

April 29, 1930.

V. BOURTH

1,756,847

AUTOMATIC PISTOL

Filed Oct. 24, 1927

2 Sheets-Sheet 1

Fig. 1.

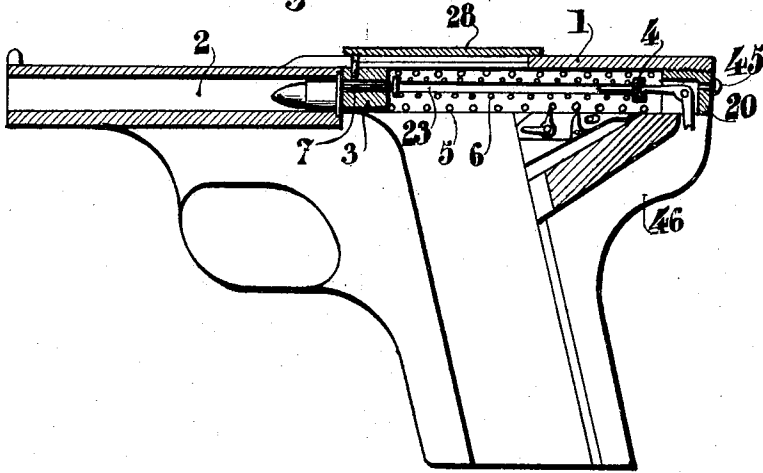


Fig. 2.

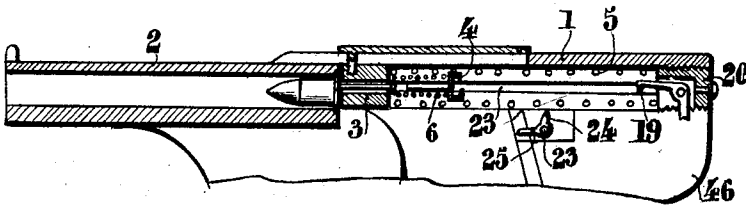
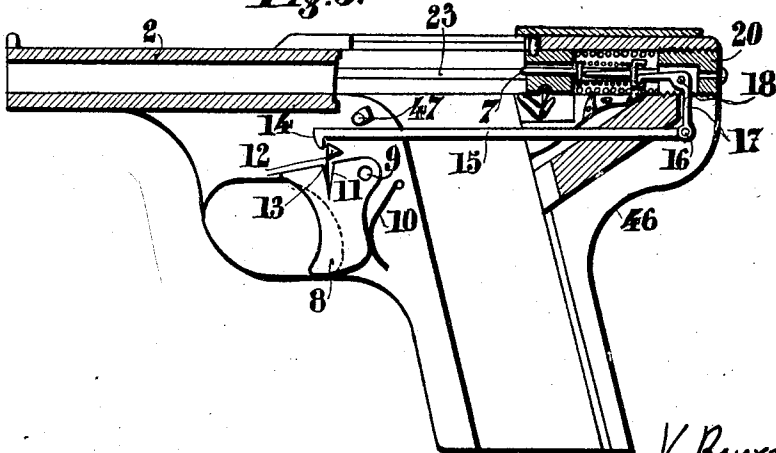


Fig. 3.



V. Bourth
INVENTOR

Bx: Mario & Core
Ally

April 29, 1930.

