

(No Model.)

C. FOEHL.  
FIRE ARM.

No. 417,672.

Patented Dec. 17, 1889

Fig. 1.

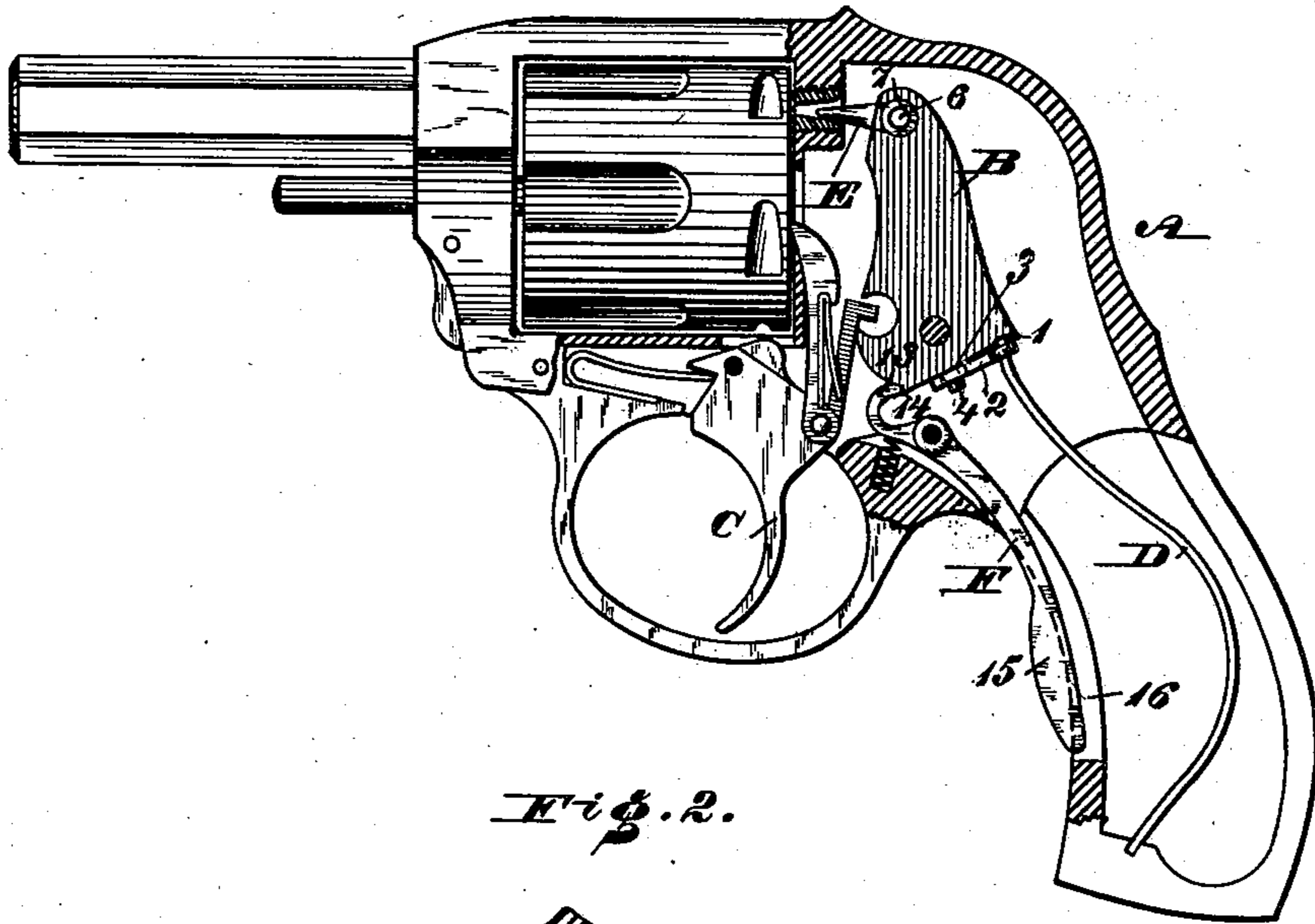


Fig. 2.

