W. H. GATES.

FIREARM.

APPLICATION FILED MAR. 26, 1909.

946,214.

Patented Jan. 11, 1910.

Fig. 1.

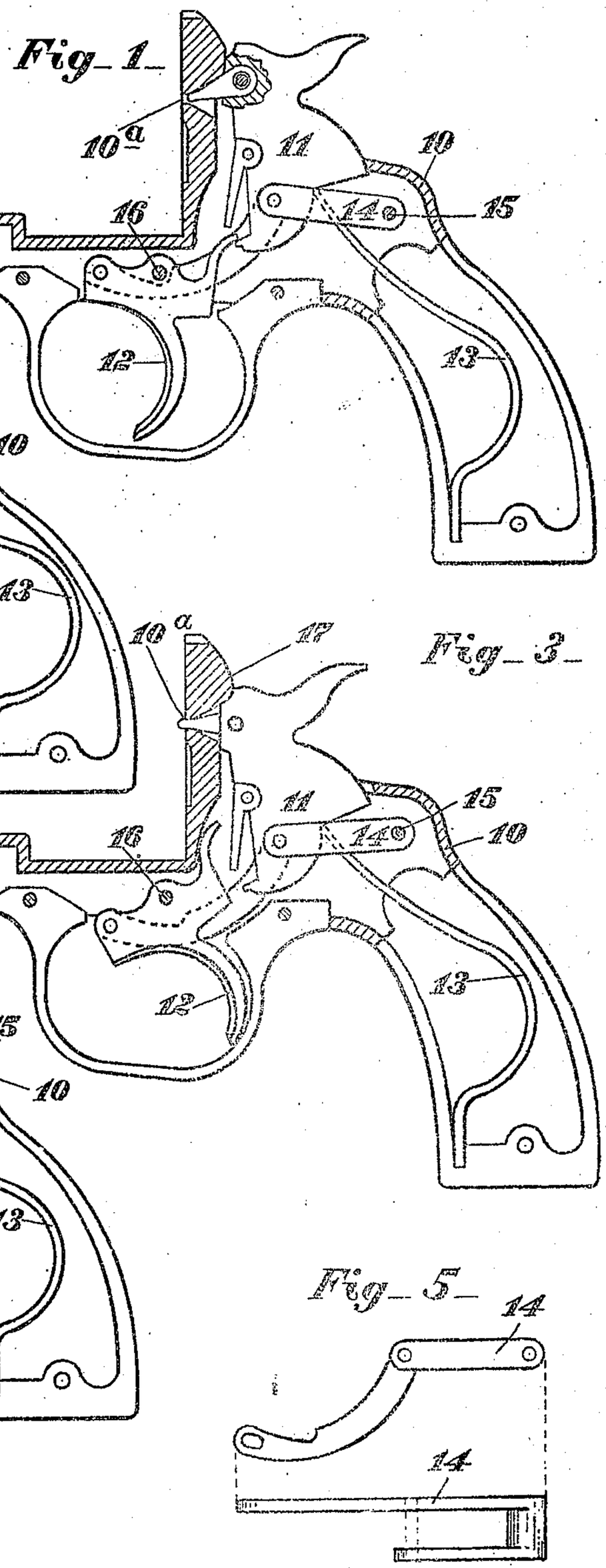


Fig. 2.