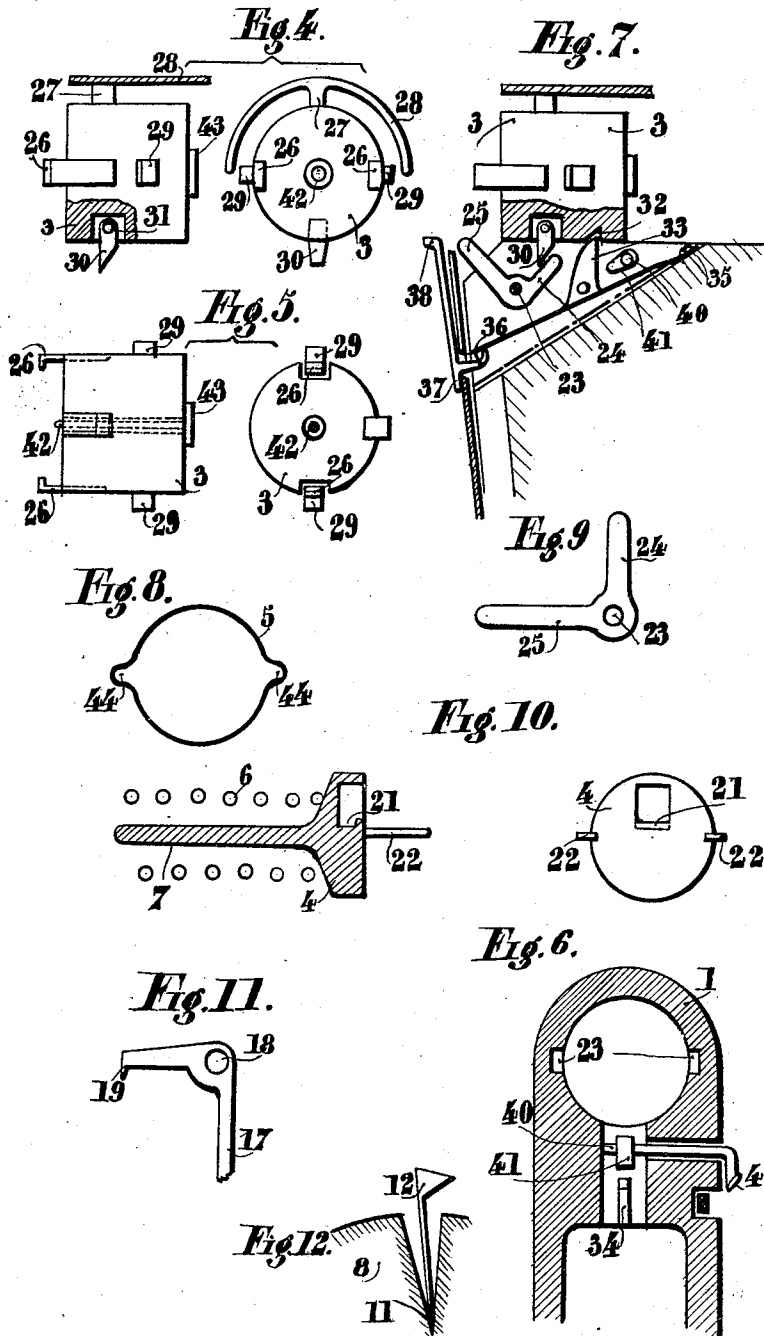
V. BOURTH

1,756,847

AUTOMATIC PISTOL

Filed Oct. 24, 1927.

2 Sheets-Sheet 2



V. Bouth
INVENTOR
By: Marks & Co.
Attys.

UNITED STATES PATENT OFFICE

VICTOR BOURTH, OF BOULOGNE SUR SEINE, FRANCE

AUTOMATIC PISTOL

Application filed October 24, 1927, Serial No. 228,460, and in Belgium October 29, 1926.

The present invention relates to improvements in automatic pistols of the kind in which loading and ejecting of the cartridge are effected by a breech block sliding in the back portion of the firearm which extends the barrel rearwardly and is closed at its back end by a plug or the like, the breech block comprising a central firing pin operated by the impact of a sliding member acted upon by a stressed spring and released when the trigger is pressed.

According to the invention two longitudinal grooves are formed in the sides of the cylindrical rearward extension of the barrel and corresponding wings are provided on the breech block sliding therein which also comprises the central firing pin and top cover plate.

A further feature of the invention consists in the fact that a recuperating coil spring is disposed between the closing plug and the back face of the sliding block this spring having bent portions forming wings guided in the said internal grooves in the firearm.

Further features of the invention will appear from the following description of an embodiment of an automatic pistol according to the invention which is illustrated in the accompanying drawings.

Fig. 1 is a sectional elevation through the pistol showing the members in readiness for firing.

