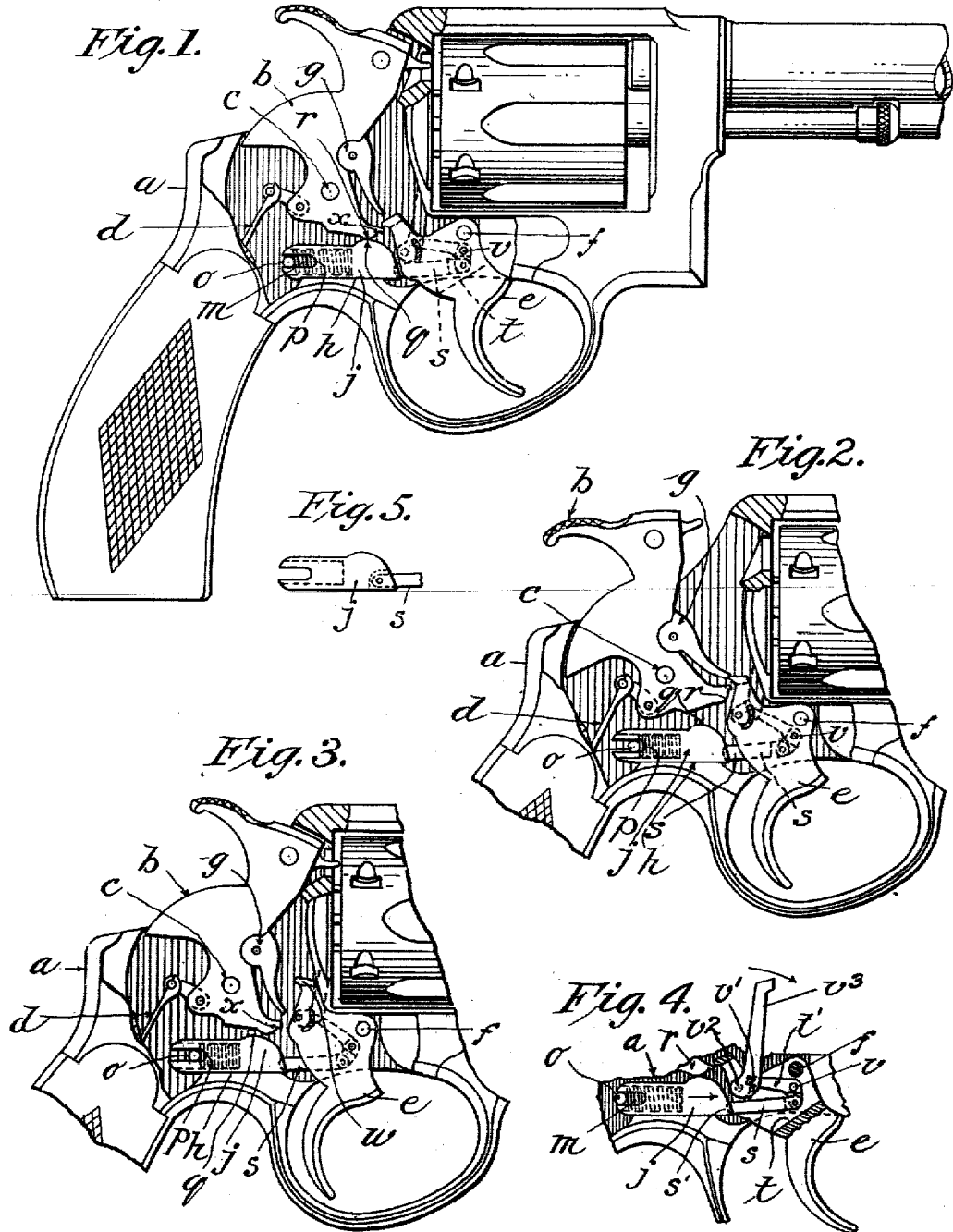


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J. H. WESSON.
FIREARM.

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UNITED STATES PATENT OFFICE.

JOSEPH H. WESSON, OF SPRINGFIELD, MASSACHUSETTS.

FIREARM.

No. 811,807.

Specification of Letters Patent.

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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 firearms, the object thereof being to provide an improved construction of so-called "rebounding" mechanism, but in this case more properly termed a "retracting device for the hammer," inasmuch as a positively-moved device is interposed at the proper time between the hammer and the frame to retract the nose of the hammer from the position it occupies at the moment of firing, and which serves as a positive block for the hammer to prevent the latter from being accidentally brought in contact with the primer of a cartridge in the cylinder by some accidental blow.

