

J. D. RUSS.  
SINGLE TRIGGER MECHANISM FOR DOUBLE BARREL GUNS.  
APPLICATION FILED NOV. 25, 1907.

942,794.

Patented Dec. 7, 1909.  
2 SHEETS—SHEET 1.

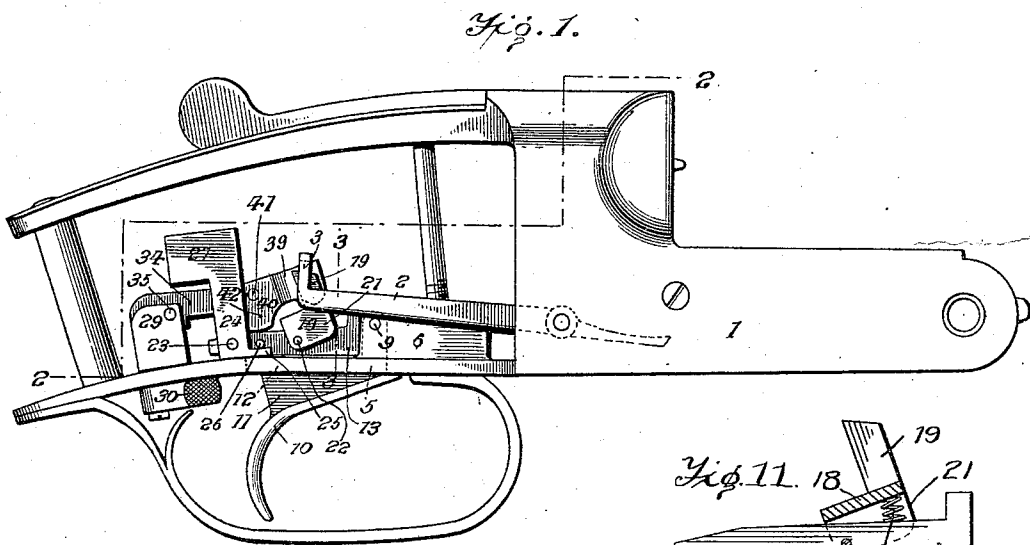


Fig. 2.

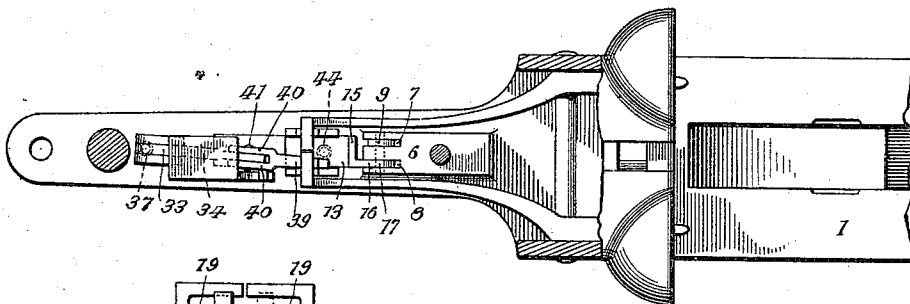


Fig. 3.

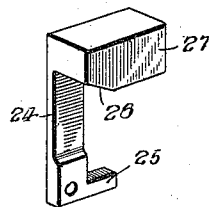
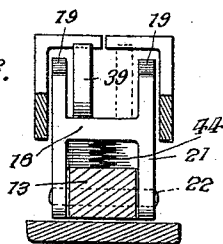


Fig. 5.

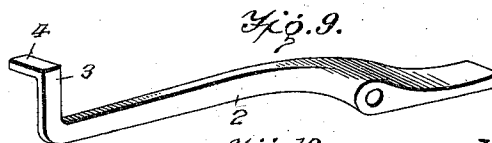


Fig. 7.

Fig. 8.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 4.

