

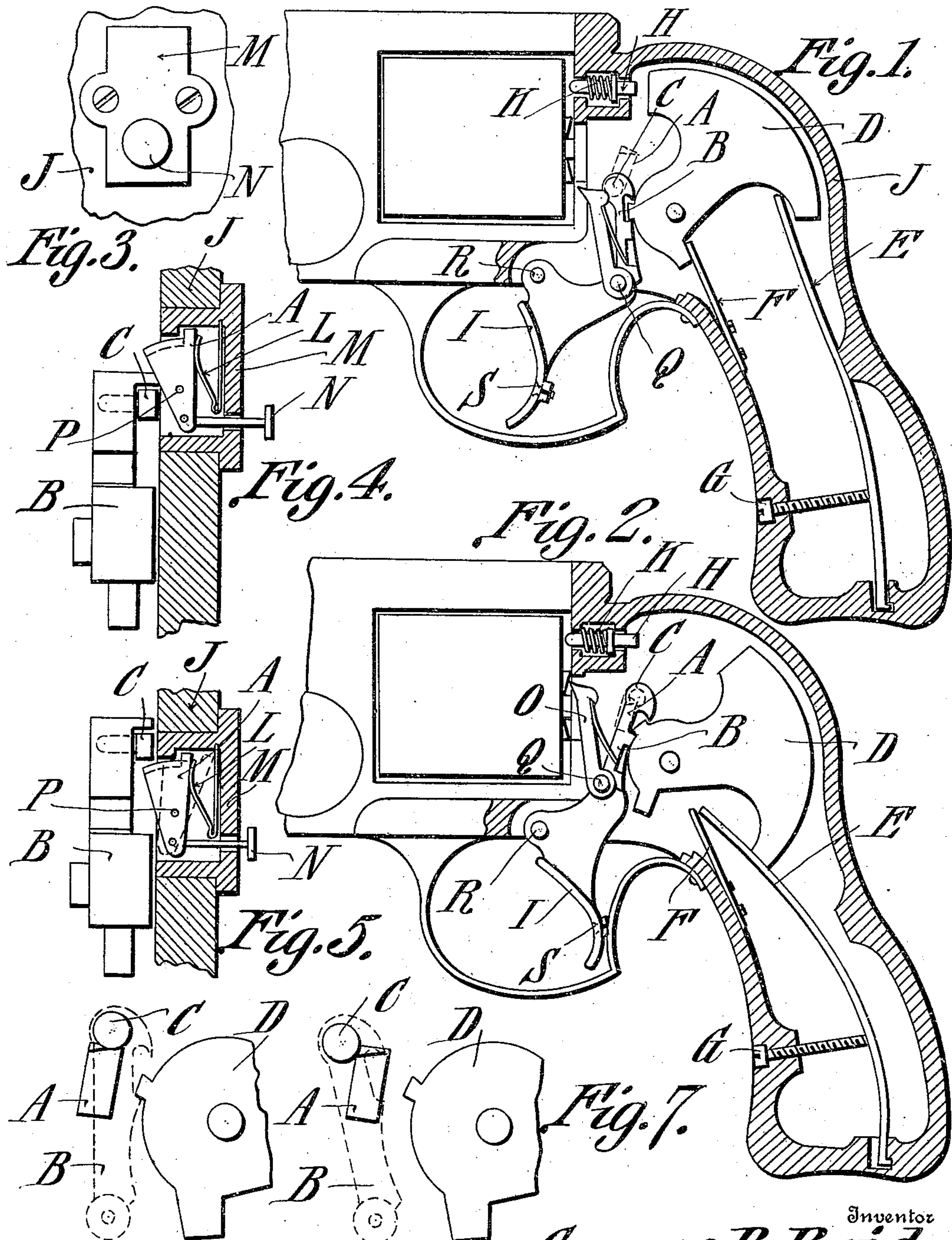
G. B. REID.

GUN.

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Witnesses
E. J. Hunt
F. J. Chapman

Inventor
George B. Reid.
By *Chas. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

GEORGE B. REID, OF ABERDEEN, WASHINGTON.

GUN.

955,436.

