L. WOODS.

PISTOL.

APPLICATION FILED OCT. 1, 1914.

1,151,320.

Patented Aug. 24, 1915.

3 SHEETS—SHEET 1.

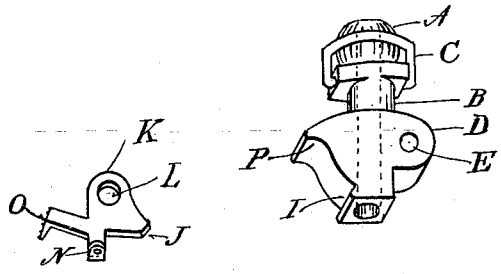


Fig. 1.

Fig. 2

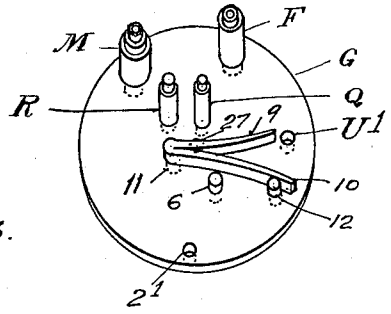


Fig. 3.

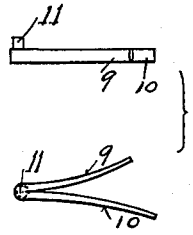


Fig. 4

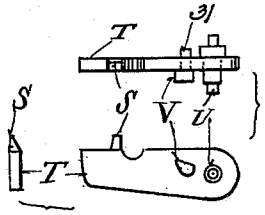
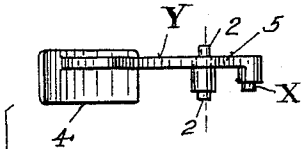


Fig. 5.



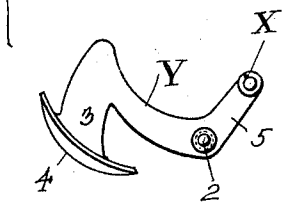


Fig. 6.

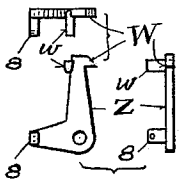


Fig. 7.

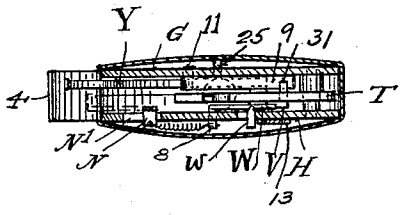


Fig. 8.

WITNESSES:

M. H. Plaisted

INVENTOR.

Leonard Woods

BY H. M. Plaisted

ATTORNEY.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

L. WOODS.

PISTOL.

APPLICATION FILED OCT. 1, 1914.

1,151,320.

Patented Aug. 24, 1915.

3 SHEETS—SHEET 2.

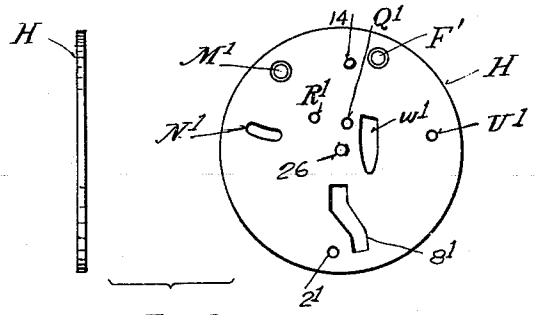


Fig. 9.

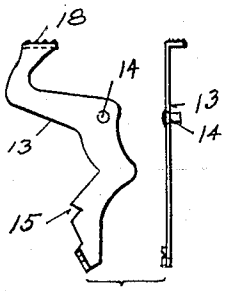


Fig. 10.

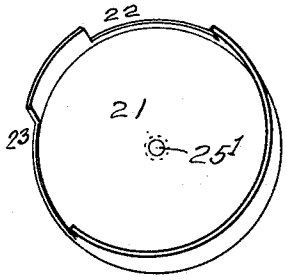


Fig. 12.