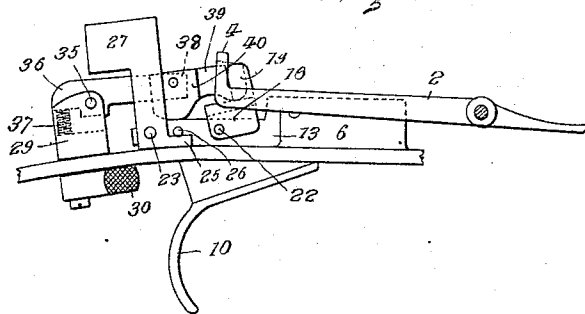


Fig. 5.

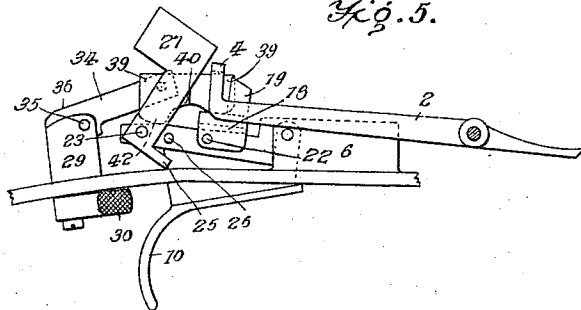


Fig. 6.

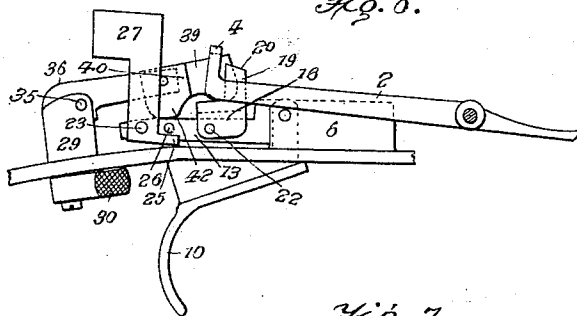
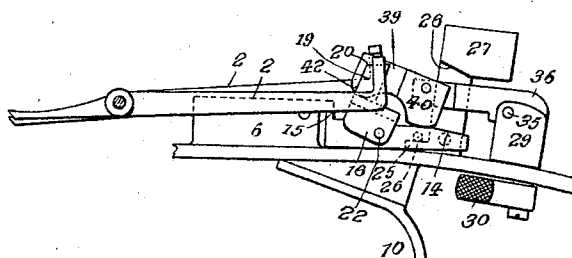


Fig. 7.



WITNESSES

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# UNITED STATES PATENT OFFICE.

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SINGLE-TRIGGER MECHANISM FOR DOUBLE-BARREL GUNS.

942,794.

Specification of Letters Patent.

Patented Dec. 7, 1909.

Application filed November 25, 1907. Serial No. 403,742.

*To all whom it may concern:*

Be it known that I, JOHN D. RUSS, a citizen of the United States, residing at Spencer, in the county of Roane and State of West Virginia, 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.

This invention relates to improvements in single trigger mechanism for double barrel guns, and has for its object to provide a mechanism which is simple in its operation and sure in its action.

A further object of the invention is to provide a mechanism of the character set forth which shall include the smallest possible number of parts, thereby enhancing its value both from a standpoint of manufacture and of liability of getting out of order.

A further object of the invention is to provide a mechanism of this character, whereby either of the two barrels may be actuated to cause the initial firing.

A further object is to provide a mechanism in which, after the initial barrel is fired, certain instrumentalities are brought into play to effectually prevent a premature firing of the second barrel, usually caused by the involuntary pull upon the trigger during the rebound of the gun, which follows the recoil caused by each discharge.

A further object of the invention is to provide a selective sear actuating means which may be shifted either before or after cocking of the gun to operate either barrel prior to the other.

A further object is to provide a rebound operated device which shall actuate the several parts in the same manner as when moved by the trigger, but before they have resumed a position which will enable them to trip the second sear, thus preventing a premature second discharge.