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To all whom it may concern:

Be it known that I, GEORGE B. REID, a citizen of the United States, residing at Aberdeen, Chehalis county, Washington, have invented a new and useful Improvement in Guns, of which the specification is as follows.

This invention has reference to improvements in trigger actions for fire-arms and its object is to provide a means whereby the fire-arm or gun may be discharged on the releasing of pressure on the trigger after the usual pressure has been applied to the trigger to cause the movement of hammer to the active position.

The invention will be best understood from a consideration of the following detail description taken in connection with the accompanying drawings forming a part of this specification, in which drawings,—

Figure 1 is a side elevation of a revolver with parts in section to display the trigger action, said parts being in the normal position. Fig. 2 is a view similar to Fig. 1 but showing the trigger pressed back and the hammer in the retracted position. Fig. 3 is a face view of a housing which is inset in the lock casing. Fig. 4 is a detail section through the gun-lock casing with parts in one position. Fig. 5 is a similar view with parts in another position. Figs. 6 and 7 are detail views showing different phases of the operation of the structure.

The showing of Figs. 1 and 2 is that of a revolver, but it will be understood that the invention may be applied to a shot-gun or a rifle or a pistol, and may be used wherever applicable.

There is provided a lock casing J, and in the particular showing of the drawings the casing J is utilized as the hand-grip for the revolver, but it will be understood that the casing J will be differently formed for different types of fire-arms and so the showing of the drawings is to be considered as typical only.

Mounted within the casing and entirely inclosed thereby is a hammer D which may be of ordinary construction and this hammer is urged in the active direction by a main spring E which latter may be of any of the known varieties adapted to the purposes of the present invention.

In the path of the hammer D is a firing pin H of ordinary construction surrounded by a recoil spring K and in the path of the

hammer D at an appropriate point is a recoil spring F, these several parts being of ordinary construction. There is also shown a tension adjusting screw G for the main spring E, this also being a customary adjunct.

There is also provided a trigger I which may be similar to triggers as ordinarily constructed and this trigger is mounted on a pivot pin R and carries a set screw S by means of which the travel of the trigger may be regulated. The end of the trigger remote from the finger-piece carries a pivot pin Q on which is mounted a pawl O of ordinary construction for actuating the usual cartridge cylinder of the revolver. Mounted on the same pivot pin Q there is a cocking pawl B provided with a shoulder for engaging a like shoulder on the hammer D so that when the trigger I is pulled by the finger of the operator in the usual manner the hammer D will be moved toward the retracted position against the action of the spring E, but the shoulders are so related that the engagement between the shoulder of the cocking pawl B and the shoulder of the hammer D is maintained when the trigger has reached the full rearward position.

Inset in the casing J at a point adjacent to the cocking pawl B is a housing M opening into the interior of the casing. Mounted in the casing M is a pivoted block A having one end beveled, and this block is urged in a direction to maintain the beveled end within the casing J beyond the inner wall thereof and beyond the inner edge of the housing M, by a spring L.

When the trigger I is pulled rearwardly under the impulse of the finger of the operator, the cocking pawl B is elevated, and at the same time causes the retractive movement of the hammer D against the action of the spring E. As the cocking pawl B moves to the uppermost position it passes the block A and moves the same into the housing M against the action of the spring L. Carried by the cocking pawl B is a roller C, the action of the roller being that of a pin, the roller simply reducing friction. When the cocking pawl B has reached the uppermost position the roller C is above the upper end of the block A and the latter is moved to its normal position by the spring L so as to override the roller C, and it is the beveled end of the block A that then overrides the roller C. The bevel of the

block A is in a direction to cause the roller C and with it the cocking pawl B to move on the pin Q in a manner to carry the shoulder on the cocking pawl B out of the path of the shoulder on the hammer D. This action of the block A however, does not take place until the trigger I is released by the operator.

