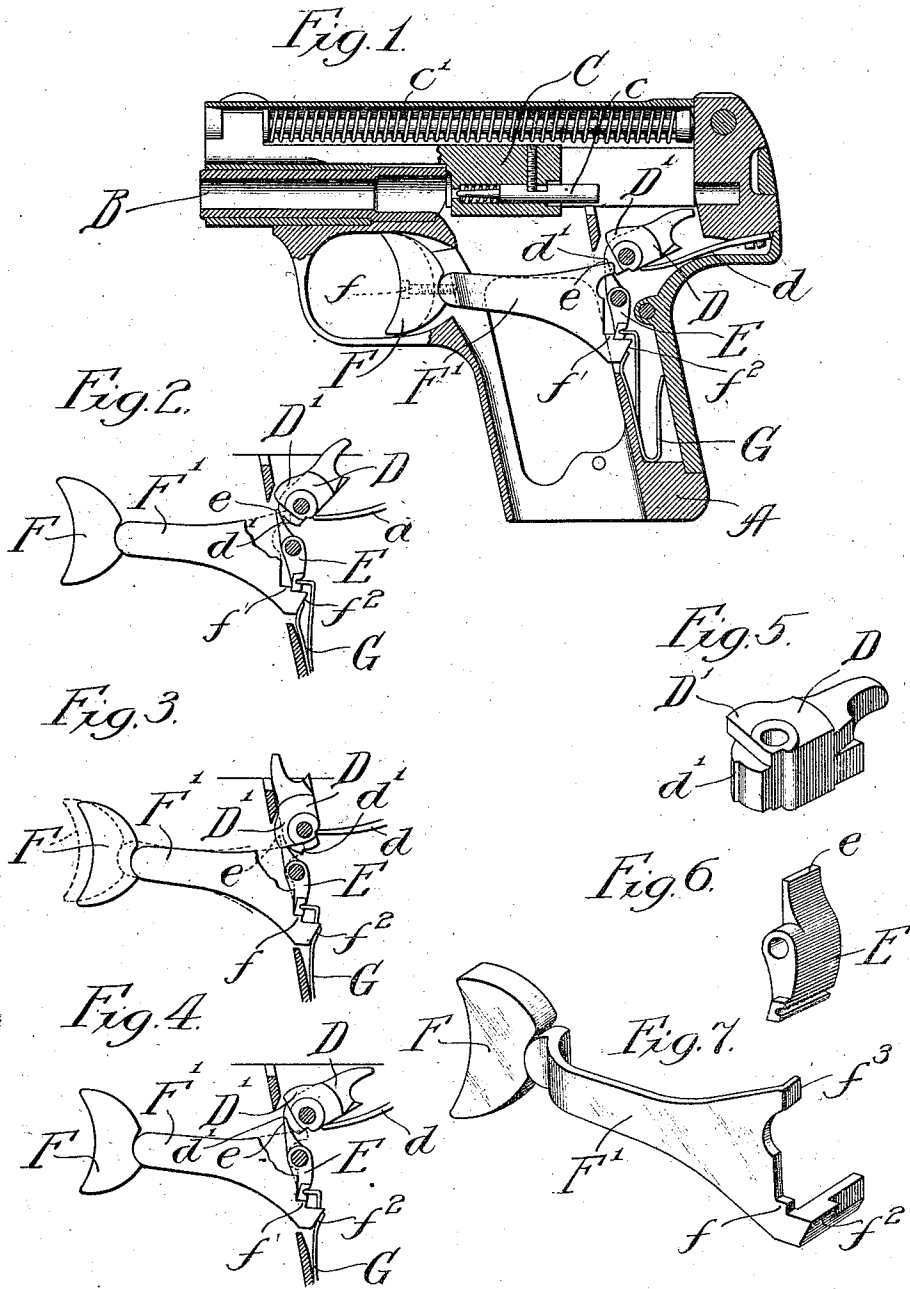


R. WILES,
AUTOMATIC PISTOL.
APPLICATION FILED JUNE 9, 1909.

941,749.

Patented Nov. 30, 1909.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC PISTOL.

941,749.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed June 9, 1909. Serial No. 501,160.

To all whom it may concern:

Be it known that I, RUSSELL WILES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Automatic Pistols, of which the following is a specification.

My invention relates to certain new and useful improvements in automatic pistols, and is fully described and explained in the specification and shown in the accompanying drawing, in which:

Figure 1 is a longitudinal section through my improved weapon, the parts being shown in the position which they occupy when ready for firing; Fig. 2, illustrates the firing-mechanism at an intermediate point between the pulling of the trigger and the firing of the weapon; Fig. 3 represents the same mechanism in the position which it occupies at the instant of firing; Fig. 4 represents the same mechanism in the position which it occupies after the automatic re-cocking of the hammer and before the trigger is released; Fig. 5 is a perspective view of the hammer; Fig. 6 is a similar view of the sear, and Fig. 7 is a similar view of the trigger.