Other objects will be made apparent from the following specification, when read in conjunction with the accompanying drawings, in which—

Figure 1 is a side elevation of the parts

in uncocked position. Fig. 2 is a top plan taken on the line 2—2 of Fig. 1. Fig. 3 is a section on the line 3—3 of Fig. 1. Fig. 4 is a side elevation of the parts in cocked position. Fig. 5 is a similar view showing the parts in the position of releasing the first sear. Fig. 6 is a similar view showing the position of the parts upon the initial movement of the trigger, such figure being the step from the position of Fig. 4 to that of Fig. 5. Fig. 7 is a similar view of the parts after one sear is released. Fig. 8 is a detailed view of the weighted block and the bar carrying the same. Fig. 9 is a detailed view of one of the sears. Fig. 10 is a detail view of the means for locking the sear-selecting lever. Fig. 11 is a detail view, showing the pawl-carrying block partly in section, and the manner of supporting the same.

Referring more specifically to the drawings, wherein like reference characters refer to corresponding parts in the several views, 1 designates the frame of the usual double-barrel gun, in the sides of which are pivoted the hammer holding sears 2, 2. The sears 2, 2 are provided at their rear ends with the vertical extensions 3, 3, which are in turn formed with offset portions 4, 4 arranged to extend over and in the path of a sear-tripping pawl hereinafter to be referred to.

Secured to the trigger plate 5 is a stationary block 6, provided with bifurcations 7 and 8. Pivotaly secured to the block 6 in the bifurcation 7 and at the point 9 is the trigger 10 having a vertically extending rib 11 adapted to pass through the slot 12 in the trigger plate 5.

13 is a movable block arranged to be engaged by the rib 11 and tapered toward the rear end at the point 14. The block 13 carries a vertical extension 15 at its front end. Projecting forwardly from the extension 15 is an integral plate 16 extending into the bifurcation 8 and constituting the means whereby block 13 is pivoted at point 17.

18 is a pawl carrying block having integral sear actuating pawls 19, 19 extending upwardly from each side thereof and arranged to actuate both sears, said pawls being beveled as indicated at 20, 20. Projecting downwardly from the pawl-carrying

block 18 are extensions 21, 21 embracing the block 13 on each side and pivoted thereto at 22.

Pivoted to one side of the rear end of block 13 at 23 is a bar 24 provided with a forwardly projecting lug 25, arranged to engage a pin 26 on the block 13 when in normal position. The bar 24 carries at its top the weighted block 27 which extends laterally substantially the width of the block 13 and rearwardly a proportionate distance, the block 27 being beveled off on its lower edge at 28 for a purpose hereinafter to be disclosed.

Rotatably mounted upon and extending through the trigger plate 5 is the post 29 provided on the under side of the trigger plate with a shifting thumb piece 30. The thumb piece 30 is cut away at 31 to accommodate in its lateral movement a stationary lug 32 on the trigger plate 5. 32<sup>a</sup> is a spring detent on the thumb piece arranged to engage on either side of the lug 32 and hold the post 29 in either of its possible positions, whereby to determine which hammer shall be actuated first, in a manner hereinafter to be set forth.

The upper part of the post 29 is bifurcated at 33 and within said bifurcated portion, lever 34 is pivoted at 35. Arranged in the post 29, and beneath the rear end 36 of the lever 34 is a spring 37 which operates to force the rear end 36 of the lever upwardly, and the front end 38 downwardly, for a purpose later to be made clear.

39 is the selective sear actuating pawl which has rearwardly and downwardly extending arms 40, 40. The arms 40 embrace the front end of the lever 34 at both sides thereof and are pivoted thereto at 41. The downwardly projecting parts of said arms are indicated at 42, 42, such lower portions being arranged to abut the upper surface of the block 13 and to be moved vertically thereby. The sear actuating pawl 39 is positioned intermediate the sear actuating pawls 19, 19 and while the position of pawls 19, 19 is the same at all times as far as lateral movement is concerned, pawl 39 may be shifted from one side to the other to operate either the right or left hand sear. This shifting is accomplished by turning the post 29, as before stated, which carries the lever 34 to which in turn is pivoted the pawl 39.

A spring 44 is positioned between the block 13 and pawl-carrying block 18 at a point forwardly of the pivot point 22, and operated to normally force the block 18 to the position shown in Fig. 1.