With a structure such as described, the hammer is moved to the retracted position against the action of the spring E by the pull of the trigger I and instead of being released at the termination of the backward movement of the trigger I the hammer is held in the retracted position so long as the operator may desire. When the operator desires to cause the discharge of the fire-arm the trigger I is released from the pressure and then returns under the action of the spring usually employed for the purpose toward its normal position and also is under the action of the main spring E through the hammer D. As the parts move toward the initial position the roller C is brought into engagement with the beveled end of the block A. Further movement of the hammer D toward the initial position causes the roller C to move along the beveled end of the block A and the cocking pawl B is thereby forced away from the hammer D in a direction to carry the shoulder of the cocking pawl B out of engagement with the corresponding shoulder on the hammer D until ultimately the hammer D is released from engagement with the cocking pawl B and then moves with great speed under the action of the main spring E until the firing pin is engaged and the cartridge is discharged, the hammer D first engaging the recoil spring F and putting the latter under tension so that ultimately the hammer D is returned to an intermediate position where the main spring E and recoil spring F are in equilibrium. The roller C ultimately passes from the beveled edge of the block A and then the trigger I returns to its normal position, the roller C of the cocking pawl B moving along one side of the block and the cocking pawl is ultimately brought into position where it will again be in operative relation to the hammer for a repetition of the action described.

It is sometimes desirable to bring the hammer to the retracted position and to then lower the hammer without permitting it to escape from engagement with the trigger. For this purpose there is provided a push pin N extending outside the housing M and connected at the inner end to one end of the block A, this end being on the side of pivot P remote from the beveled end of the block A. The operator may, by pushing upon the pin N, cause the block A to become entirely housed within the member M so as to be out of the path of the roller C and then the

trigger may be slowly released to permit the hammer D to move toward the firing pin H but at such low speed as to be arrested by the recoil spring F before striking said firing pin. The mechanism may thereby be returned to normal or rest position without causing the discharge of the cartridge carried by the gun.

It will be understood of course that the hammer shown in the drawings is illustrative of any impact member for causing the discharge of the load of the gun. It will be observed that the cocking or moving of the impact member or hammer to the retracted position against the action of the impelling spring and the holding of the impact member in the retracted position is due entirely to the pulling of the trigger and the maintenance of the pressure on said trigger and as soon as the pressure on the trigger is relieved the said trigger is immediately disconnected from the hammer and the latter is free to move under the impulse of the main spring to deliver an impact blow to the firing pin, assuming of course that the pin N has not been manipulated to move the block A out of the path of the roller or pin C.

What is claimed is:—

1. In fire-arms, a spring-actuated hammer, a trigger, connections between the trigger and hammer for causing the cocking of the hammer on the pulling of the trigger, and a throw-off for disconnecting the hammer from the trigger on the release of the latter.

2. In fire-arms, a spring-actuated hammer, a trigger, connections between the trigger and hammer for causing the cocking of the hammer on the pulling of the trigger, and a throw-off for disconnecting the hammer from the trigger on the release of the latter, said throw-off responding to the action of the hammer actuating spring.

3. In fire-arms, a hammer, a main spring therefor, a trigger, a cocking pawl carried by the trigger and normally engaging the hammer, and a throw-off for the cocking pawl for disengaging it from the hammer, said throw-off responding actively to the movement of the hammer toward normal position under the impulse of the main spring.

4. In fire-arms, a hammer, a main spring therefor, a trigger, a cocking pawl carried by the trigger and normally engaging the hammer, and a diverting member inactive with respect to the cocking pawl on pulling the trigger and active to cause the cocking pawl to release the hammer to the action of the main spring when the trigger is released.

5. In fire-arms, a hammer, a main spring therefor, a trigger, a cocking pawl carried by the trigger and normally engaging the hammer, and a beveled block movable into the path of the cocking pawl when the ham-

mer is in the cocked position and tending to disconnect the cocking pawl from the hammer when the latter is moved by the main spring on the release of the trigger.

5 6. In fire-arms, a hammer, a main spring therefor, a trigger, a cocking pawl carried by the trigger and normally engaging the hammer, an inclosing casing for the hammer, spring and cocking pawl, a diverting

member for the cocking pawl carried by the 10 casing, and means extending to the exterior of the casing for rendering said diverting member inactive.

GEORGE B. REID.

Witnesses:

MICHAEL RYAN,
WM. A. HARDY.