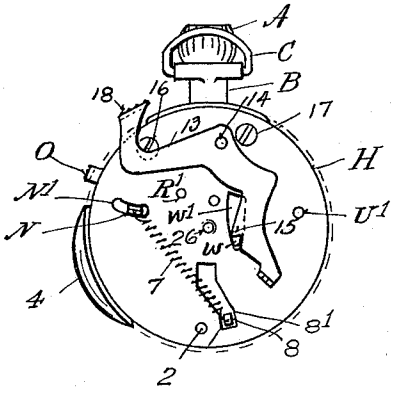


Fig. 11

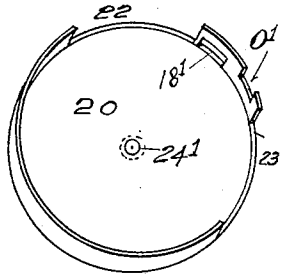


Fig. 13.

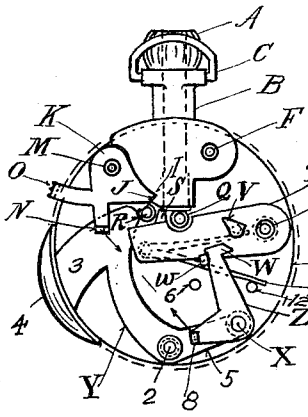


Fig. 15.

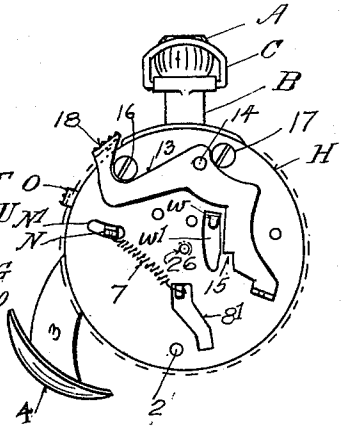


Fig. 14.

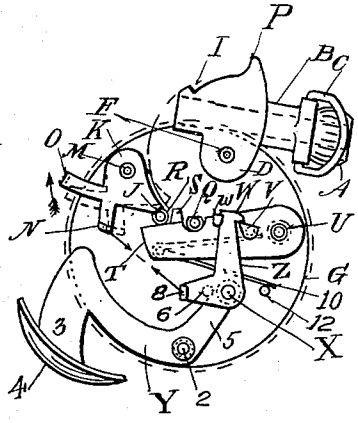


Fig. 16.

WITNESSES:

M. H. Plaisted.

INVENTOR.

BY Leonard Woods

M. M. Plaisted.

ATTORNEY.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

L. WOODS.

PISTOL.

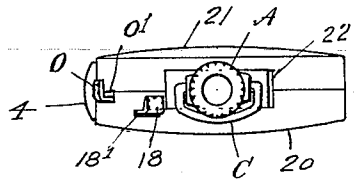
APPLICATION FILED OCT. 1, 1914.

1,151,320.

Patented Aug. 24, 1915.

3 SHEETS—SHEET 3.

Fig. 17.



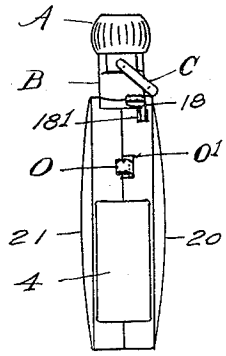


Fig. 19.

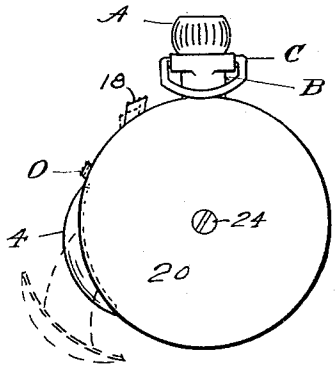


Fig. 18.

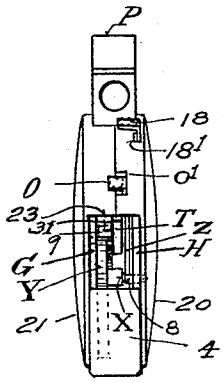


Fig. 20.

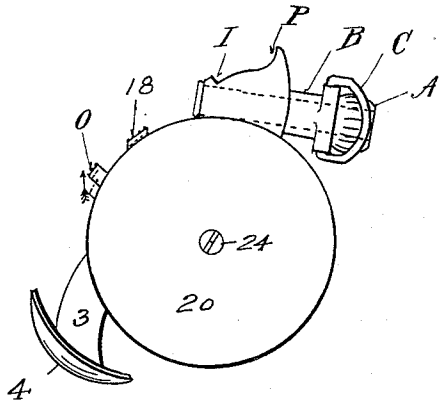


Fig. 21.