Upon operating the trigger 10, the block 13 is moved upwardly from the position in Fig. 4, thereby forcing vertically the arms 42 and in turn the pawl 39 against the action of spring 37. Before the pawl 39 is moved sufficiently to actuate the particular

sear selected to be initially released, the pawl-carrying block 18 has been thrown forward on its pivot 22 to carry the pawls out from under the offset portions of the sears. The parts then occupy the position shown in Fig. 5. Further movement of the trigger operates to give the pawl 39 an increased vertical movement sufficient to actuate the sear under whose offset portion the pawl has been adjusted. Upon release of the trigger, the parts resume the position shown in Fig. 7, where the pawls 19 are each beneath their respective sears.

In the initial position with both hammers cocked, as shown in Fig. 4, the sears are both in lowered position, one of them engaging pawl 39, and holding the same down against the tendency of spring 44 to raise it, through block 18, and pivot 41, as in Fig. 7. In this position of the parts (Fig. 7), the bottom of the front portion of pawl 39 engages the block 18, rocking it forwardly to such an extent that only a slight additional movement is necessary to take it entirely out of the path of the sears. As soon as the sear, under which pawl 39 is positioned, is released, the pawl is permitted to rise under pressure of 44 acting through the block 18, which rocks rearwardly, forcing the pawl 39 upward. The parts are then ready for another movement of the trigger, as shown in Fig. 7, and the second operation of the trigger forces up the block 13 and pawl-carrying block 18, to release the other sear, through one of the pawls 19.

In order to prevent premature firing of the second barrel, so frequently caused by the involuntary pull on the trigger upon rebound of the gun, due to the recoil after the initial discharge, I have provided the weighted block 27 which is brought into action immediately after the initial discharge. The recoil of the gun tends to throw this block forward and thus rock the bar 24 forwardly on its pivot 23 before it has resumed its normal position. By reason of the front end of the lug 25 engaging the trigger plate as the bar is rocked, the pivotal point 23 is moved vertically carrying the block 13 and in turn the pawl carrying block 18 in the same manner as when operated by the trigger. Simultaneously with the vertical movement of the block 18, there is a forward movement of the same on the pivot 22 sufficient to move the pawls 19, 19 out from under the offset portions of the sears, so that if there is a further vertical movement due to involuntary pull on the trigger, the pawls 19, 19 merely move vertically in front of the offset portions of the sears, and no release is effected as shown in Fig. 5. The several parts including block 27, are returned to normal position, after rebound, by the spring 37, acting through lever 34 and the downwardly projecting arms 42 of

pawl 39. In this position of the parts, will be seen the function of the beveled or cut away portion 28 of the block 27, the same permitting said block to be thrown forwardly to permit the proper operation of the parts, for if it were not for the beveled portion 28, the block 27 would be prevented from assuming the position of Fig. 5, owing to the upper surface of pawl 39, against which the beveled portion abuts when in its forward position.

Briefly the operation is as follows: After the hammers are cocked, in any manner according to the construction of the gun, the thumb piece 30 is manipulated to move the sear actuating pawl 39 under one or the other of the offset portions of the sears, according to which barrel it is desired to discharge first. The trigger is then pulled, its initial movement causing the pawls 19, 19 to be moved upwardly, and forwardly sufficiently to take them from beneath the offset portion of the sears, while further movement of the trigger moves the pawl 39 sufficiently high to engage the selected sear and actuate the same. The parts then take the position shown in Fig. 7, when upon pulling the trigger again, the pawls 19, 19 are moved vertically to engage the offset portion of the sears, and as one pawl is positioned beneath each sear, it is obvious that the unreleased sear is now operated, no matter which it may be. Firing of the second barrel, previous to a second voluntary operation of the trigger, is obviated in the manner previously referred to.

In the appended claims, I make reference to the pawl-carrying block 18 with its pawls 19, 19 as a "common sear actuating means" and to the selective sear actuating pawl 39 as a "selective sear actuating means".

It is to be understood that various changes may be employed and modifications made of the structure as disclosed, without departing from the spirit of the invention.

