of the gun mechanism.

A further object is to so construct a self-contained single trigger mechanism for a double barrel gun, that it can be readily applied to the trigger plate of the gun and supply a proper finish for the latter.

A further object is to provide a single trigger mechanism employing a recoil locking bolt, in which the firing means will normally lock the recoil bolt and in which the firing means may be locked so as to prevent the operation of the same.

With these objects in view, the invention consists in certain novel features of construction and combinations of parts as hereinafter set forth and pointed out in the claims.

In the accompanying drawings, Figure 1 is an elevation showing my improved, self-contained, single trigger mechanism; Fig. 2 is a sectional view showing the location of my improvements in a gun; Fig. 3 is a detail view, partly in section showing a portion of the mechanism, Fig. 4 is an end view of the recoil bolt, and Fig. 5 is a view of a portion of the trigger plate.

1 represents the lock casing of a gun, with which the barrels 2 are connected, said casing 1 containing any approved construction of inclosed hammers, cocked by breaking the gun and released by sears 3 which project rearwardly from said casing. In

Fig. 2 of the drawing, the tang is represented at 4, and 5 indicates the trigger plate.

In an ordinary double barrel gun employing two triggers, the trigger plate is provided with two slots 6, 6, for the accommodation of these triggers. In order to convert such a gun into a double barrel, single trigger gun, the trigger plate will be cut as indicated by dotted lines in Fig. 5 to form a single centrally located slot 6 for the accommodation of my improved self contained, single trigger mechanism. In constructing this mechanism, I employ a rectangular frame 7, the lower member 8 of which is adapted to enter and close the elongated slot in the trigger plate so that its lower face will lie flush with the lower face of said trigger plate. The lower portion of the frame 7 is provided at respective ends with lugs 9 which rest upon the trigger plate and are secured thereto. The frame 7 may also be provided with upwardly projecting arms 10—11 secured at their upper ends to tang 4. The frame 7 carries all the mechanism necessary to control the operation of the sears of the gun, and can be inserted bodily into position in the gun without removing or disturbing the sears which may already be in position, and thus this mechanism is self-contained.

The lower member 8 of the frame 7 is provided with a slot 12 for the accommodation of the trigger 13, the latter being pivotally supported near one end by a pin 14 passing through a slot 15^a in one end of the frame 7. The trigger is made with a toe 15 engaged by a spring 16 secured to one of the lugs 9 for maintaining the trigger normally in and returning it to its normal position. The pin 14 also pivotally supports two links 17, each having a pin 18 disposed under one of the sears 3. Trip arms or levers 19 are pivotally attached at their lower ends to the links 17 and the movements of these arms or levers may be guided by a slotted plate 20 secured to the top member 21 of the frame 7 by means of a screw 22. The trip arms 19 are provided at their lower ends with toes 23 to engage screws 24 in the bottom member 8 of frame 7 and the upper ends of said trip arms are provided with fingers 25. Standards 26 rise from the top member 21 of frame 7 and between these standards, two tumblers 27 are mounted and connected so as to be movable together.

The finger 25 of one trip arm is disposed in line with one of these tumblers and the finger 25 of the other trip arm is located in the path of the other tumbler, so that when
 5 said tumblers are turned in one direction or the other, one or the other of the trip arms will be moved out of the path of a plunger 28, connected with the trigger 13.

The plunger 28 passes upwardly through
 10 a slot 29 in the top member 21 of the frame 7 and is guided by a pin 30' passing through a slot 31' in said plunger. When the trigger is pulled, the plunger 28 will be raised and, engaging the finger 25 which may be dis-
 15 posed over it, will raise the trip arm from which the finger projects and consequently raise the link 17 which carries said trip arm, thereby operating one of the sears 3 to fire one barrel of the gun. It is evident
 20 that if the tumblers be shifted in the reverse direction, the other trip arm will be operated when the trigger is pulled, and hence the other barrel will be fired.

In order to retain the tumblers in the position to which they may be moved, a spring
 25 plate 32 is secured to the frame 7 and provided with recesses 33 to be engaged by a pin 34 which projects from one of the connected tumblers 27.

It is desirable to provide means for locking the firing mechanism in order to prevent
 30 accidental firing of the gun when the latter is being handled more or less roughly and carelessly, and for this purpose the devices now to be described will be employed.
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The top members 21 of the frame 7 is provided, at or near respective ends of the slot 29, with posts 30—31, through which
 40 a bar 34^a is horizontally movable, said bar being provided, between its ends, with an elevated portion 35 whereby a recess 36 is formed. The bar 34^a is provided at or near
 45 one end with a pin 37 which enters an elongated slot 38 at the lower end of a shank 39. The shank 39 depends from a slide 40 on the tang and passes through an elongated slot 41 in the latter. By moving the slide 40 in one direction, the bar 34^a will be moved
 50 to such position that the recess 36 formed by the elevated portion 35 will be directly over a finger 42 projecting upwardly from the plunger 28, so that said plunger will be permitted to move upwardly and permit the operation of the firing mechanism. When
 55 the slide is moved in the reverse direction, the portion 43 of the bar 34^a will become disposed over the finger 42 and prevent the plunger from being raised sufficiently to fire the gun,—the bar 34^a thus acting to lock the
 60 firing means. When the slide is in this position a suitable designation, such as the letter "S" denoting "safety," will appear through the hole 44 in said slide. In order to retain the locking bar 34^a in the position
 65 to which it may be moved, a spring-pressed

pin 45, disposed in the post 30 will engage in one or another of two notches 46 in said bar 34^a. If desired, a notched spring 47 may also be employed and made to engage
 70 a pin 48 on the shank 39 to hold the locking bar 34^a in place.

