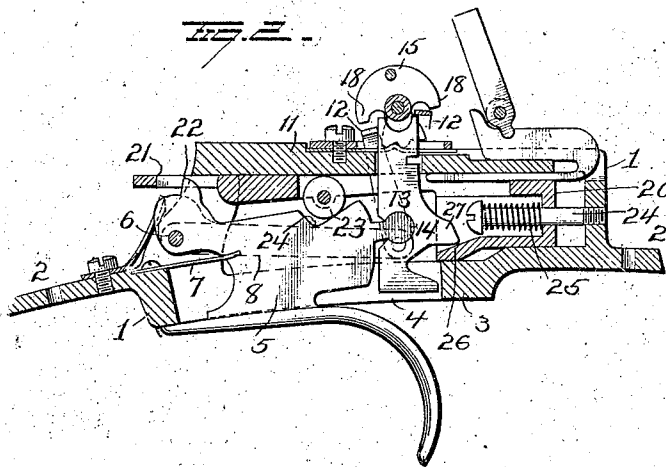
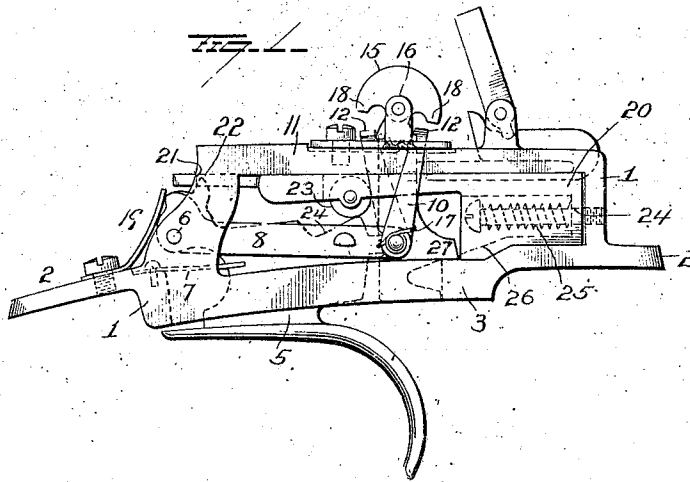


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SINGLE TRIGGER MECHANISM FOR DOUBLE BARREL GUNS.
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SINGLE-TRIGGER MECHANISM FOR DOUBLE-BARREL GUNS.

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Specification of Letters Patent.

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Application filed July 23, 1910. Serial No. 573,458.

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 Single-Trigger Mechanism for Double-Barrel Guns; 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.

My invention relates to an improvement in single trigger mechanisms for double barrel guns, and is designed particularly as an improvement on the construction disclosed in my pending application Serial Number 504,327, filed June 25th, 1909.

In single trigger double barrel guns, considerable difficulty has been experienced in preventing the recoil from discharging the second barrel, due to the rebound or an indifferent pull of the trigger. In my application above referred to I employ a bolt actuated by the recoil, for locking the firing mechanism during the recoil and rebound, but owing to the fact that the force and degree of recoil and trigger pull vary under different conditions of the load, it is possible under some conditions, to discharge a load without producing recoil or trigger pull sufficient to actuate the locking bolt.

The object therefore of the present invention, is to provide means, positively actuated, directly or indirectly, by the movement of the trigger, for locking the firing means against movement during recoil, or while the trigger is held back by the finger.

With this object in view my invention consists in the parts and combinations of parts as will be more fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of my improvement and Fig. 2 is a view in vertical longitudinal section of the same.

In the drawings I have shown only those parts of the mechanism that are essential to an understanding of this invention. This mechanism shown comprises a self contained trigger mechanism that can be used in new guns, and which can also be readily applied to any double trigger gun, and comprises a frame 1 provided at its ends with lugs 2 by which it is secured to the trigger plate 3 of the gun. The lower member 3 of the

frame is provided with a slot 4, for the passage through same of the trigger 5, the latter being pivotally mounted at its front end on the pin 6, and yieldingly held in its normal position by the spring 7. The pin 6 also pivotally supports two links 8, one on each side of the trigger, and each link 8 has a pin adapted to engage one of the sears for actuating the same. Trip arms 10 are pivotally attached at their lower ends to the links 8, and pass upwardly outside of the upper member 11 of the frame 1. Each trip arm 10 is provided at its upper end with a laterally projecting toe 12, one of which is located in front of the plunger 13 and the other in rear of the latter, and in position to be engaged by the upper end of said plunger, and be lifted thereby, thus lifting the links 8, which, by their movements, actuate the sears to release the hammers. This plunger 13 is connected to the trigger by the knuckle joint 14 as shown, and passes upwardly through top member 11 of frame 1, and terminates adjacent the double tumbler 15. This double tumbler is mounted to rock in the bracket arms 16, carried on the upper member 11 of the frame 1, and is rocked by the upward movements of the trip arms 10.

