

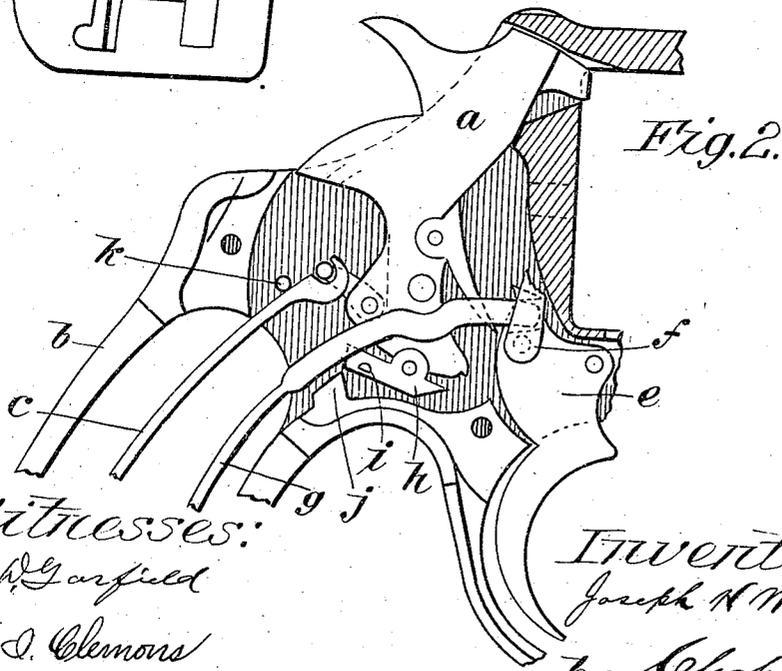
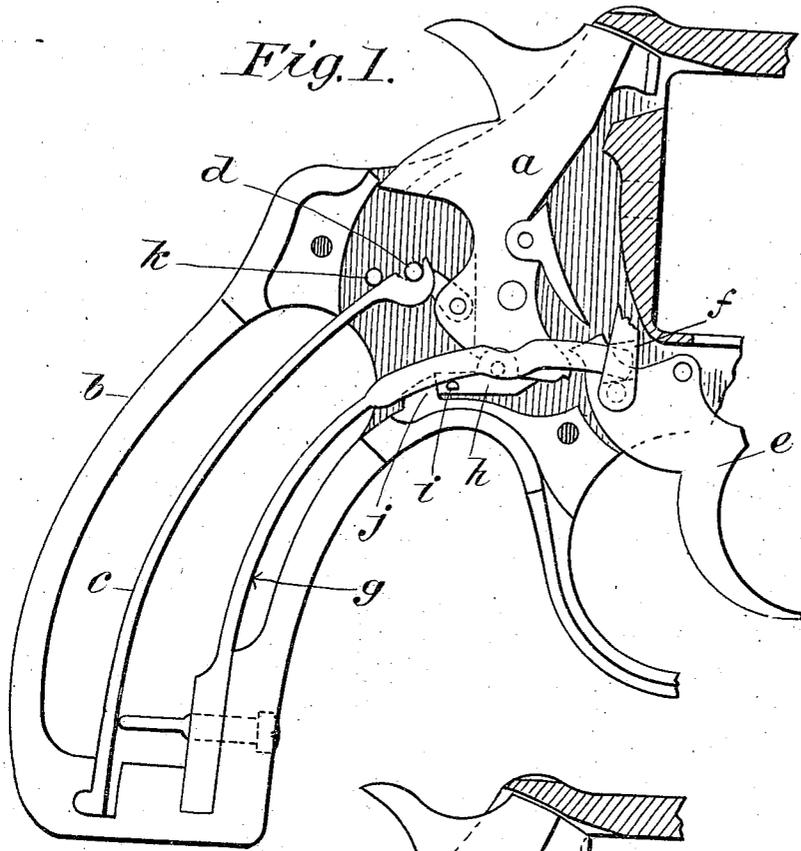
No. 708,437.

Patented Sept. 2, 1902.

J. H. WESSON.
REVOLVER LOCK.

(Application filed Mar. 15, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH H. WESSON, OF SPRINGFIELD, MASSACHUSETTS.

REVOLVER-LOCK.

SPECIFICATION forming part of Letters Patent No. 708,437, dated September 2, 1902.

Application filed March 15, 1901. Serial No. 51,372. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. WESSON, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Firearms, of which the following is a specification.

This invention relates to revolvers, and particularly to means for withdrawing the nose of the hammer from contact with the primer after firing the arm, and is in the nature of an improvement on the construction forming the subject-matter of my United States Letters Patent, dated August 14, 1900, No. 655,844.

The drawings forming part of this specification consist of Figure 1, which shows an enlarged sectional elevation of a revolver embodying my invention, showing the hammer forced back from contact with the primer of a cartridge. Fig. 2 is a similar view to Fig. 1, showing the position of the parts at the fall of the hammer before pressure on the trigger is released.

It is to be understood that these improvements apply more particularly to revolvers of the self-cocking type.

In my said patent of August 14, 1900, means are provided for effecting the rebound of the hammer by means of a peculiar connection between the mainspring and the hammer and for locking the hammer in a rebounded position by means of a safety-stop actuated by the release of pressure on the trigger.

The object of this invention is to provide a construction whereby the operation of the safety-catch for the hammer, as described in my said prior patent, will effect the withdrawal of the nose of the hammer from contact with the cartridge-shell positively, the rebounding devices described in my said patent being done away with. These improvements result in a simplification of the construction of the arm.