An indicator 49 may be provided to denote which barrel is to be fired, and this indicator is operated by a pin 50 carried by the tumblers 27.
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A recoil bolt 51 is located within the frame 7 and provided with a slot 52 through which the plunger 28 passes. This bolt is provided at one end with a weight or head
 80 53 having a recess 54 therein. A pin 55 passes through one end of the frame 7 and the head 53 on the recoil bolt 51 and is provided at its free end with a nut 56 having wings 57 to enter recesses 58 in the head 53.
 85 Between this nut and the rear end of the recess 54, a coil spring 59 is located. With this construction, when one barrel has been fired, the recoil will cause the shoulder 60 at one end of the slot 52 of the bolt 51 to engage the shoulder 61 on the plunger 28
 90 and momentarily prevent the descent of said plunger, thus preventing the firing of the other barrel by an involuntary pulling of the trigger by the operator when the first barrel was fired, and thus the firing mechanism will be momentarily locked by the recoil bolt. In view of the fact that the plunger 28 (which constitutes part of the firing mechanism) passes through the recoil bolt, the latter will be normally locked by the
 95 firing mechanism, thus securing said bolt against any displacement by the handling or bumping of the gun. Thus locking the recoil bolt insures against any misfires when the user desires to fire hurriedly.
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It will be observed that the mechanism carried by the frame 7 is a single trigger alternating mechanism which is complete in itself and not dependent for its operation upon any part in the gun and not carried
 110 by said frame.

Various slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope and hence I do not wish to restrict myself to the precise details herein set forth.
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Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is:—
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1. In firing mechanism for double barrel guns, the combination of a frame and a complete single trigger mechanism including devices for locking the firing mechanism against action, carried by said frame, whereby the said frame and its operative mechanism may be applied as a unit to a double trigger gun for converting the latter into a single trigger gun.
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2. In a firing mechanism for double bar-
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rel guns, the combination of a frame, single trigger alternating mechanism including two tumblers, each controlling a firing mechanism of one barrel, and means for retaining said tumblers against accidental movement, the said trigger mechanism as a whole and the retaining means being self contained in said frame, whereby the latter may be applied to a double barrel gun.

3. In a multi-barrel gun, the combination of a frame adapted to be inserted into a multi-barrel gun, complete single-trigger alternating mechanism carried by said frame and including alternating tumblers and spring actuated means cooperating with said tumblers to retain them in the position to which they may be moved.

4. In a multi-barrel gun, the combination with a slotted trigger plate, of a frame secured thereto and having a member lying in and closing the slot of the trigger plate and overlapping the latter at the ends, means for securing said frame in place, and a complete single trigger alternating mechanism carried by said frame for controlling the firing of the gun.

5. In a multi-barrel gun, the combination with the tang and a slotted trigger plate, of a frame secured to the tang and having a member closing the slot in the trigger plate and overlapping said slot at both ends, and a complete single trigger alternating mechanism carried by said frame and adapted to be applied bodily with said frame into the gun for controlling the firing thereof.

6. In a multi-barrel gun, the combination with single trigger alternating mechanism including a longitudinally movable plunger connected with the trigger, of a manually controlled bar having a recessed portion movable over said plunger, the said bar, when in one position adapted to engage said plunger for locking it against movement, and when in another position adapted to permit free movement of the plunger.

7. In a multi-barrel gun, the combination with a frame adapted to be inserted bodily into the gun, of single-trigger firing mechanism carried by said frame and adapted to be inserted therewith into the gun, said firing mechanism including a longitudinally movable plunger having a finger, posts on

said frame, a longitudinally-movable bar mounted in said posts over the plunger of the firing mechanism, and adapted to cooperate with the finger on the plunger to lock the firing mechanism, said bar having a recessed portion to receive said finger and permit the operation of the firing mechanism, and means for moving said bar.

8. In a multi-barrel gun, the combination with a frame adapted to be inserted into the gun, and single trigger firing mechanism carried by said frame, of posts on said frame, a locking bar for the firing mechanism, mounted in said posts, a spring-pressed pin mounted in one of said posts and adapted to engage said bar, and a slide connected with the locking bar for operating it.

9. In a double-barrel gun, the combination with a frame carrying single-trigger firing mechanism and adapted to be inserted bodily into the gun, of a locking bar for said firing mechanism also carried by said frame, a pin on said locking bar, a slide, and a shank on said slide and provided at its lower end with a slot to receive the pin on the locking bar.

10. In a double-barrel gun, the combination with single trigger firing mechanism including alternating tumblers connected together, of a pin on one of said tumblers, and a notched spring plate cooperating with said pin to retain said tumbler in the position to which they may be moved.

11. In a double barrel gun, the combination with a frame and single-trigger firing mechanism carried thereby, of a recoil bolt movable in said frame and having a slot for the passage of a member of said firing mechanism, said bolt having a recessed head, a pin passing through one end of the frame and the recess of the head of the recoil bolt, a nut in said recess and secured to said pin, and a spring bearing against said nut and the end of the recess in the head of the recoil bolt.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

ALFRED H. WORREST.

Witnesses:

WILLIAM H. KREADY,
B. C. KREADY.