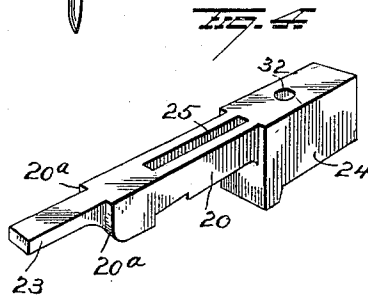
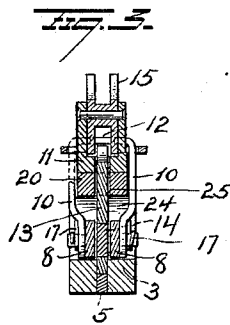
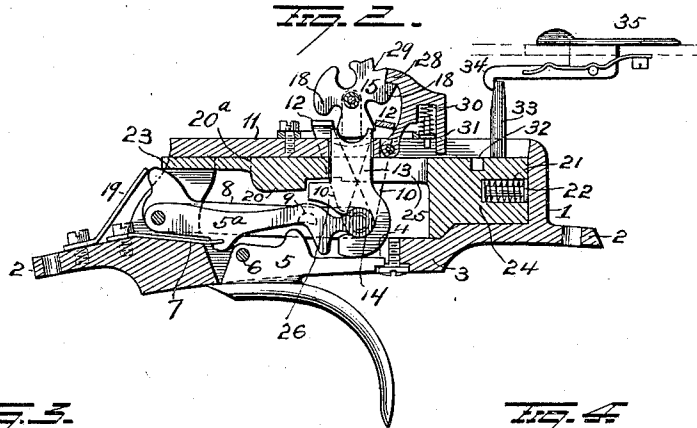
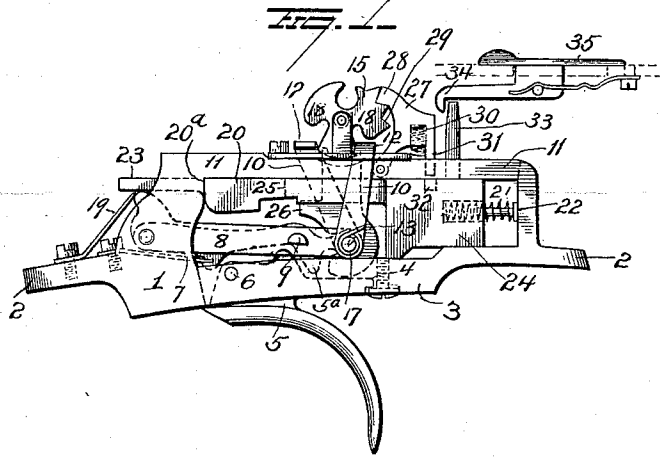


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SINGLE TRIGGER MECHANISM FOR DOUBLE BARREL GUNS.
APPLICATION FILED OCT 16, 1911.

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SINGLE-TRIGGER MECHANISM FOR DOUBLE-BARREL GUNS.

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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, a citizen of the United States, residing at 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 mechanism for double barrel guns, the object being to provide means for preventing discharge of the second barrel, during the rebound and after the recoil from the discharge of the first barrel.

Heretofore means have been provided for preventing premature discharge during the recoil, but so far as I am aware, no provision has been made for locking the firing mechanism after the recoil and during the rebound, and my invention therefore consists broadly in means for locking the firing mechanism against discharge during the rebound.

My invention further consists in the parts and combinations of parts as will be more fully explained and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation of my improvement, showing the firing mechanism unlocked. Fig. 2 is a view in section showing the firing mechanism locked. Fig. 3 is a view in transverse vertical section through the mechanism, and Fig. 4 is a perspective view of the sliding locking bolt.

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 barrel gun, and consists of a frame 1 provided at its ends with lugs 2 by which it is secured to the trigger plate 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 normal position by the spring 7 engaging the lifter 5^a. The pin 6 also pivotally supports two links 8, one on each side of the lifter 5^a, and each link 8, has a lug 9 projecting at

the side, 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 adapted 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 hammer. This plunger 13 is connected to the lifter 5^a by the knuckle joint 14, as shown, and passes upwardly through top member 11 of the frame 1, and terminates adjacent to the double tumbler 15. This double tumbler is mounted to rock 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 10 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 the double 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 said trip arm 10, the toe of the latter engages a cam surface on the lower end of the tumbler 15, 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 of the arm 10, at the rear of the plunger is shown resting on the top of the plunger, while the trip arm to the front of the plunger, is shown held out of the path of movement of the plunger by the lower cam end of tumbler 15. If, with the part in the position shown in Fig. 1, the trigger should be pulled, the trip arm at the rear 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 13 descends, and the toe 12 of the trip arm at the rear engages the cam face of the tumbler and is forced out of the path of movement of the plunger. This movement of the tumbler permits the other trip arm to move so as to bring its toe into a position to be engaged

and elevated by the plunger at the next upward movement of the latter. By this arrangement the links 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 8 are normally retained in depressed position by the springs 19.