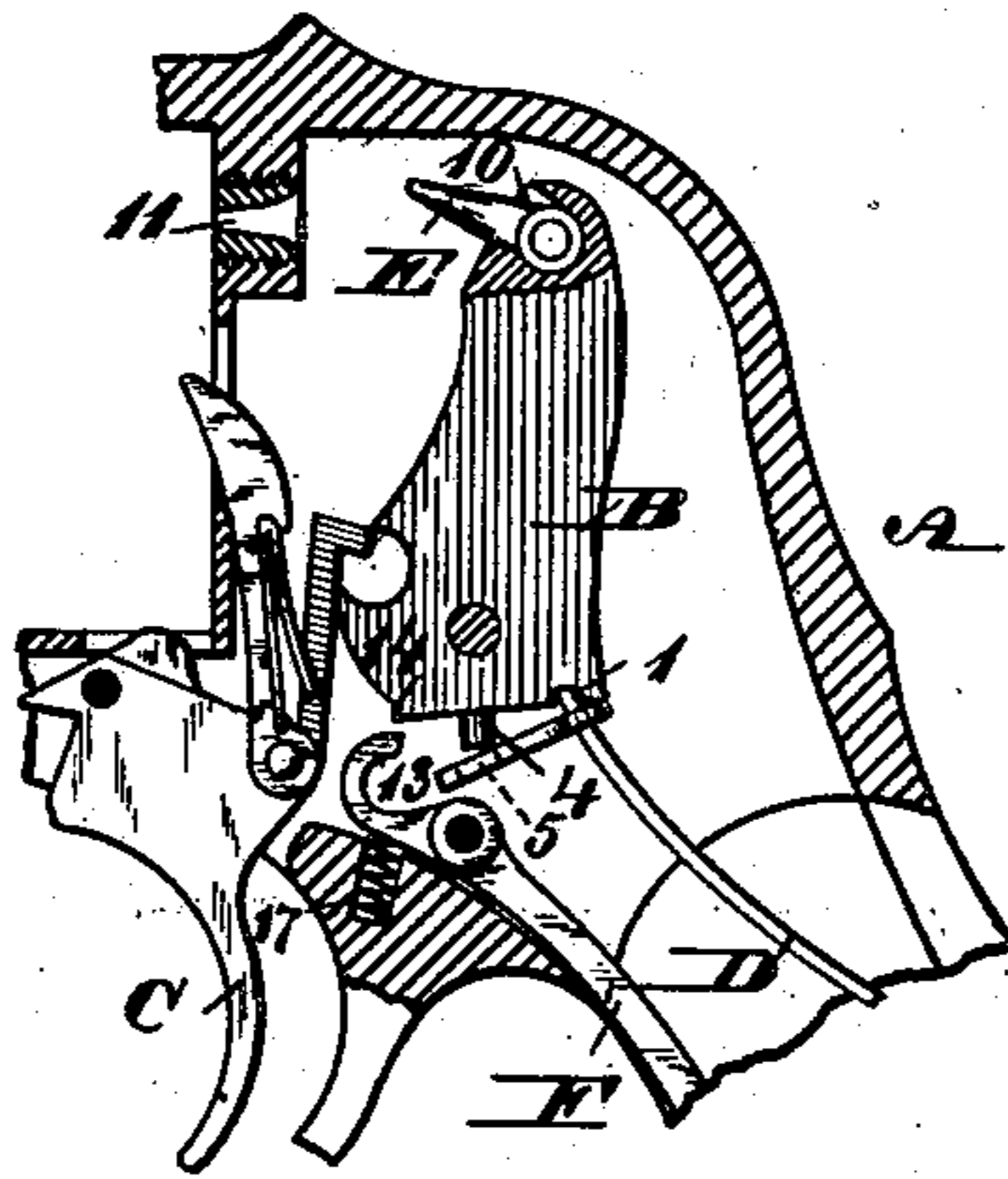


Fig. 3.