Fig. 2 is a sectional elevation showing the parts at the moment when the released striker is about to act for firing the cartridge.

Fig. 3 is a sectional elevation of the pistol showing the parts at the moment the recoil is completed while the block is about to push forward in front of it into the barrel a new cartridge.

Fig. 4 is a side view to a larger scale together with a view of the back face of the sliding block.

Fig. 5 shows to a larger scale a plan of the sliding block and a view of the front face.

Fig. 6 shows in sectional elevation to an enlarged scale a portion of the back part of the firearm.

Fig. 7 is a view to an enlarged scale of the mechanism for locking the sliding block at

the back part of the firearm when the magazine or loader is empty.

Fig. 8 is a view to an enlarged scale of the spring of the sliding block.

Fig. 9 is a view to an enlarged scale of the ejector lever.

Fig. 10 is a view to an enlarged scale of a sectional elevation of the striker together with a view of the back face.

Fig. 11 is a view to an enlarged scale of the tumbler lever.

Fig. 12 is a view to an enlarged scale showing the attachment of the member which actuates the detent lever.

Referring to the drawings, 1 is the body or outer part of the firearm, 2 the barrel. The back part of the firearm extending to the rear of the barrel, forms a cylindrical chamber closed by the plug 20. Upon the sides of this chamber are formed longitudinal guiding grooves 23 for the ribs or studs 29 of the sliding block 3.

This sliding block 3 carries the extractor blades 26 and, at the centre, the firing pin proper 42 provided with the impact head 43. In addition a screen or shutter 28 is mounted at its upper part by the screw 27 and, at its lower part, in a suitable recess is pivoted at 31 a finger or beak 30 the use of which will be described hereinafter. The back face of the said block 3 is in contact with a coil spring 5, see Fig. 8, comprising wings 44 lodged in the grooves 23 of the body.

The rear end of this spring presses upon a plug 20 fitted into the body. Upon the back face of the same block 3 is attached a spring 6 secured also to the front face of the striker 4; see Fig. 10, which comprises at the front an extension 7 adapted to come into contact with the head 43 and at the back a cavity provided with a hooking face 21 upon which engages the beak 19 of the tumbler lever 17 pivotally mounted at 18 upon the plug 20. The striker 4 also comprises guiding wings 22 adapted to be displaced in the interior of the loops 44 of the spring 5 sliding in the grooves 23.

The tumbler 17 is pivoted at 16 upon the detent rod 15 comprising at its front end a beak 14 adapted to engage upon the front

face of the blade 12 set at 11 into the trigger pivotally mounted upon the firearm 9 and provided with a return spring 10.

The blade 12 is elastic so as to permit the engagement of the beak 14 without causing the release of the beak 19 from the member 4.

A small lever having two arms 24 and 25 is freely pivoted at 23.

The arm 24 is adapted to engage with the stop formed by the finger 30 at the end of the backward travel of the block 3 in order to swing the arm 25 which compels the cartridge case to move out of the claws 26 and jump through the aperture in the firearm which is at this moment uncovered by the shutter or screen 28, moved backwards.

The sliding block 3 is provided in its lower part with an indent or notch 32 in which can engage a retaining beak 33 carried by an elastic blade 34 secured at 35 and the free end 36 of which see Fig. 7, is forced upwards by a projection or tappet 37 carried by the platform 38 supporting the magazine or loader, all this arrangement being provided for the purpose of locking at the back the block 3 when the magazine is exhausted, as is the case in Fig. 7.

At ordinary times the blade 34 is situated in the lower position shown in dotted lines and the beak 33 is out of the path of the sliding block 3.

At 40 is arranged a spindle carrying a cam 41 and a control knob 48 arranged outside the firearm, the object of this arrangement being to compel, by the rotation of the knob 48, the cam 41 to move down on to the blade 34 and thus disengage the block 3 in order to permit the sliding block 3 to re-enter into the breech of the firearm, which block during its travel takes a cartridge from the loader or magazine replaced in position.