20 is the locking bolt for locking the plunger 13 against upward movement until after the gun has recovered from the rebound, and thus prevent an involuntary pull on the trigger, caused by the contact of the trigger with the firing finger during the rebound, from prematurely discharging the charge in the second barrel. This locking bolt 20 is mounted to slide in the frame 1, and normally rests with its shoulders 20^a which are adjacent the front end of the bolt, against the frame 1, so that there can be no forward sliding movement of the bolt when the latter is in its normal position, and it is yieldingly held in such normal position by the spring 21, embracing the pin 22 intermediate the rear end of bolt 20 and the rear end of frame 1. This pin 22 is carried by frame 1, and together with the front end 23 of bolt 20, which passes through the slot in the front end of frame 1, guides the bolt in its movements and holds the same in position with the frame. From the foregoing it will be seen that the bolt is free to slide rearwardly after overcoming the pressure of spring 21, and that the said spring tends to force the bolt forwardly to its normal position. This bolt is provided with an enlarged or weighted rear end 24, and with a slot 25 in advance of said weighted end through which the plunger 13 passes. This plunger is provided on its front edge with a forwardly projecting toe 26, which when the parts are in their normal positions, rests in a plane below that portion of the bolt 20 adjacent the plunger 13. The slot 25 in the bolt is of a length sufficient to receive the toe 26 on the plunger, so that when the trigger is pulled, and the plunger raised, the toe 26 passes up into the slot 25 in the bolt, and when the parts are in such position, the bolt will be prevented from any backward movement by the toe. When therefore the trigger is pulled the plunger will be raised and one barrel discharged. The bolt 20 will however be locked by the toe 26 against any movement until the trigger is released from the firing finger by the recoil of the gun. The tendency of the bolt 20 during the recoil would be to remain stationary, but as its front end is in contact with frame 1, it is moved with the parts during recoil. During the rebound, or forward movement of the gun after recoil, the weighted bolt 20

remains stationary or tends to, while the other parts rebound, hence the toe 26 on plunger 13 is moved from under the slot 25 in the bolt, and rests under the bolt, so that when the trigger is moved forward into contact with the firing finger during the rebound, the plunger will be locked against the possibility of movement until the parts come to a rest, thus preventing the premature discharge of the second barrel. After the rebound, or as the gun comes to a rest, the spring 21 forces the bolt 20 forwardly to its normal position thus releasing the plunger 13 and permitting the latter to be actuated by the trigger.

In order to prevent the possibility of any movement of the parts of the firing mechanism prior to the finish of the rebound after recoil, I have provided a locking dog 27 pivoted to the frame 1 and provided with a tooth 28 adapted to engage the notches 29 in the tumbler 15. This dog 27 is normally held in contact with the tumbler by the spring 30, and is provided with a lip 31 which latter passes through the top member of frame 1 and normally rests over and in the plane of a recess 32 in the top surface of bolt 20. When the parts are in normal positions the recess 32 is under the lip 31 of the dog 27, and the movements of the tumbler, when actuated by the trip arms 10, simply shifts the dog rearwardly, the recess 32 permitting of the necessary movement of the dog. When however the bolt is in its rearward position, as it is while the gun is moving forwardly during the rebound, the portion of the bolt in front of recess 32 is under the lip 31 as shown in Fig. 2, thus locking the dog against movement and preventing any movement of the tumbler 15, and so long as the tumbler remains locked, there can be no positive movement of any parts of the firing mechanism.

In order to put the gun on safety, or lock the parts against accidental discharge while handling or carrying the gun, I provide the sliding locking bolt with an upwardly projecting pin 33 which is engaged by the hook 34 on the safety slide 35, which latter may be of the ordinary construction. By simply pulling slide 35 rearwardly, the hook 34 engages the upper end of pin 33 and pulls the locking bolt back to the position shown in Fig. 2 thus locking the firing mechanism against movement.

With this improvement the sliding or locking bolt locks the trigger in its normal position against an involuntary pull or movement by the forward rebound of the gun after discharge and 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

5 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 means actuated by the rebound of the gun after recoil for locking the firing means of both barrels during the rebound.

2. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, of a sliding locking bolt actuated by the rebound of the gun after recoil for locking the firing means of both barrels during the rebound.

3. In a double barrel, single trigger gun, the combination with a trigger and firing means actuated thereby, of a sliding locking bolt normally held in its forward position by a spring and adapted when in its rearward position to lock the firing means of both barrels against movement.

4. In a double barrel, single trigger gun, the combination with a trigger and firing means actuated thereby, of a sliding locking bolt normally held in its forward position by a spring, and adapted when in its rearward position to engage a projection on the firing mechanism of both barrels and lock the latter against movement.

5. In a double barrel single trigger gun, the combination with a trigger and firing

means actuated thereby, of a sliding locking bolt actuated by the rebound of the gun, after recoil, for locking the firing means during the rebound, and a second safety lock for preventing any movement of the firing means during the time the sliding locking bolt is out of its normal position.

6. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, the said firing means including a rocking tumbler, of a sliding locking bolt actuated by the rebound of the gun after recoil for locking the firing means during the rebound, and a pivoted dog engaging said tumbler, the said dog being locked against movement by the bolt during the whole of the time the latter is out of its normal position.

7. In a double barrel single trigger gun, the combination with a trigger and firing means actuated thereby, of a sliding locking block normally held in its forward position by a spring and actuated by the rebound of the gun after recoil, for locking the firing means during the rebound, a pin projecting from said block and a safety slide engaging said pin whereby the sliding block may be manually moved to its locking position.

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

ALFRED H. WORREST.

Witnesses:

FLORENCE I. MENTZER,
HECTOR G. STONE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."