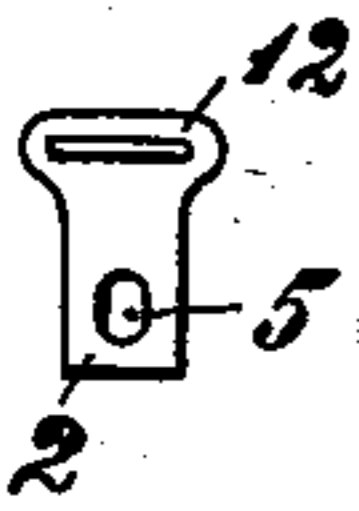
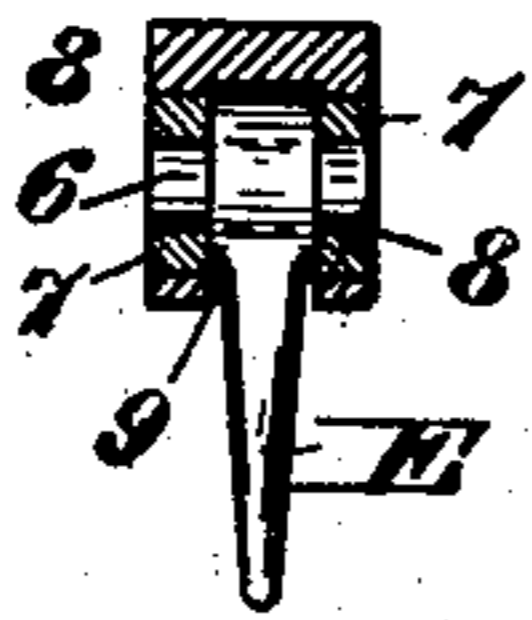


Fig. 3.



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# UNITED STATES PATENT OFFICE.

CHARLES FOEHL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE FOEHL & WEEKS FIRE ARMS MANUFACTURING COMPANY, OF NEW JERSEY.

## FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 417,672, dated December 17, 1889.

Application filed October 12, 1888. Serial No. 287,942. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES FOEHL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Fire-Arms, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of improvements in the class of fire-arms of such construction that when the hammer is down it is set back from the barrel and prevented from striking the same, or, in other words, when the hammer is discharged, it is caused to rebound, the novel features being hereinafter fully set forth.

It also consists of a firing-pin pivotally connected with the hammer, so as to properly enter the opening by which it is guided to the head of the cartridge.

It also consists of a guard or safety-catch, whereby the hammer cannot be cocked until it is released of the holding action of said guard.

Figure 1 represents a partial side elevation and partial vertical section of a fire-arm embodying my invention. Fig. 2 represents a vertical section of a portion of the hammer, being shown cocked. Fig. 3 represents a horizontal section of the firing-pin and adjacent parts on an enlarged scale. Fig. 4 represents a front view of a detached portion.

Similar letters and numerals of reference denote corresponding parts in the several figures.

Referring to the drawings, A represents a pistol, to which, however, my invention is not limited, as the same is applicable to other fire-arms.

B represents the hammer, C the trigger, and D the mainspring, the upper end of the latter bearing against the back of the hammer above the axis thereof, as at 1, and having connected with it a plate or limb 2, formed of more rigid material than the main or spring portion, and extends angularly from the mainspring and accords with the face 3 of the hammer below the axis thereof. Projecting from said face is a pin 4, which freely enters an opening 5 in the limb 2. The said

limb 2 has an opening or eye 12, having oblique sides, through which freely passes the tapering end portion of the main part of the spring D, so that the said limb 2 rests loosely on the said end and is not rigidly secured thereon.