WITNESSES:

O. Kramer

M. A. Plaisted.

INVENTOR.

BY Leonard Woods

A. M. Plaisted

ATTORNEY.

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LEONARD WOODS, OF ST. LOUIS, MISSOURI.

PISTOL.

1,151,320. Specification of Letters Patent. Patented Aug. 24, 1915.

Application filed October 1, 1914. Serial No. 864,446.

To all whom it may concern:

Be it known that I, LEONARD WOODS, a citizen of the United States, residing at 3644 Botanical avenue, in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Pistols, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in pistols, the peculiarities of which will be hereinafter described in the specification and particularly pointed out in the claims.

The object of this invention is to provide a pocket pistol of convenient size and shape for the vest pocket or other place where one would naturally carry a watch, and of such effective construction and simple operation that it can be readily aimed and discharged at a highwayman, for instance, without likelihood of his being aware, beforehand, that such was the intention of the operator.

My present improvements have reference mainly to the casing or stock, the tip barrel with locking device, the thumb trigger, hammer mechanism and other features not included in my Patent No. 1,073,312 dated Sept. 16, 1913, nor in my application S. N. 812991, filed Jan. 19, 1914.

In the accompanying drawings on which like reference letters indicate corresponding parts, Figure 1 designates a perspective detail view of my tip barrel; Fig. 2, a similar view of the lock catch for said barrel; Fig. 3, a similar view of the back plate with some bearing pins and a spring mounted thereon; Fig. 4, a special hammer spring in face and edge views; Fig. 5, a special hammer in face, edge and end views; Fig. 6, a special trigger in face and edge views; Fig. 7, a special pawl catch connection between trigger and hammer, in face, edge and end views; Fig. 8, a cross section near the center of the stock showing the relation of the hammer, etc., to the bore of the barrel in broken outline; Fig. 9, a front plate in face and edge views; Fig. 10, a safety lever trigger lock in face and edge views; Fig. 11, a face view of front plate with trigger and lock in normal locked position, with casing removed; Fig. 12, a detail perspective view of back case; Fig. 13, a detail perspective view of front case as removed from Fig. 11; Fig. 14, a face view of front plate with trigger mechanism unlocked and trigger out; Fig. 15, the front plate removed, and the interior parts in their normal position as in Fig. 11; Fig. 16, the front plate removed and the trigger out corresponding to Fig. 14, and also showing method of loading; Fig. 17, a muzzle view of my pistol; Fig. 18, a face view with parts dotted to indicate the change from normal position to cocked position; Fig. 19, an edge view in normal position; Fig. 20, an edge view in cocked position; and Fig. 21, a face view with barrel tipped to reloading position.

The flat, disk-like stock and stem barrel of my prior applications above referred to, are preserved in this present application, but the barrel is made so as to tip and expose the bore chamber for reloading. The detail Fig. 1 shows the knurled muzzle end A, neck B and link C, similar to the stem of a watch, forming the short barrel that projects from a curved block with a semi-circular side lug D constituting a barrel coupling having a center hole E transverse to the bore to match a bearing pin F (Fig. 3), that also forms one of the connections between a back plate G Fig. 3, and a front plate H Fig. 9 at the hole F'. The opposite side of the said coupling has an ogee curve ending in a notch I at the breech. Into this notch fits the point J of a lock catch for the barrel which has a shape on one side matching the said ogee curve of the barrel coupling, a rounded semi-circular top K having a center hole L to match a bearing pin M that connects with the plate H at the hole M^1; a lever arm with a turned up lip N about 45° to the left of the point J and extending through a slot N^1 in the plate H, and finally a spur O opposite the point J to throw the catch in and out, as will be presently described. The other end P of the ogee opposite the notch I comes to a bearing on the top K when the point J is ready to engage the notch I as shown in Fig. 15; thus the barrel, pivoted at E on the said pin F is firmly fixed in both directions; when so fixed the cartridge inserted in the bore is brought firmly against a pin Q that takes the recoil of the exploding cartridge, this being firmly fastened to the back plate G and to the matching plate H at the hole Q^1. Another pin R near the point J serves as a limit stop for the safety catch when thrown out from the barrel coupling as shown in Fig. 16; connection is made with the front plate at the hole R^1.

