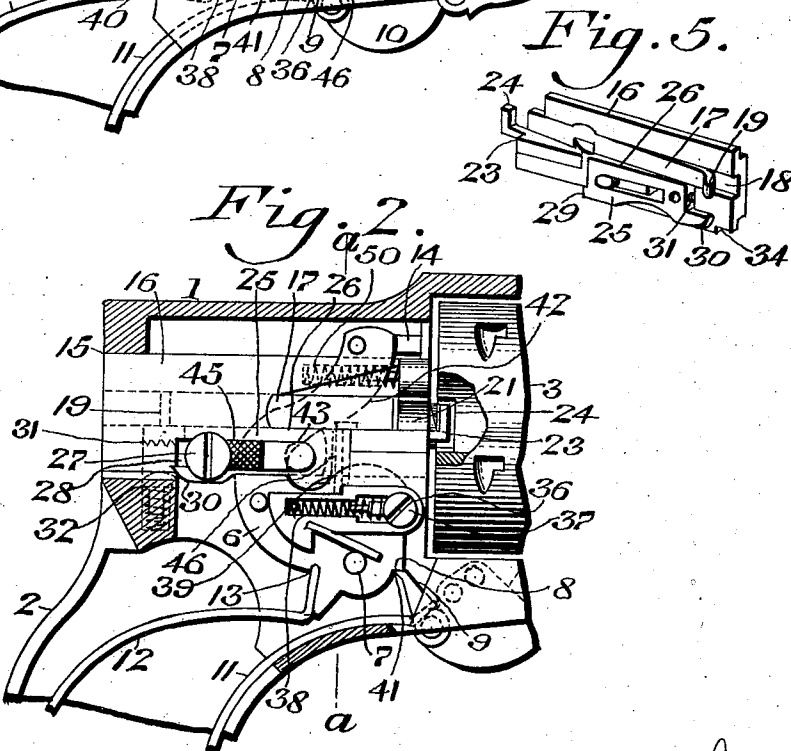
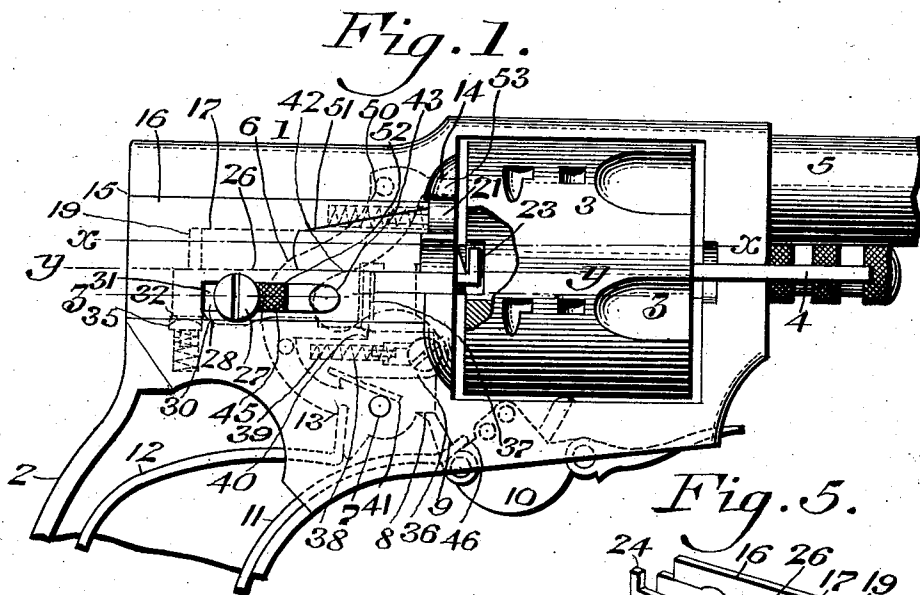


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 AUTOMATIC SHELL EJECTING DEVICE FOR REVOLVERS.
 APPLICATION FILED JULY 18, 1911.

1,019,446.

Patented Mar. 5, 1912.
 3 SHEETS—SHEET 1.



