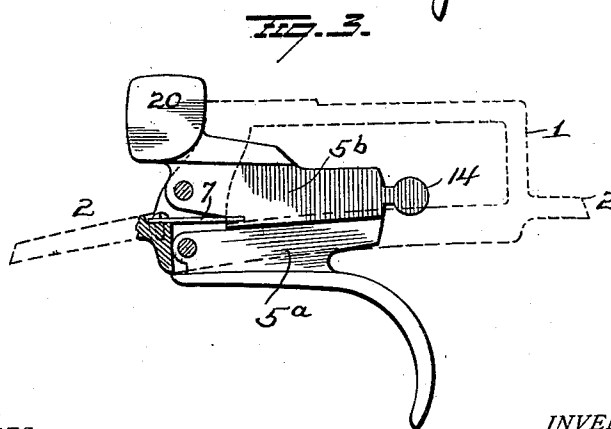
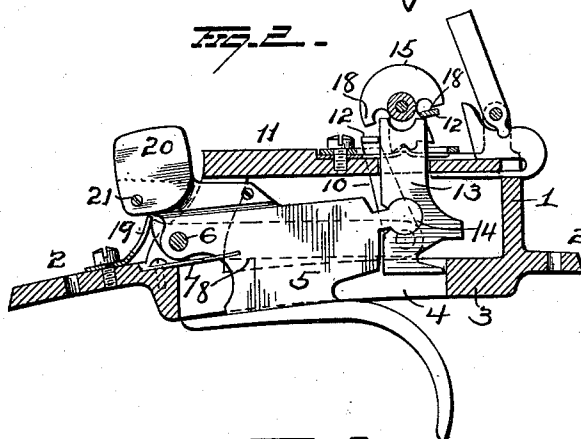
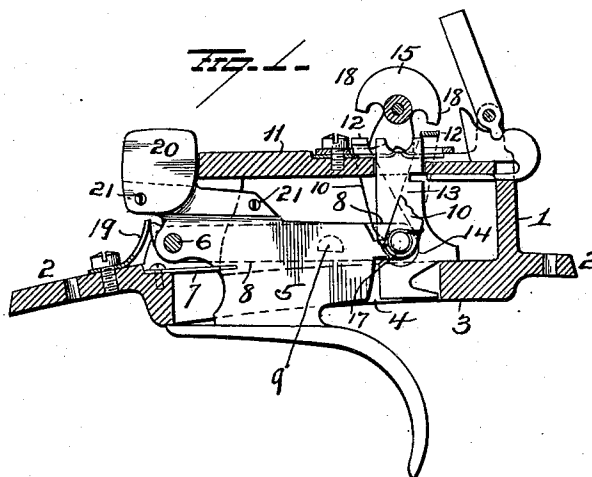


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 COUNTERWEIGHTED SINGLE TRIGGER FOR DOUBLE BARREL GUNS.
 APPLICATION FILED JULY 23, 1910.

1,013,255.

Patented Jan. 2, 1912.



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COUNTERWEIGHTED SINGLE TRIGGER FOR DOUBLE-BARREL GUNS.

1,013,255.

Specification of Letters Patent.

Patented Jan. 2, 1912.

Application filed July 23, 1910. Serial No. 573,459.

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 Counterweighted Single Triggers 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, which, when the trigger is pulled and the load discharged, will operate by gravity assisted by any recoil however slight to make the working parts of the firing mechanism make their full travel and hold them there until after the completion of the recoil, and thus absolutely safeguard the second barrel from accidental discharge, or balk on next shot to be fired.

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 section of the frame and side elevation of the firing means; Fig. 2 is a similar view, with the link on the near side removed, and Fig. 3 is a view of a modified form.

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 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 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 9 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 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 trip arm, 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 horn 18 of the tumbler 15 and shifts the latter 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 10 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, (the one on the far side) to now move over into a position to be engaged by the plunger as the latter resumes its normal position and be 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 their normal depressed position by the springs 19.

The parts thus far described are substantially identical with those disclosed in my application previously referred to.

The present invention consists in providing the trigger 5, with a counterweight 20 so located with relation to the axis of the trigger, that when the trigger is pulled and lifted, the counterweight will be moved to a position where its weight will tend to hold the trigger elevated, and this position will be maintained so long as the finger is pressing against the trigger, and during the recoil, the movement of the gun tends to force the counterweight forwardly, and thus hold the plunger in its elevated position and preventing its return to a position where it can be engaged by the toe of the trip lever which actuates the sear of the other hammer. This counterweight may be formed integral with the trigger, but I prefer to make it separate and secure it by screws or rivets 21, to an upwardly projecting thin flange at the upper edge of the trigger. This counterweight rests in front of the upper member 11 of frame 1 and in the plane of the pivot 6, and while the major part of its weight may be in front of the pivot 6, the weight of the trigger and parts carried thereby, to the rear of the pivot 6, and the spring 7, are sufficient to overbalance the counterweight and thus maintain the trigger normally in its lowered position. When the trigger is pulled, the counterweight will be moved into a plane in front of the pivot and thus oppose by its entire weight, the weight of the trigger and parts carried thereby and also the spring. The recoil will also force or hold counterweight 20 in its forward position as shown

in Fig. 2, and these two forces, to wit; the counterweight and recoil will be amply sufficient to hold the trigger elevated during recoil, and thus prevent the descent of the plunger prior to the finish of the recoil. The weight of the trigger and parts carried thereby outweigh the counterweight, but as the movement of the gun during recoil is much more rapid than the movement of the trigger during its descent, and as the counterweight is assisted by the recoil, it will be impossible for the parts to return to position for firing the second barrel during recoil, hence the danger of accidental discharge of the second barrel due to the rebound of the trigger against the firing finger during recoil is entirely overcome.

In the construction shown in Fig. 3, the trigger is made in two sections 5^a and 5^b, each having an independent pivot, the section 5^b resting loosely on the section 5^a so as to be positively moved upwardly by the latter. The part 5^b carries the counterweight, which is shown as integral with said part. With this construction the counterweight acts precisely as in the other case, but is not a part of the trigger proper and is relieved of the weight of the trigger, consequently its return to normal position after recoil, will be slower than in the construction wherein the trigger and counterweight are constructed in a single piece.

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 pivoted adjacent its front end, and a vertically movable plunger having a loose connection with the rear end of said trigger, of a counterweight carried by said trigger adjacent to the pivot of the latter and so placed with relation to said pivot, that when the trigger is operated to elevate the plunger, the counterweight will be shifted to a plane in front of the pivot and operate to hold the plunger elevated during the recoil.

2. In a double barrel single trigger gun, the combination with a two part trigger, the two parts being located one above the other and in contact and each having an independent pivot near its front end, of a vertically movable plunger for actuating the firing means, the said plunger having a loose connection with the rear end of the upper part of said trigger.

3. In a double barrel single trigger gun,

the combination with a two part trigger, each part having an independent pivot, the two parts being located one above the other and in contact, and the upper part counter-
5 weighted adjacent its pivot, of firing means connected to and actuated by the upper part of said trigger.

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

ALFRED H. WORREST.

Witnesses:

G. K. BIEMESDERFER,
S. Z. MOORE.

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