Other forms of limit stop and recoil stop than the pins R and Q shown may be employed. Between these two pins projects the striking point S of the hammer T which is preferably in the form of a plate pivotally mounted on a shouldered bearing U that connects the front and back at a hole U^1 in each. A lip or projection V preferably at the front face of said hammer between the pivot and the striking point, is engaged by a hook W of a bell-crank catch Z pivoted on a gudgeon bearing X of a trigger Y which trigger is pivoted on bearing 2 engaging the front and back plates at the holes 2^1. This trigger Y is a pivoted plate lever with a middle portion curved to the outline of the plate G when the trigger is in its outer position as in Fig. 16, and having a side projection 3 in an arc about the pivot 2 ending in a rounded pressure shield 4 adapted to be engaged by the base of the thumb when the trigger is thrown out as in Fig. 14. When thus thrown out (by means presently to be described) the lever end 5 that carries the catch Z is raised so that the hook W engages the said lip V on the front of the hammer, as shown in Fig. 16. A stop pin 6 projecting from the back plate G limits the throw of the trigger arm 5. The engagement of the hook W is maintained preferably by a spring 7 Figs. 11 and 14, which connects the turned-out end N of the lock catch for the barrel, with the turned-out end 8 of the bell-crank catch Z on the opposite side of the center from the hook W, thus giving said hook a normal spring tendency toward the lip V. The turned-out end 8 passes through a zigzag slot 8^1 in the front plate H, and the spring 7 is in front of said plate as shown in Figs. 11 and 14.

The hammer spring is preferably of the form detailed in Fig. 4 consisting of two arms 9 and 10 diverging from a pivot 11 to which they are rigidly or integrally secured. The pivot 11 passes through a hole in the back plate G, and a limit stop or projection 12 from said plate is engaged by the lower arm 10 of the spring while the upper arm, 9 engages a pin or projection 31 on the back of said hammer. This two-pronged pivoted spring acts to return the striking point S with force against the cartridge as soon as the hook W slips off from the lip V after drawing back the hammer, when the hook catch is drawn downward by the lever action of the trigger under impulse of the thumb on the shield 4.

A safety catch for the trigger mechanism whereby the trigger shield is caused to lie close to the edge of the plates as in Figs. 15 and 11, consists of a thin flat irregular lever 13 pivoted at 14 to the front plate H and having a notch 15 near its lower end adjacent to a projection *w* at the back of the hook W when the latter is in the normal position shown by Fig. 15. This projection *w* extends outward through a curved slot w^1 in the front plate H. This slot is straight on one side and curved on the other or opposite side to the hook W, and the side play of the projection *w* in the slot is a little more than the engagement of the hook W with the lip V of the hammer, Fig. 16. The trigger mechanism and hammer are shown in the same position in Fig. 14 as in Fig. 16, but in Fig. 14 the front plate with its lever is secured in position by two screws 16 and 17 that engage the threaded counter-bored centers of the bearings M and F respectively. The screw heads are flush with the front plate H by means of the countersunk holes M^1 F^1 before mentioned. Fig. 14 shows this catch 13 bent in a curve around the screw 16 on the outer lip 18 that projects beyond the plates and is preferably bent at right angles to the plate H with a rough cross-cut outer surface to be engaged by the thumb. The normal position of this catch is shown in Fig. 11 with the notch 15 engaging the projection *w* so as to hold the hook at the bottom of the slot w^1. This position of *w* forces the lever arm and pivot X of the trigger Y outward as shown in Fig. 15 and stretches the tension spring 7 as shown in Fig. 11. The action of this spring on the bell-crank catch is to throw the hook end outward at all times, except when resisted by this safety lock catch 13; thus a pressure of the thumb upon the lip 18 Fig. 11 disengages the notch 15 and allows the projection *w* to rise along the right hand straight side of the notch w^1 so that the nose of the hook W presses against the slant face of the lip V, and ratchets into engagement above the slip V as shown in Fig. 16. Thus the spring 7 tends to engage the hook and the hammer; to raise the lever arm 5 of the trigger; and to throw out the shield 4; besides this, the spring also tends to maintain the engagement of the point J and notch I of the barrel coupling as shown in Fig. 15. Thus several functions are carried out by this one spring 7, but other means may be employed if desired. It will be seen therefore that this trigger is a safety trigger and is disengaged from the hammer in its normal position Fig. 15, and is operatively engaged with the hammer by releasing the hook projection *w* from the notch of the safety lever 13, which thereupon not only engages the hook and hammer but throws out the trigger shield. The hammer is not drawn back, however, till continued pressure on the shield 4 is made by the base of the thumb. It is therefore safe to reload the pistol with the trigger thrown out and connected to the hammer as in Fig. 16. This reloading is done by pulling upward and outward in the direction of the arrow, the lip *o* of the safety catch shown in detail