WITNESSES

P. F. Nagle.
L. Cowille.

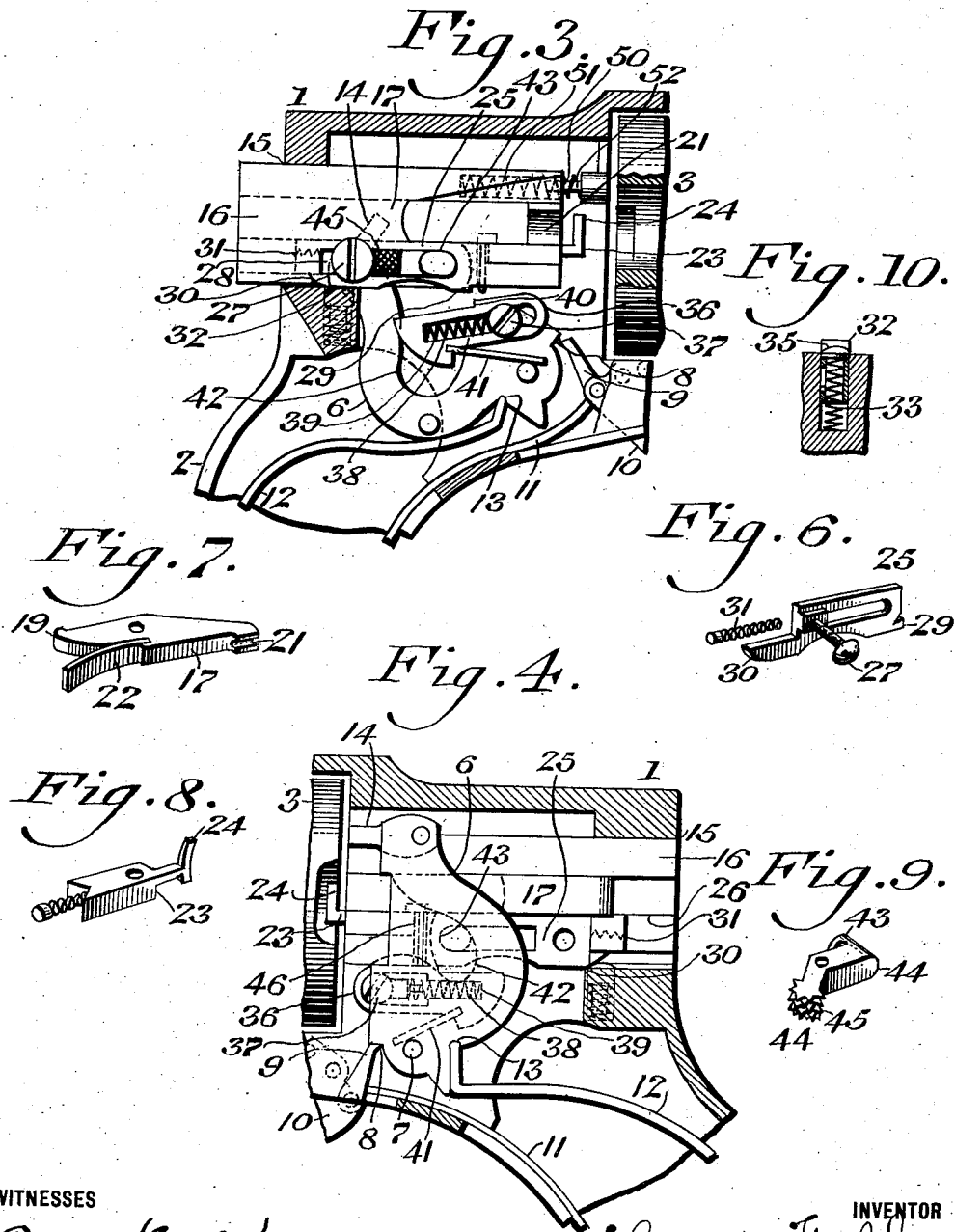
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3 SHEETS—SHEET 3.

Fig. 11.

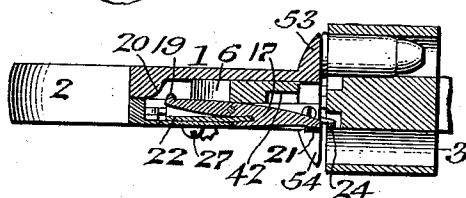


Fig. 12.

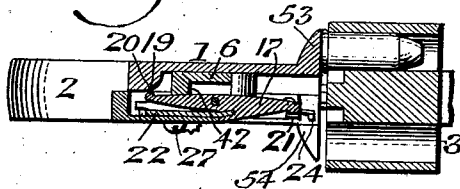


Fig. 13.