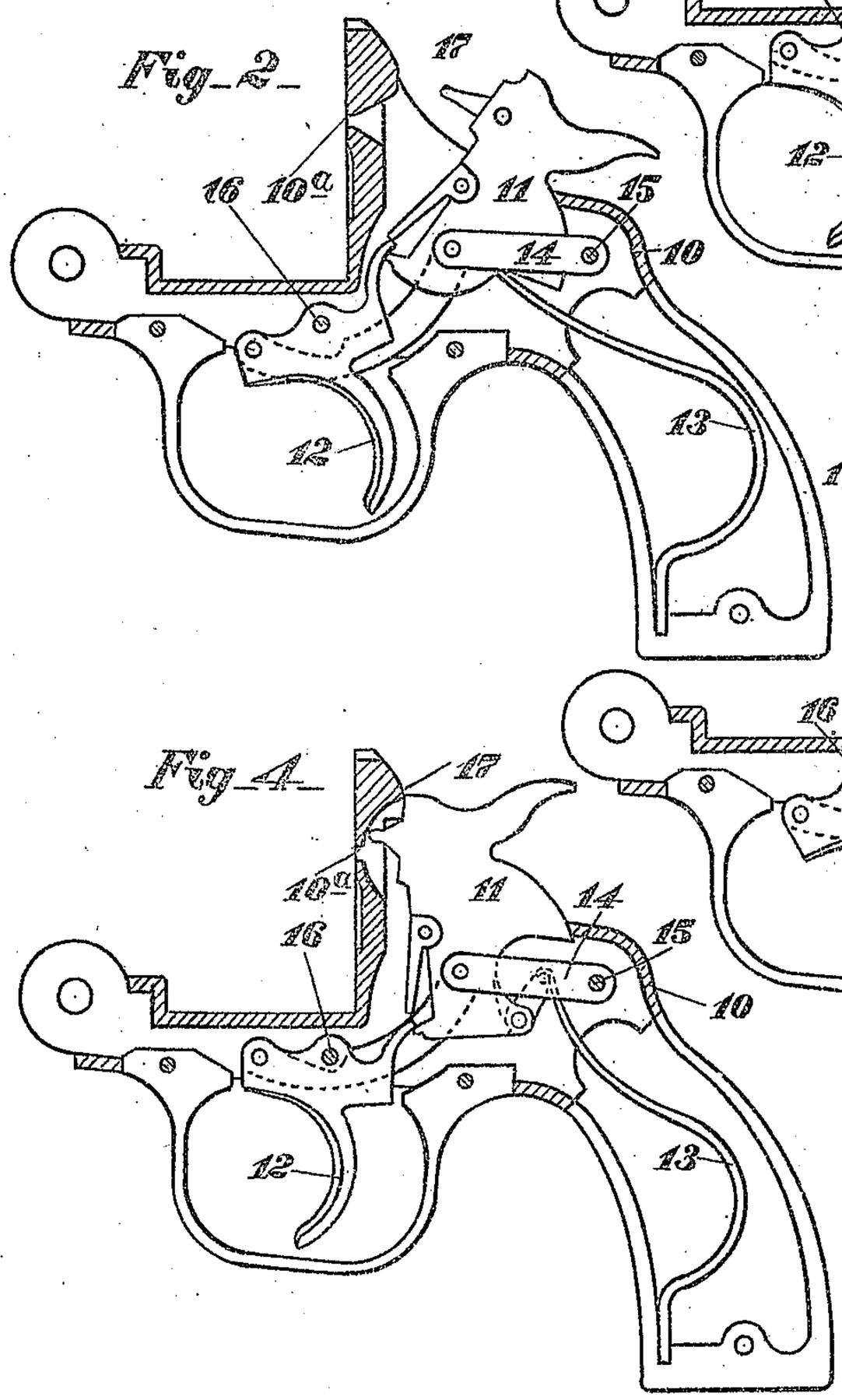


Fig. 3.




Fig. 4.




Fig. 5.




WITNESSES

Frank C. Palmer

Madeline D. Ritchie.

INVENTOR,

William H. Gates.

BY

Frank H. Allen

ATTORNEY.

# UNITED STATES PATENT OFFICE.

WILLIAM H. GATES, OF NORWICH, CONNECTICUT, ASSIGNOR TO THE HOPKINS & ALLEN ARMS COMPANY, OF NORWICH, CONNECTICUT.

## FIREARM.

946,214. Specification of Letters Patent. **Patented Jan. 11, 1910.**

Application filed March 26, 1909. Serial No. 486,010.

*To all whom it may concern:*

Be it known that I, WILLIAM H. GATES, a citizen of the United States, residing at Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in Firearms, of which the following is a specification.