in Fig. 2, which is thus moved from the dotted position to that shown in full lines in Fig. 16, thus throwing the point J out of engagement with the point I and allowing the barrel to be rotated about the bearing F so as to expose the bore of the breech. The point J stops against the pin R before mention to avoid undue strain on the spring 7. After reloading, the barrel coupling is rotated from the position of Fig. 16 into the position of Fig. 15, the breech readily passing the point J as indicated by broken lines in Fig. 16, till the parts are firmly seated as shown in Fig. 15 with the cartridge end bearing on the recoil pin Q.

The trigger can readily be returned to its normal position without discharging the cartridge, by pulling outward on the lip 18 which will throw the other end of the lever 13 inward against the projection w which is thus pushed inward to the curved side of the slot w^1 thereby disengaging the hook W from the lip V. Pressure against the trigger shield 4 will then draw down the hook without acting on the hammer till the trigger is fully returned to the position shown in Fig. 15, which brings the projection w to the bottom of the notch w^1 and into engagement once more with the notch 15 of the safety lever as shown in Fig. 11.

The front and back plates H and G are covered by a smooth disk-like casing, preferably in halves, with plain or other joint at the center as shown Figs. 8, 17, 19 and 20. Elsewhere the casing is indicated by broken lines outside of and concentric with the front and back plates that fit snugly into their respective half cases, 20 and 21, detailed in Figs. 12 and 13. A notch is cut out of each case at 22 to form the opening for the transverse arc of the barrel coupling that fills out the circumference of the casing. A similar pair of notches toward the rear of the stock, forms an opening 23 into which fits the shield 4 in similar manner, so that only the rounded swell of the shield projects beyond the casing in the normal position of the trigger. A suitable opening is also provided at 18^1 for the lip 18 of the safety lever 13, and at 0^1 for the lock catch of the barrel, both being in the front case 20, between the openings for the barrel and the trigger, so as to be conveniently located for the thumb of the operator. Central counter-sunk holes 24^1 and 25^1 match with central tapped holes 26 and 27 respectively in the front and back plates, by which the flat head screws 24 and 25 secure the casing in place as shown, or in any other suitable manner. A compact, smooth-sided, disk-like stock is thus provided without projections liable to catch on the pocket lining in the act of drawing, whether or not a chain or fob is connected to the link C in similar manner to a watch. When thus drawn from the pocket, the stock readily lies in position in the palm of the hand to allow the thumb to press the lever tip 18 to throw out the trigger shield 4 and connect with the hammer mechanism, so that pressure of the base of the thumb on the shield will actuate the hammer and effect the discharge of the contained cartridge. The tension spring 7 acts to throw out again the trigger shield, and again automatically to connect with the hammer, so that the trigger can be pressed at once after inserting another cartridge, as above described. Thus the pistol can be quickly reloaded and another shot fired, if desired.

The barrel coupling is preferably a drop forging; practically all the other pieces of this construction are capable of being struck out by dies, facilitating uniformity, accuracy and cheapness.

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

1. A pistol comprising a flat disk-like stock, a short stem-like barrel projecting from the stock, with an inner barrel coupling having a pivot hole at one side transverse to the bore, a pivot bearing for said coupling mounted in said stock, a lock catch for said barrel, a hammer mechanism, a pivoted trigger normally recessed in said stock, a ratchet connection between the trigger and hammer, and a safety trigger lock to hold the trigger in recessed position and adapted to throw it out for operative connection with said hammer.

2. A pocket pistol comprising a pair of plates, a barrel coupling mounted between said plates and consisting of a short stem-like barrel projecting from a curved block having a semi-circular side lug adapted to form a pivot bearing and a notch near the breech on the opposite side of the block from said lug, a catch adapted to engage the said notch, and hammer and trigger mechanisms coöperating with said barrel coupling.

3. A pocket pistol of the kind described, comprising a pair of plates, a drop-forged barrel coupling consisting of a short stem-like barrel projecting from a curved block having a side lug by which it is pivotally mounted between said plates and having an ogee projection and a notch on the side of the block opposite the lug for securing said barrel in operative position, a lock-catch matching the said ogee projection pivotally mounted between said plates and having a point to engage said notch a lever arm and a spur, and hammer and trigger mechanisms coöperating with barrel.