What I desire to secure by Letters Patent, and claim, is:

1. A single trigger mechanism for multi-barrel guns including a common sear-actuating means and a selective sear-actuating means both normally in firing position, and means whereby initial movement of the trigger forces said common sear-actuating means out of operative position, and further movement causes said selective-sear-actuating means to operate.

2. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear actuating means cooperating therewith and instrumentalities for moving said common sear-actuating means out of operative position immediately previous to the final actuating movement of said selective sear-actuating means.

3. A single trigger mechanism for multi-

barrel guns including a common sear-actuating means, a selective sear-actuating means, and instrumentalities for automatically moving said common sear-actuating means out of operative position and operating said selective sear-actuating means immediately thereafter.

4. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means, and instrumentalities for moving said common sear-actuating means forwardly away from firing position and said selective sear-actuating means upwardly to release one sear.

5. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means, and instrumentalities for moving said common sear-actuating means upwardly and forwardly away from firing position and said selective sear-actuating means upwardly to release one sear.

6. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means, and instrumentalities for automatically moving said common sear-actuating means in a direction away from said selective sear-actuating means immediately previous to release of a sear by said selective sear-actuating means.

7. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means, and instrumentalities for moving said common sear-actuating means out of operative position, such movement of the common sear-actuating means being immediately prior to the operation of the selective sear-actuating means.

8. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means positioned above said common sear-actuating means, and instrumentalities for moving said common sear-actuating means in a direction away from said selective sear-actuating means immediately previous to the release of a sear by said selective sear-actuating means.

9. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means positioned above said common sear-actuating means, and instrumentalities for moving said common sear-actuating means out of operative position immediately previous to the release of a sear by said selective sear-actuating means.

10. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means positioned above said common sear-actuating means, both normally in firing position,

and means whereby initial movement of the trigger forces said common sear-actuating means out of operative position, and further movement causes said selective sear-actuating means to operate.

11. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means positioned above said common sear-actuating means and coöperating therewith, and instrumentalities for moving said common sear-actuating means out of operative position immediately previous to the final actuating movement of said selective sear-actuating means.

12. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means positioned above said common sear-actuating means, and instrumentalities for moving said common sear-actuating means out of operative position and operating said selective sear-actuating means immediately thereafter.

13. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means positioned above said common sear-actuating means, and instrumentalities for moving said common sear-actuating means forwardly and said selective sear-actuating means upwardly, immediately thereafter.

14. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means positioned above said common sear-actuating means, and instrumentalities for moving said common sear-actuating means out of operative position, such movement of the common sear-actuating means being immediately prior to the operation of the selective sear-actuating means.

15. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means and recoil-operated means whereby to initially force said common sear-actuating means forwardly out of operative position.

16. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means and recoil operated means for moving said common sear-actuating means forwardly.

17. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means and recoil operated means for moving said common sear-actuating means upwardly.

18. A single trigger mechanism for multi-barrel guns including a common sear-actuating means, a selective sear-actuating means and recoil operated means for moving said common sear-actuating means upwardly and forwardly.

19. A single trigger mechanism for multi-

barrel guns including a common sear-actuating means, a selective sear-actuating means and recoil operated means for moving said common sear-actuating means forwardly away from said selective sear-actuating means.

20. In a single trigger mechanism for multi-barrel guns, the combination with a plurality of sears, an integral common-sear-actuating instrumentality positioned to engage all of said sears, a selective sear-actuating means supported upon the common-sear-actuating instrumentality, and means whereby said selective sear-actuating means may be caused to engage any one of said sears.

21. In a single trigger mechanism for multi-barrel guns, the combination with a plurality of sears, an integral sear-actuating instrumentality carrying a plurality of sear-actuating pawls, and a selective sear-actuating means comprising a pawl positioned and movable laterally between the pawls of said common sear-actuating means.

22. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, an integral sear-actuating instrumentality carrying pawls adapted to engage both of said sears, and a selective sear-actuating means positioned between the pawls of said common sear-actuating means.

23. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, an integral sear-actuating instrumentality carrying pawls adapted to engage both of said sears, and a selective sear-actuating means comprising a pawl positioned above said common sear-actuating means and between the pawls thereof.

24. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a common sear-actuating means comprising a block, pawls extending upwardly therefrom, and a selective sear-actuating means comprising a pawl positioned upon said block and between the pawls thereof.

25. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a common sear-actuating means comprising a block, pawls extending vertically therefrom, a selective sear-actuating means arranged between the pawls of said common sear-actuating means, and instrumentalities for moving said common sear-actuating means forwardly.

26. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a common sear-actuating means comprising a block, pawls extending vertically therefrom, a selective sear-actuating means arranged between the pawls of said common sear-actuating means, and instrumentalities for moving said common sear-actuating means forwardly and simul-

taneously with the vertical movement of said selective sear-actuating means.

27. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a common sear-actuating means comprising a block, pawls extending vertically therefrom, a selective sear-actuating means arranged between the pawls of said common sear-actuating means, and recoil-operated instrumentalities for moving said common sear-actuating means forwardly.

28. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a common sear-actuating means comprising a block, pawls extending vertically therefrom, a selective sear-actuating means arranged between the pawls of said common sear-actuating means, and recoil-operated instrumentalities for moving said common sear-actuating means forwardly and simultaneously with the vertical movement of said selective sear-actuating means.

29. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a common sear-actuating means carrying pawls adapted to engage both of said sears, and a selective sear-actuating means comprising a pawl positioned above said common sear-actuating means and between the pawls thereof and means for moving said common sear-actuating means in a direction away from said selective sear-actuating means.

30. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a common sear-actuating means comprising a block, pawls extending upwardly therefrom, and a selective sear-actuating means comprising a pawl positioned upon said block and between the pawls thereof and recoil operated means for moving said common sear-actuating means in a direction away from said selective sear-actuating means.

31. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a block pivotally mounted upon the trigger plate of the gun, a common sear-actuating means pivotally secured to said block, and selective sear-actuating means adapted to be engaged by said block.

32. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a block pivotally mounted upon the trigger plate of the gun, a pawl-carrying block pivotally secured thereto, pawls extending upwardly from said pawl-carrying block, a laterally movable pawl positioned between the aforesaid pawls, and instrumentalities for moving said pawl carrying block forwardly and simultaneously with the vertical movement of said laterally shiftable pawl.

33. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a block pivotally mounted upon the trigger plate of the gun, a pawl-carrying block pivotally secured thereto, pawls extending upwardly from said pawl-carrying block, a laterally movable pawl positioned between the aforesaid pawls and provided with an extension abutting said first mentioned block, and recoil-operated means connected to said first mentioned block for raising the same.

34. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a block pivotally mounted upon the trigger plate of the gun, a pawl-carrying block pivotally secured thereto, pawls extending upwardly from said pawl-carrying block, a rotatable post mounted upon the trigger plate, a lever pivotally secured to said post, a pawl pivotally carried by said lever, said pawl being positioned between the aforesaid pawls of the pawl-carrying block and having an extension abutting said first mentioned block, and means for raising said first mentioned block.

35. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a block pivotally mounted upon the trigger plate of the gun, a pawl-carrying block pivotally secured thereto, pawls extending upwardly from said pawl-carrying block, a rotatable post mounted upon the trigger plate, a lever pivotally secured to said post, a pawl pivotally carried by said lever, said pawl being positioned between the aforesaid pawls of the pawl-carrying block and having an extension abutting said first mentioned block and recoil-operated means for raising said first mentioned block.

36. In a single trigger mechanism for double-barrel guns, the combination with hammer sears, a block pivotally mounted upon the trigger plate of the gun, a pawl-carrying block pivotally secured thereto, pawls extending upwardly from said pawl-carrying block, a rotatable post mounted upon the trigger plate, a lever pivotally secured to said post, a pawl pivotally carried by said lever, said pawl being positioned between the aforesaid pawls of the pawl-carrying block and having an extension abutting said first mentioned block, and recoil-operated means connected to said first mentioned block for raising the same.

In testimony whereof, I affix my signature, in the presence of two subscribing witnesses.

JOHN D. RUSS.

Witnesses:

HAYWARD DODSON,  
O. J. CHAMBERS.