Referring to the drawings, A is a frame having a handle or stock-portion made hollow in form and adapted to receive the magazine in the usual way and also a horizontal or barrel-portion which carries a barrel B rifled in the usual manner, as illustrated. Above the barrel and guided by the frame is a movable breech-block C having a firing-pin *c* normally spring-pressed forward by a spring *c'* mounted in a suitable chamber provided to receive the same in the frame. This portion of the mechanism was well known prior to the date of my invention and forms no part of what I claim as new. For this reason I have not seen fit to illustrate it in more than a very general way, those skilled in the art being informed as to the various details of construction which will preferably be adapted for above-named and described parts.

Pivotaly mounted in a chamber in the frame is a hammer D adapted to strike the firing-pin in the breech-block C, said spring being normally pressed toward the position

illustrated in Fig. 3 by means of a hammer-spring *d*. Beneath the hammer pivot is rotatably mounted a sear E, the point *e* of which is adapted to engage a shoulder *d'* upon the hammer to hold the hammer in a cocked position as illustrated in Figs. 1 and 4. When the sear is swung about its pivot to the position shown in Fig. 2, it will release the hammer and permit the same to fall and strike the firing-pin in the usual way. In front of the stock or handle-portion of the frame, there is formed in the material of the frame a trigger-guard which is of usual form. The frame is slotted so that the interior of the frame communicates with the space within the trigger-guard in the manner illustrated.

F is the front part of the trigger, the same being longitudinally movable with a sliding motion in the trigger-guard and also being capable of a limited rocking or oscillatory motion in all directions. Rigidly attached to the rear part of the trigger is a flat trigger-extension *F'*, the form of which is best illustrated in the perspective of Fig. 7. The two portions of the trigger are rigidly secured together by means of a screw *f* (dotted lines Fig. 1) so that the two portions of the trigger will move and oscillate together. At the rear end of the trigger extension and near the lower part thereof is a shoulder *f'* in position to engage with the lower end of the sear E in the manner illustrated in Fig. 1. Below this shoulder, on the trigger, is a beveled surface *f''* which is adapted to be engaged by a spring G the action of which is to force the rear end of the trigger upward. At the upper corner of the trigger-extension is a laterally-projecting pin *f'''* which extends into the path of a cam-projection *D'* on the hammer D heretofore described.

The manner of operation of the weapon is as follows: Starting with the parts in the position shown in Fig. 1, it will be seen that the weapon is ready to be fired; that is to say, the hammer is cocked and held in its cocked position by the sear, the trigger-extension is in its upper position with its shoulder *f'* in engagement with the sear, and all parts are so arranged that by pressing back the trigger the sear will be moved to release the hammer. Upon the pulling of the

trigger, the parts assume the position shown in Fig. 2, that is the trigger moves back, the upper end of the sear moves forward, and the hammer begins to move down, this figure 5 illustrating the hammer after it has moved through a part of its downward course. At the end of the movement of the hammer, the parts take the position shown in Fig. 3, the cam D' on the hammer striking the projection f³ at the rear of the trigger-extension and moving the same down so as to release the sear. The sear thereupon swings into position to engage the hammer, when the hammer is retracted. When the hammer 15 finishes its downward movement, it of course engages the firing-pin and explodes the cartridge. The recoil of the charge exerted against the shell drives back the breech-block in the usual way, ejecting the empty shell 20 and drawing in a fresh shell from the magazine. The backward movement of the breech-block causes the rocking of the hammer back to its original position where it takes the position shown in Fig. 4. At this time the sear is free from engagement with the trigger by reason of the trigger-extension being still in its lower position, and engages the hammer to lock it in cocking position. The trigger-extension is held in this 30 position, being prevented from rising by engagement of the upper portion of the angular shoulder f' with the lower end of the sear, all as illustrated in Fig. 4. When the pressure of the finger is removed from the trigger it will return to its original position as illustrated in Fig. 1 and the spring G will force the rear end of the trigger up into position to again engage the sear for a subsequent operation. 35

40 The device above described is advantageous in that it is particularly simple and convenient, the number of moving parts being reduced in number, the usual pivot being dispensed with.

What I claim as new and desire to secure by Letters Patent is—

1. The combination, in an automatic pistol having a magazine in the handle, a sear behind the magazine, and firing mechanism in position to be engaged by the sear, of a trigger having a finger-piece in front of the magazine and an operating member extending beside the magazine into position to engage the sear, said trigger being capable of bodily longitudinal movement and a limited oscillatory movement, and means for bodily oscillating the trigger after its longitudinal movement. 50 55

2. The combination, in an automatic pistol having a magazine in the handle, of a sear behind the magazine and firing mechanism arranged to be engaged by the sear and release, a trigger having a finger-piece in front of the magazine and an operating member extending to one side of the magazine, the trigger being arranged to slide bodily longitudinally of the weapon and in such movement to move the sear to release the firing-mechanism, and means for bodily oscillating the trigger to release the sear after such longitudinal movement. 60 65 70

3. The combination, in an automatic pistol having a magazine in the handle, of a sear and hammer to the rear of the magazine, and a trigger having a finger-piece in front of the magazine and an operating portion extending beside the magazine, said trigger having a portion to engage the sear to release the same from the hammer, and the hammer and trigger having cooperating portions whereby when the hammer descends, the trigger will be bodily oscillated to release it from the sear. 75 80

RUSSELL WILES.

In presence of—

RALPH SCHAEFER,
JOHN WILSON.