Normally the toe 12 of one of the trip arms, rests on the upper end of the plunger. When the plunger is elevated by a pull on the trigger 5, this arm 10, which is forced toward the plunger by a spring 17, will be elevated by the plunger until it contacts with one horn 18 of tumbler 15, and rocks the latter in a direction to throw the lower end of tumbler 15 out into the path of movement of said toe 12 so that during the descent of the trip arm the toe of the latter engages the cam surface of the tumbler and is moved out of the path of movement of the plunger 13, and is so held until the tumbler has been again shifted. In Fig. 1, the toe 12 of the arm 10, at the left or near side of the mechanism, is shown resting on the top of the plunger, while the trip arm to the right or far side, is shown held out of the path of movement of the plunger by the lower cam end of the tumbler 15. If, with the parts in the position shown in Fig. 1, the trigger should be pulled, the trip arm on the near side would be raised until it contacts with, and shifts the tumbler from the position shown in Fig. 1, to that shown in Fig. 2. By now releasing the trigger the

plunger descends, and the toe 12 of the trip arm on the near side engages the cam face of the tumbler and is forced by the latter rearwardly and held out of the path of movement of the plunger. This movement of the tumbler, permits the toe of the other trip arm to now move into a position to be engaged and elevated by the plunger at the next upward movement of the latter. By this arrangement, the links 8 are alternately raised to actuate their respective sears, but the construction is such that only one link can be actuated at a time, consequently only one hammer can be released by one pull of the trigger. The two links are yieldingly retained in the normal depressed position by the springs 19.

20 is the locking bolt for locking the plunger 13 against downward movement until after the trigger has been released, and thus prevent an involuntary pull on the trigger caused by the recoil, from prematurely discharging the charge in the second barrel. This locking bolt 20 is mounted to slide in the frame 1, and is provided at its front end with a slot 21, the front wall of which is engaged by the shoulder 22 formed at the front end of the trigger 5 above the axis of the latter, and is also provided with the roller 23 which is designed to move on the inclined seat 24 formed in the top of the trigger. From the foregoing it will be seen that during the entire movement of the trigger, the shoulder 22 engaging the end wall of the slot in the locking bolt 20, pulls the latter forwardly, and this forward movement of the locking block is continued by the engagement of the inclined surface 24 of the trigger with the roller 23, so that by the time the trigger has been moved sufficiently to actuate one sear, the locking block 20 will have been moved its full throw forward. The rear end of the locking block 20 is recessed to receive the screw 24^a carrying the spring 25 which bears at one end against the block 20 and tends to force same back to its normal position which is shown in Fig. 1, and is also provided with the recess 26 adapted to receive the rearwardly projecting toe 27 on the plunger 13, and thus prevent the plunger from descending while the block is in its locking position, which position is assumed by the block before firing, and before recoil. If during the recoil, the trigger should be carried away from the firing finger and thus release the block, the movement of the gun in its recoil will be so much faster than the movement of the block 20, that the latter will still be in a position to lock the plunger against accidental movement, at the end of the recoil and thus absolutely prevent accidental firing.

From the foregoing it will be seen that the locking block is actuated positively by

the trigger to lock the plunger after the first fire, and holds it so locked until after recoil.

It is evident that many slight changes might be resorted to in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention; hence I would have it understood that I do not wish to confine myself to the exact construction and arrangement of parts shown and described, but,—

Having fully described my invention what I claim as new and desire to secure by Letters-Patent, is,—

1. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, of a sliding bolt for locking the firing means after the latter has been actuated by the trigger to discharge one barrel, the said locking bolt being disconnected from the trigger and free to move independently of the trigger, the said bolt being positively moved to its locking position when the trigger is pulled.

2. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, of a bolt for locking the firing means after the latter has been actuated by the trigger to discharge one barrel, the said bolt being free of the trigger and having movement independently of the trigger, and means whereby the bolt will be positively moved to its locking position by the trigger.

3. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, of a locking bolt having a sliding connection with the trigger, but free to move independently of said trigger, the said sliding connection being such that the bolt will be moved only by the trigger, into position to lock the firing means during recoil.

4. In a double barrel single trigger gun, the combination with a trigger, and a sliding locking bolt, one of said parts having an inclined surface and the other a roller moving in contact with said inclined surface whereby when the trigger is pulled, the bolt will be moved to a position to prevent the return of the trigger until the latter has been released.

5. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, the said trigger having a shoulder, of a sliding locking bolt having a shoulder engaged by the shoulder on the trigger, whereby the said bolt will be moved into position to block the return of the firing means to normal position until the trigger has been released.

6. In a double barrel single trigger gun, the combination with a trigger and firing means the trigger having an inclined surface, of a sliding locking bolt having a

roller adapted to be engaged by the inclined surface on the trigger, whereby when the trigger is pulled, the bolt will be moved to a position to prevent the return of the firing means to normal position until the trigger has been released.

7. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, the said trigger having a shoulder and inclined surface, of a sliding locking bolt having a shoulder to engage the shoulder on the trigger and a

roller to engage said inclined surface, whereby when the trigger is pulled the bolt will be moved to a position to prevent the return of the firing means to normal position until the trigger has been released. 15

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

ALFRED H. WORREST.

Witnesses:

S. Z. MOORE,

G. K. BIEMESDERFER.