In carrying my invention into practice the hammer *a* is hung in the usual manner in the frame *b* and is provided with a mainspring *c*, supported, as usual, in the frame at one end and connected with the hammer at its other end by means of a stirrup *d*, pivotally supported in the hammer, in which it may have a free swinging movement. The trigger *e* is

pivotally supported in the frame in such position as to properly engage the hammer in the usual way in arms of the self-cocking type. On the trigger the hand *f* is pivoted, on which the free end of a trigger-spring *g* bears, said spring, as described in my prior patent, serving the double purpose of a trigger-spring and a spring for the hand to hold the latter in operative position relative to the ratchet on the end of the cylinder. This trigger-spring *g* lies close beside the lower end of the hammer, on the lower extremity of which is pivotally supported the safety-catch *h* for the hammer. In the side of this safety-catch is a pin *i*, which projects out under the trigger-spring *g*. The rear end of the safety-catch is more or less rearwardly beveled and is adapted when pressed downward by the action of the spring *g* on the pin *i* to bear against a similarly-beveled projection *j* on the frame of the arm. When the hammer is in the position shown in Fig. 1 and the safety-catch is in engagement with the projection *j*, it will be seen that the swing of the hammer to the rear will cause the rear end of the safety-catch to be forced upwardly toward the hammer by the contact of said rear end with the plane. This movement serves to raise the rear end of the catch far enough so that as the hammer falls the catch will not strike said projection. Obviously it is also necessary that the rear end of the catch should not fall by gravity when the hammer is in its cocked position, and to that end said catch is supported on the hammer in a manner which provides for means of holding the rear end of the catch in the elevated position shown in Fig. 2, as described in my said prior patent, but which permits the depression thereof by the contact of the trigger-spring when the trigger is released.

Referring to Fig. 2, it will be seen that when the hammer falls the rear end of the catch *h* is in such position relative to the projection *j* on the frame that when the trigger is released and the spring *g* forces said safety-catch downward the lower end of the inclined portion of the safety-catch will strike the upper end of the inclined face of the projection, and the trigger-spring *g* in forcing the safety-catch down to the position shown in Fig. 1, as it does when the trigger is released, must forcibly swing the upper end of the hammer rear-

wardly to the position shown, thereby producing the same effect as is attained by a rebounding of the hammer through the cooperation of the mainspring—that is, the rear end of catch *h* in moving down the inclined face of projection *j* acts as a cam-lever, and the inclined face of projection *j* acts as a cam to force the lower part of the hammer forward, thus swinging back the upper or striking end of the hammer.

The safety-catch *h* having performed the function of the rebounding mechanism is held by the spring *g* in a position of engagement with the projection *j*, thereby fulfilling its further function as a safety-catch for the hammer in its rebounded or partially-retracted position, as described in my patent hereinbefore referred to. The degree of inclination of the abutting surfaces of the catch and the projection *j* while ample for the purpose of retracting the nose of the hammer is not sufficiently great to permit the separation thereof against the force of the trigger-spring by any power which might be applied to the upper end of the hammer to force it in the direction of the cylinder. If desired, a pin *k* may be located in the frame in such position as to arrest the movement of the mainspring *c* at an instant before the nose of the hammer strikes a cartridge. This would permit a very slight separation of the stirrup and the mainspring, as shown in Fig. 2—that is to say, it would leave the hammer free to swing on its pivot—and therefore the safety-catch would operate to retract the upper end of the hammer nearly to the full extent of its retracting movement, free from the counteracting influence of the mainspring, which would come in contact with the stirrup only at the end of the rearward movement of the hammer. It is found in practice, however, that this pin *k* is not an essential element, though under certain conditions it would be desirable.

It is seen from the above description that the present construction is a great improvement over the construction shown in my prior patent in that it not only provides for the positive retraction of the hammer, but also in that it does away with a nice adjustment of the parts necessitated by the construction

providing for the rebounding of the hammer through the cooperation of the mainspring. 50

In this specification the words "retraction" and "rebounding" as applied to the hammer are used synonymously, for the word "rebound" has by usage become a familiar one whereby to describe the retraction of the hammer. As a matter of fact, however, the hammer in the construction described herein does not rebound; it is retracted. 55

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is— 60

1. In a firearm, a pivoted hammer, a mainspring connected to said hammer and tending to throw it forward, a safety-catch pivoted to the hammer, an incline on the frame against which said safety-catch bears with cam action to rebound the hammer, and a spring acting on said catch to force it along the incline, all combined. 65

2. In a firearm the combination of a pivoted hammer, a mainspring connected to the hammer to throw it forward, a safety-catch pivoted to the hammer, and an incline on the frame with which said safety-catch engages in certain positions as described, said incline acting as a cam to force back the hammer against the pressure of the mainspring. 70

3. In a firearm the combination of a hammer, a mainspring acting on the same to force it to striking position, a safety-catch pivoted to the hammer, a cam or incline in the frame with which said safety-catch makes contact in certain positions, and the trigger-spring engaging said catch to force it along the incline, thereby rebounding the hammer. 75

4. In a firearm, the combination of a hammer and mainspring a safety-catch pivoted to the hammer, an incline in the frame against which the free end of the catch bears in certain relations, and automatic means operating to force said catch along the incline, thereby rebounding the hammer. 80 85 90

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