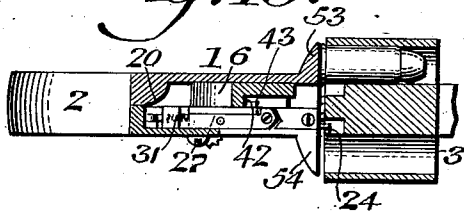


Fig. 17.

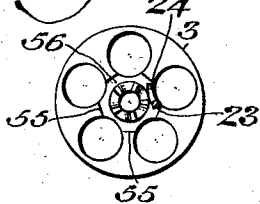


Fig. 18.

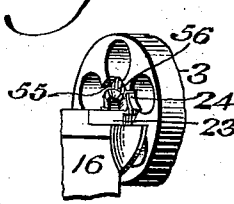


Fig. 14.

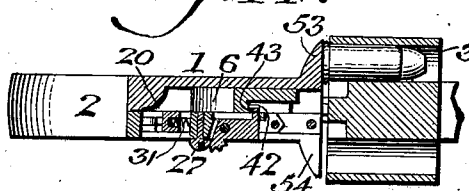
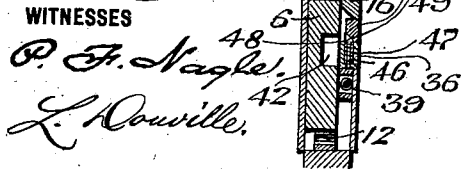


Fig. 15.



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Fig. 16.

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UNITED STATES PATENT OFFICE.

CHARLES FOEHL, OF PHILADELPHIA, PENNSYLVANIA.

AUTOMATIC SHELL-EJECTING DEVICE FOR REVOLVERS.

1,019,446.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed July 18, 1911. Serial No. 639,114.

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 Automatic Shell-Ejecting Device for Revolvers, of which the following is a specification.

My invention consists of a revolver having an automatic shell-ejector device, the same acting successively after each shot.

It further consists of means for retaining the ejector from action when the first charge of the full cylinder is fired.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

The invention is satisfactorily illustrated in the accompanying drawing, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific arrangement and organization shown and described.

Figure 1 represents a side elevation of my improved revolver, showing the interior parts of the mechanism in dotted lines and showing the hammer in its position after having fired a shell. Fig. 2 represents a side elevation of the frame and operative parts of the firing and ejecting mechanism, parts of the frame being illustrated in section. Fig. 3 represents a similar view of said parts and illustrating the hammer cocked. Fig. 4 represents a side elevation of the frame and firing and ejecting mechanism seen from the side opposite to that illustrated in Figs. 1, 2, and 3. Fig. 5 represents a perspective view of the inner face of the main or primary slide. Fig. 6 represents a perspective view of the secondary slide. Fig. 7 represents a perspective view of the loading gate. Fig. 8 represents a perspective view of the ejector. Fig. 9 represents a perspective view of the latch upon the main slide engaged by the cam groove of the hammer. Fig. 10 represents a sectional detail view of the lock for the main slide. Fig. 11 represents a longitudinal section on the line $x-x$ in Fig. 1, and with the main slide in its forward position. Fig. 12 represents a longitudinal section on the line $x-x$ in Fig. 1 and with the main slide in its rear position. Fig. 13 represents a longitudinal section on the line $y-y$ in Fig. 1. Fig. 14 represents a longitudinal section on the line $z-z$ in Fig. 1. Fig. 15 represents a

transverse section on the line $a-a$ in Fig. 2. Fig. 16 represents a detail side view of the hammer. Fig. 17 represents a detail end view of the cylinder, indicating the end of the ejector in its relative position to the recessed portion of the cylinder. Fig. 18 represents a perspective view of the rear end of the cylinder and the ejector.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings;—the reference numeral 1 indicates the frame of the pistol, which extends to form the grip 2, and in the forward portion of which is journaled the cylinder 3, of the usual or any preferred form, journaled upon a pintle 4. The barrel 5, projects from the forward end of the frame. A hammer 6 is fulcrumed upon a fulcrum pin 7, and has a shoulder 8 at the lower end of its forward edge which is engaged by a dog or sear 9, pivoted upon the trigger 10, so that the hammer can be cocked and again released by pulling upon the trigger. A spring 11 serves to reset the trigger, and a hammer spring 12 engages a shoulder 13, to the rear of the fulcrum pin and serves to throw the hammer forward. The hammer has at its free end a projecting nose or firing pin 14, which strikes the percussion cap of the cartridge. One side of the frame is open and formed with parallel and undercut guides 15, in which a substantially rectangular main slide 16 is guided to slide. Said slide has a cartridge-gate fulcrumed in it, which gate consists of a lever 17, the rear portion of which fits in a longitudinal groove or recess 18, in the inner side of the slide and is formed at its rear end with a rounded lip 19, which may ride upon a rounded or beveled projection 20, in the rear end of the frame when the slide is moved rearward, so that the gate may be rocked. Forward of its fulcrum, the gate projects through the slide and has a shoulder, 21, at its end, which shoulder prevents the cartridge registering with it from falling out. A spring 22 is secured to the cartridge-gate at its fulcrum and extends rearward to bear against the bottom of the recess in the slide to force the forward end of said gate outward.