4. A pocket pistol comprising a flat disk-like stock having a recess in the edge thereof, a curved block pivoted in said recess and bored to form a barrel, and conforming to the outline of said stock, provided with a short stem-like projection continuing the

bore through said block and having also a notch near the breech and a stop at the curved portion opposite the pivot, a lock catch pivoted adjacent to said stop-portion of the block in normal position and provided with a point to engage said notch and a spur to disengage said point and notch when desired to tip said barrel.

5. A pocket pistol comprising a flat disk-like stock having a recess in the edge thereof, a block with projecting stem barrel, pivotally mounted in said recess and suitably bored to form a barrel, a recoil pin forming a stop for the inserted cartridge, a lock catch for said block to maintain the said barrel in firing position, a pivoted lever trigger normally recessed in said stock, a hammer and operative spring, a ratchet hook pivoted to the inner end of said trigger having a spring tendency to engage said hammer, and a trigger lock holding said hook and trigger in normal safety position but capable of releasing the trigger for cocking.

6. A pocket pistol comprising a stock composed of front and back plates, a casing for said plates, a tip barrel block pivoted between said plates, a lock catch for said block, a spring-actuated plate hammer, a lever trigger pivoted between said plates, a bell-crank ratchet pawl pivoted to the inner end of the trigger, and a spring to throw out said trigger shield and connect the pawl and hammer.

7. A pocket pistol comprising front and back plates, suitable casing therefor, forming a flat disk-like stock adapted to rest in the palm of the hand, a barrel coupling provided with short-stemmed barrel projecting beyond the stock, a pivot bearing for one side of said coupling, a lock catch for the other side of the coupling having a projecting spur to effect disengagement and a turned-out lever end, a ratchet pawl in the shape of a bell-crank lever having a hook on one end and turned-out tip on the other, a spring-actuated hammer pivoted adjacent to said hook and in line with said barrel provided with a lip or projection adapted for engagement by said hook, a coil spring connecting said pawl and lock catch by the turned out ends thereof, and a lever trigger carrying said pawl at one end and a pressure shield at the other, substantially as described.

8. A pocket pistol of the kind described, comprising a pair of round thin plates with suitable connections to separate them a predetermined distance, a thin smooth casing fitting snugly around said plates and suitably joined, provided with openings for trigger, barrel and safety catches at the edge, convenient for operating substantially as and in the manner described, a barrel coupling pivotally mounted between said plates with the barrel projecting like the stem of a watch from its case, hammer mechanism, a trigger with flush shield end, and safety catches for trigger and barrel coupling respectively.

9. In a pocket pistol of the kind described, a round disk-like stock, a barrel, a hammer mechanism, a lever trigger consisting of a lever portion with a gudgeon bearing at one end, a curved pressure shield at the other end and a fulcrum intermediate of said ends, a curved plate portion on the opposite side of said fulcrum from the lever portion, and connected with said shield by a reversely curved portion concentric with said fulcrum and a pawl catch pivotally mounted on said gudgeon bearing, and operatively connecting said trigger and hammer mechanism.

10. In a pistol of the kind described, the combination with a flat disk-like stock, plates therein having a guide slot, a short barrel mounted between said plates, hammer mechanism, and a curved lever trigger, of the hereindescribed ratchet pawl consisting of a bell-crank lever having a hook and guiding projection in said slot at one end and a turned out lip at the other end adapted for spring connection and pivotally mounted on the lever end of said trigger to form an operative connection between said hammer and trigger, and a spring co-acting with said ratchet pawl and guide slot, substantially as described.

11. In a pistol of the kind described, a trigger mechanism comprising a pivoted bent lever with shield at one end and a reversely curved portion concentric with the fulcrum, a lever portion beyond said fulcrum ending in a gudgeon bearing, a bell-crank lever fulcrumed on said gudgeon bearing having a hook at one end and adapted for spring connection at the other end, a spring-actuated hammer adapted to be engaged by said hook, and a spring controlling said trigger and bell-crank lever substantially as and for the purpose described.

In testimony whereof I have affixed my signature in presence of two witnesses.

LEONARD WOODS.

Witnesses:
H. M. PLAISTED,
W. B. WATSON.

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