The operation is as follows: When the hammer is at full-cock, the mainspring presses against the back of the same, as will be seen in Fig. 2. When the hammer is released, it flies forward under impulse of said spring, thus discharging the pistol. The heel end of the hammer then strikes the free or forward end of the limb 2, so that the pressure of the spring is exerted against the hammer below the axis thereof, whereby the hammer is caused to rebound and its nose or firing-pin accordingly set back from the barrel. It will be seen that when the limb 2 is first struck by the hammer on the rebound the impact thereof is first received by the said limb and forces the same more tightly upon the end of the spring before the contact of the limb with the heel of the hammer and the pressure on the main portion of the spring, so that the force is not so suddenly imparted to the spring, thus lessening the liability of the breaking thereof and also of the limb. By adding the limb to the mainspring of an ordinary pistol the same may be converted into a "rebounder." It will also be seen that when the hammer is down the pin 4 enters the opening 5 of the limb as a guide, serving to prevent lateral displacement of said limb, and consequently of the upper end of the main-spring.

E represents the firing-pin, which is supported upon a pivot 6, the latter having its ends fitted to bushings 7, which are of the form of annuli and mounted in the upper end of the hammer, it being noticed that said end has openings 8 in its sides, the walls of which form bearings for said bushings, a recessed portion 9, with side openings to receive the axial portion of the firing-pin and its pivots, the front opening of said recess forming the vertical slot 10, in which the body of the pin is permitted to vertically play.

It will be seen that when the hammer is discharged the firing-pin enters a conical

opening 11 in the seat or breech-plate of the pistol and is guided in a right line to and against the head of the cartridge instead of moving in a curved direction and striking the cartridge angularly, which would be the case if the firing-pin was rigidly secured to the hammer, it being evident that the firing-pin turns on its axis as the hammer advances, and thus strikes the cartridge in a right line, or a line parallel with the cartridge.

In order to connect the limb 2 with the mainspring, it is formed with a flattened eye 12, to receive the end of the mainspring, the sides of the eye and the mainspring being tapering or oblique, so as to form a locking-joint between said parts. If desired, the eye may be formed in the spring, so as to receive the rear end of the limb.

It is evident that any fire-arm having a mainspring of the character shown may have a limb attached to it, so as to produce the rebounding action of the hammer.

Pivoted to the frame at the front of the handle portion thereof is a spring-actuated dog F, whose nose 13 projects rearward and is adapted to come in contact with a shoulder 14 on the heel of the hammer at the forward end thereof. The handle 15, which is in rear of and below the pivotal point of the dog, and is heavier than the hook portion, so as normally to force the said hook against the hammer, partly occupies a slot 16 in the front of the handle and partly projects, so as to be pressed by the hand when grasping the handle. A spring 17, seated in a recess of the handle, also aids in keeping the hook 13 in contact with the hammer.

The hammer is of the order self-cocking or adapted to be cocked by the operation of the trigger, which feature, broadly considered, is not new. When, however, the hammer is discharged and recoils, the nose 13 immediately

engages with the shoulder 14 and locks the hammer, said dog thus constituting a guard or safety-catch, whereby the hammer cannot be cocked and discharged until it is released of said dog, avoiding accidents should the trigger be accidentally struck or caught.

When it is desired to discharge the pistol, the handle of the fire-arm being grasped, the pressure of the hand is exerted on the handle 15, so as to force back the same, and thus throw the nose 13 from the hammer, whereby, when the trigger is pulled, the hammer is cocked, tripped, and discharged.

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

1. A fire-arm having a hammer with a guide-pin on the heel thereof, and a mainspring having an angular extension or piece on its upper end provided with an opening to receive said pin, substantially as described.

2. A fire-arm having a mainspring provided with a limb loosely fitted on the end thereof and adapted to engage the head of the hammer on the other side of the pivot from that engaged by the body of the mainspring, whereby on the rebound of the hammer the impact thereof is received by the limb before the spring is affected, said parts being combined substantially as described.

3. In a fire-arm, a pawl pivoted to the under side of the handle and having a hooked upper end projecting rearward into position to engage a detent-notch in the hammer, and a depending lower portion normally adapted to project forward under the action of gravity through an opening or slot in said handle, substantially as and for the purpose set forth.

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