An ejector 23, having an upwardly-projecting curved finger 24, to engage the rim of the last fired cartridge-shell, is yieldingly secured to the forward end of the main slide. A plate 25 slides in a recess 26, in the inner side of the main slide, being held and

guided in the same by a screw 27, movable in a longitudinal slot 28, in the main-slide. The lower edge of said plate projects below the edge of the slide and forms a shoulder 29, at its forward end and a rounded cam 30, at its rear end. A spring 31 bears against the rear end of the sliding plate and normally forces the same forward. A latch 32, is movably supported in the rear portion of the frame and has a spring 33 forcing it upward to engage a notch 34, in the main slide, and one side 35 of the head of said latch is rounded, so that the cam-portion 30 of the sliding plate may travel over it and depress the latch to disengage the same from the notch in the slide. A dog 36 is pivoted upon one side of the hammer by means of a screw 37, passing through a longitudinal slot 38, in the dog, and a spring 39 in said dog bears against the screw. The upper edge of said dog is formed with a shoulder 40 which may engage the shoulder of the sliding plate, and a flat spring 41 secured in the dog and bearing against the fulcrum pin of the hammer serves to bring the shoulder of the dog into engagement with the shoulder of the sliding plate. The hammer is formed with a curved cam 42 upon one side, which engages an inwardly projecting stud 43 upon the end of a bent finger-piece or lever 44 fulcrumed in the slot 28 in the main slide, directly forward of the screw 27 and having its roughened head 45 bearing against the head of said screw. A pin 46 slides in a vertical bore in the main slide and has a spring 47 forcing it upward. Said pin has a beveled head 48 and the cartridge-gate has a bevel 49, which engages said head to force the pin downward when the forward arm of the gate is moved inward, which causes the lower end of the pin to depress the dog 36 so that the same may pass rearward in cocking the hammer without engaging the sliding plate and without moving said plate and the slide and ejector rearward. A pin 50, projects rearward from the front portion of the action-frame and enters a registering bore 51, in the main slide, and a spring 52 fits in said bore and upon such pin, and serves to force the slide rearward. The pistol is formed with the usual recoil-shield 53 having a loading and discharge opening 54.

The pistol is loaded in the usual manner and the cartridge-gate is depressed by the rim of the cartridge as it is inserted in the chamber of the cylinder. When the chambers are loaded and the trigger is pulled, the hammer is cocked and the screw upon the side of the hammer begins to travel rearward in the slot of the dog until it strikes the rear end of said slot, when the dog moves rearward with the hammer and engages the shoulder of the sliding plate upon the main slide, moving said plate rearward

to depress the latch and disengage it from the notch in the main slide. The spring in the bore of the slide may now push said slide rearward and allow the ejector to pull out an exploded shell. As the slide moves rearward, the lip upon the rear end of the cartridge-gate engages the beveled projection in the frame, and the forward end with its shoulder is tilted inward, admitting of the empty shell being discharged, and the bevel upon said cartridge-gate depresses the pin 46 so as to depress the shouldered dog and allow the slide to be moved forward with the hammer, the cam on the latter engaging the inwardly projecting stud and bringing the main slide forward. The main slide is thus moved backward by its spring and again thrown forward while the hammer is thrown forward by its spring, firing a cartridge, while an empty shell is thrown out. When the chambers of the cylinder are loaded, the cartridge-gate is depressed by the rims of the cartridge, thereby causing the bevel on the gate to depress the pin which throws the dog out of engagement with the shoulder of the sliding plate upon the main slide, so that when the first cartridge is fired, the main slide and the ejector are not actuated and the loaded cartridge is not ejected. After the first cartridge is fired, the normal operation of the slide and ejector is resumed. When the cylinder is to be removed, the main slide is pulled back to withdraw the ejector from the notches in the chambers of the cylinder, when the pintle may be withdrawn and the cylinder taken out.