The chief object of this invention is to provide simple but effective mechanism whereby fire arms of the "hammer" type are rendered safe when in the hands of children and other unskilled persons, but which may be operated under normal conditions without the aid of slides, thumb-pieces, or other special releasing means.

In the accompanying drawings I have illustrated my said invention as applied to a revolver but it will be obvious, and I wish it understood, that it may be as readily and effectively applied to the various types of fire arms, such as shot-guns and rifles, in which a hammer is provided.

In the said drawings, Figures 1, 2 and 3 are side views of a revolver frame in which is mounted lock mechanism embodying my present form of safety mechanism; the said frame being broken away in part so as to disclose the said mechanism. In Fig. 1 the hammer is shown in its "safe" position. In Fig. 2 the hammer is cocked and in Fig. 3 the arm has been "pulled off" and discharged, and the hammer is shown in its operative position. In Fig. 4 I have shown a similar view, in which the hammer nose is formed as an integral, or rigid, part of said hammer instead of being hinged to the hammer as in the preceding figures. In Fig. 5 I have illustrated, by side and top views, a novel form of hammer support, whereby I am able to move the said hammer into, and out of, its operative or firing position.

In these drawings the numeral 10 indicates the frame of a revolver, 11 denotes the hammer, 12 the trigger and 13 the main-spring, these specified parts of the lock mechanism being, in the main, of the ordinary types. The hammer, however, instead of being mounted upon a pivot pin, stud, or screw, in frame 10, is pivoted upon a lever 14, whose rear end portion, as here shown, is fulcrumed to said frame at 15 and whose front end portion is pivoted to the trigger 12 at a point forward of the trigger pivot 16 and so that, when the trigger is pulled rearward in the act of discharging the arm, (see Figs. 2 and 3), the lever 14 will be drawn downward and the connected hammer will be correspondingly lowered in the frame.

Under ordinary conditions, that is to say, when it is not desired to discharge the arm, the hammer is in its elevated position in the frame, as seen in Figs. 1 and 4, in which position the upper front portion of said hammer engages the full portion 17 of the frame and the hammer nose is thus held out of operative engagement with the cartridge but, when the trigger is pulled rearward sufficiently to bring the hammer to a full cock position, the hammer then snaps forward, while in its lowest position, and the hammer nose then registers with the opening $10^a$ in frame 10, and engages and discharges the cartridge. So soon as pressure of the finger is removed from the trigger the strained main-spring immediately operates to push the hammer upward to its safe position, as in Figs. 1 and 4 and, obviously, the lever 14 returns to its normal position and rocks the trigger back to its normal position. It will, of course, be understood that the same result could readily be obtained if an ordinary firing pin were mounted in the frame in position to be engaged by the hammer.

My described improvement has the decided advantages of cheapness, simplicity and strength of parts and requires no delicate fitting or adjustment of the lock parts.

Having thus described my invention I claim:—

1. In a fire arm, in combination with the frame and a trigger pivoted in said frame, a lever fulcrumed to the frame and pivoted to the trigger, and a hammer mounted on said lever.

2. In a fire arm, in combination with the frame and a trigger pivoted in said frame, a lever fulcrumed to the frame and pivoted to the trigger, and a hammer mounted on said lever between the trigger and the said fulcrum.

3. In a fire arm, in combination with the frame and a trigger pivoted in said frame, a lever fulcrumed to the frame and pivoted to the trigger, a hammer mounted on said lever and yielding means for holding the hammer normally in its inoperative position.

4. In a fire arm, in combination with the frame, a trigger pivoted in said frame, a

lever fulcrumed to the frame and pivoted to the trigger, a hammer mounted on said lever, a main-spring and means for returning the trigger to its initial position.

5. In a fire arm, in combination with the frame, a lever fulcrumed to said frame, a hammer pivotally mounted on said lever, and means for automatically actuating said lever, during the operation of discharging the arm, to move the hammer from its inoperative position to its operative position.

WILLIAM H. GATES.

Witnesses:
FRANK H. ALLEN,
CHARLES B. LEE.