Finally, a safety catch is provided at 47, arranged in such a way as to lock the rod 15 and prevent it being pulled with the effect of producing the operation of the sear. A screw 45 secures a plate 46, closing the whole of the back part of the firearm.

The operation of the firearm envisaged forming the subject of the present invention is as follows:—

Referring to Fig. 1, a cartridge is engaged in the barrel and the sliding block 3 is at the end of its forward travel. By operating the trigger 8 the pull on the rod 15 disengages the striker 4 which, being then acted upon by its stressed spring 6 is thrown upon the impact head 43 shown in Fig. 2. When the shot is fired the gases push back the block 3 and the striker, uncovering the aperture in the body of the firearm and compressing the spring 5. At the end of the backward travel the lower beak 30 of the block 3 pivots the arm 24 and the empty cartridge case is ejected, see Fig. 3. At this moment, if the pressure of the

finger is removed from the trigger 8, the striker 4 hooks by means of the face 21 upon the beak 19 of the sear lever 17 and the firearm is ready for firing a fresh cartridge; by pressing upon the trigger 8, the cycle of operations described above is repeated.

It is possible, by maintaining the pressure of the finger upon the trigger, to fire all the cartridges in succession, by suitably choosing the mass of the striker 4, so that it will follow the sliding block 3 with a certain time lag when the latter returns forward.

Naturally, other constructional details or modifications may be envisaged without on that account going outside the scope of the invention.

The drawings are given merely by way of example in order to enable the operation of the automatic pistol envisaged to be understood.

What I claim is:—

1. An automatic pistol comprising a cylindrical back portion continuing the barrel and having two longitudinal grooves formed in the sides thereof, a plug closing the end of said cylinder remote from the barrel, a cylindrical block slidably mounted in said cylindrical portion and comprising wings corresponding with said grooves, projections and cartridge extracting blades, a firing pin at the centre of said block, a shutter member on the upper part of said block and a screw securing said member to the block, said member being also of cylindrical form, a notch in the lower part of said block, a finger pivoted in said notch, an indent in said block and a retaining beak adapted to engage in said indent.

2. An automatic pistol as claimed in claim 1, further comprising a recuperating coil spring lodged between said closing plug and the rear face of said sliding block, the turns of said spring being bent to form projections guided in said grooves in the firearm.

3. An automatic pistol as claimed in claim 1, further comprising a recuperating coil spring lodged between said closing plug and the rear face of said sliding block, the turns of said spring being bent to form projections guided in said grooves in the firearm, a plate-shaped striker of suitable thickness formed with a striking pin in front and having at the back a cavity with an internally disposed stopping face.

4. An automatic pistol as claimed in claim 1, further comprising a recuperating coil spring lodged between said closing plug and the rear face of said sliding block, the turns of said spring being bent to form projections guided in said grooves in the firearm, a plate-shaped striker of suitable thickness formed with a striking pin in front and having at the back a cavity with an internally disposed stopping face, a coil spring connected at one end to the rear face of said sliding block and

at the other end to the front face of said striker.

5 5. An automatic pistol as claimed in claim 1, the sear being pivoted upon said closing plug.

6. An automatic pistol as claimed in claim 1, further comprising a two-armed lever so arranged that one arm of the lever expels the spent cartridge case when the other arm of said lever is acted upon by said sliding block.

10 7. An automatic pistol as claimed in claim 1, further comprising a blade spring, a beak on said spring adapted to engage in the indent in said sliding block when its free end is forced upwards, and a projection upon the magazine supporting platform whereby said blade is pushed upwards.

15 8. An automatic pistol as claimed in claim 1, further comprising a blade spring, a beak on said spring, adapted to engage in the indent in said sliding block when its free end is forced upwards, and a projection upon the magazine supporting platform whereby said blade is pushed upwards, a disengaging device for said sliding block, formed by a cam adapted to be operated from the outside and pressing upon said blade spring in order to disengage then the hooking beak from the indent in the sliding block.

20 25 30 In testimony whereof I have signed my name to this specification.

VICTOR BOURTH.

35

40

45

50

55

60

65