As will be seen from Figs. 17 and 18 of the drawings, the ejector bears against the walls 55 of the chambers in the cylinder within the recess 56 in the rear end of the same, so that when the latter is revolved, such ejector will act as a brake or friction device to prevent the cylinder from traveling too far as it is being revolved.

An efficient revolving firearm is thus provided, in which the last fired cartridge is ejected while another is fired, so that the cylinder may be loaded while firing between each shot, or after all or a part of the charges have been fired without breaking the pistol or otherwise disconnecting the parts. By operating the slide and extractor mounted thereupon by means of the spring pushing the slide rearward with a quick movement as soon as the latch holding the latter is retracted, the ejector acts to completely throw the empty shell out of the chamber in the cylinder. The forward throw of the main slide is accomplished by the hammer carrying the slide with it by its cam engaging the stud upon the finger-piece as the hammer is released and thrown forward by its spring and firing the cartridge, so that the ejector will be in place

to engage the rim of the exploded shell before such shell is carried around by the next pull upon the trigger.

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

1. In a revolver, a hammer, means for cocking and releasing the same, a slide provided with an ejector and with means engaged by the hammer for carrying it forward with the same, a spring bearing against said slide to move it backward, a latch engaging the slide to keep it from moving backward, a sliding plate arranged to depress said latch, and means connected to the hammer to actuate said plate before the latter moves forward in the act of firing.

2. In a revolver, a hammer, means for cocking and releasing the same, a slide provided with an ejector and with means engaged by the hammer for carrying it forward with the same, a spring bearing against said slide to move it backward, a latch engaging the slide to prevent backward movement of the same, a sliding plate upon the slide and constructed to release said latch, and a dog upon the hammer and constructed to engage and move the sliding plate when the hammer is cocked.

3. In a revolver, a hammer formed with a cam, means for cocking and releasing the same, a slide provided with an ejector and with a stud engaged by the cam upon the hammer, a spring bearing against said slide to force the same rearward, a latch engaging a notch in the slide and having a spring forcing it into such engagement and a rounded head-portion, a sliding plate upon the slide formed with a rounded cam portion for engaging the rounded head portion of the latch and with a shoulder, a spring forcing such plate forward, and a dog pivoted to be longitudinally movable upon the hammer and formed with a shoulder adapted to engage the shoulder of the sliding plate when the hammer is cocked.

4. In a revolver, a hammer formed with a curved cam on one side, means for cocking and releasing such hammer, a slide having an ejector at its forward end, a finger-piece pivoted to rock in the slide and having a

stud engaged by the cam of the hammer, a spring bearing against the slide to throw the latter rearward, a latch engaging a notch in the slide and having a spring forcing it into such engagement and formed with a rounded head-portion, a sliding plate upon the slide formed with a cam riding over said rounded portion and with a shoulder, a spring forcing said plate forward, and a dog pivoted to slide upon the hammer and having a spring forcing it rearward and formed with a rearwardly facing shoulder adapted to engage the shoulder of the sliding plate.

5. In a revolver, a main slide having means for throwing it rearward, a latch engaging said slide to hold it against rearward movement, a sliding plate upon said slide formed with a cam adapted to engage such latch to disengage the same, a hammer, means for cocking and releasing the same, a dog upon said hammer having a shoulder adapted to engage the sliding plate to move it rearward, a pin in the slide having its end adapted to bear against the dog, and a pivoted cartridge-gate in the slide formed with a shoulder to be engaged by the rim of the cartridge and to be depressed by the insertion of the same and formed with a bevel engaging and depressing the pin when the gate is rocked by the insertion of a cartridge.

6. In a revolver, a main slide provided with an ejector, means for forcing said slide rearward, a hammer formed with a cam, means for cocking and releasing said hammer, and a finger piece pivoted in said slide and having a stud adapted to be engaged by the cam on the hammer and to be retracted from engagement with the same.

7. In a revolver, a main slide provided with an ejector, means for throwing such slide rearward, a cartridge-gate fulcrumed in such slide and having an inwardly projecting lip upon its rear end, and an inclined projection in the action-frame over which such lip rides when the slide is thrown rearward to move the forward end out of the way of the moving shell.

CHARLES FOEHL.

Witnesses:

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N. BUSSINGER.