A further object of the invention is to provide a retracting device for the hammer, so arranged that the movement of the hammer independently of the trigger, as in the cocking of the hammer by the thumb, will not render the retracting device ineffective to block the fall of the hammer should it be released during the manual cocking operation.

A still further object of the invention is to provide a construction in which the spring which moves the hammer shall serve also to hold the hand in operative relation to the cylinder.

Having these ends in view, the invention consists in mounting a sliding wedge-like member in the frame which is connected by suitable means with the trigger, whereby when the trigger is released after the fall of the hammer a suitable spring associated with this sliding member operates to swing the trigger forward to normal position and simultaneously to retract the hammer by pushing said wedge-like member under the lower end thereof forwardly of its pivotal point, which operates to retract the upper end of the hammer and to hold it in retracted position.

The invention is fully illustrated in the drawings, in which—

Figure 1 is a side elevation of a revolver with certain parts broken away to show the application of the invention in its relation to the hammer and trigger, the hammer being in its retracted position. Fig. 2 is a similar view to Fig. 1, showing the parts in a different position, the hammer being raised as in

the act of firing. Fig. 3 is a view similar to the others, but showing the hammer down as at the moment of firing and before pressure on the trigger has been released, whereby the actuation of the retracting device is rendered possible. Fig. 4 is a longitudinal sectional elevation of the trigger-retracting device and hand, showing a construction whereby the spring which actuates the retracting device and trigger may also serve to actuate the hand. Fig. 5 is a side elevation of the retracting device, showing a slight modification in the mode of connecting the latter to the trigger.

For the sake of convenience the active member of the retracting device will hereinafter be referred to as a "wedge-block."

In the various drawings like letters of reference refer to like parts in the various figures, and *a* indicates the frame of the arm, in which the hammer *b* is pivotally supported, as at *c*, in the usual manner in arms of this class. The mainspring for the hammer is indicated by *d*, and *e* is the trigger, pivotally supported in the frame at *f*. The arm shown herein is of the self-cocking type, and the hammer is provided, therefore, with the usual cocking-lever *g*.

Beneath the hammer and between it and the frame the latter is leveled off, as at *h*, to receive the sliding wedge-block *j*. The rear end of this member is chambered out to receive a coiled spring *m*, which bears against the bottom of the chamber thus provided and against a pin *o* in the frame. Preferably the chambered-out end of the wedge-block is slotted transversely, as at *p*, in which slot the pin *o* is located, whereby during the sliding movement of the block in one direction this pin will serve to hold the latter in position. This is a detail of construction, however, and any means may be employed to prevent the displacement of the sliding wedge-block and any other arrangement of spring may be substituted for that shown.

The forward end of the wedge-block *j* is rounded off, as at *q*, and the lower end of the hammer, which extends forwardly of the pivotal point thereof, is provided with a slightly-rounded projection *r* to bear on the rounded end of the wedge-block, whereby the movement of the latter against the lower end of the hammer will be relieved from more or less friction. A lever *s* is located between the trigger and the forward end of the wedge-block, the latter being provided with a slight depres-

sion s' to receive the end of said lever s , the opposite end of which extends into a vertically-disposed slot in the trigger, the lower border of which is indicated by t , Fig. 4, and in this slot an elbow-lever t' is pivoted at v to the trigger, the short downturned arm of said lever being pivotally connected to the lever s and the long arm extending back to and bearing on a pin v' , offset from the pivot-pin v^2 of the hand v^3 . Of course the lever t' may be omitted if it is desired to use a separate spring for the hand in the usual manner, and in that case the lever s would be pivoted directly to the trigger. While it is preferred that the rear end of the lever s should only bear against the end of the wedge-block j , as shown in the drawings, because of the facility with which the parts may be dismounted, it may be, if desired, pivotally secured to the forward end of the wedge-block, as shown in Fig. 5.

The spring m in the wedge-block is the trigger-spring, and whenever the trigger is pulled to cock the hammer this spring is compressed against the pin o , and because of the lever connection between the trigger and the wedge-block j the latter moves with the trigger, and therefore, as distinctly shown in Figs. 2 and 3, the retraction of the trigger moves the rounded end q of the wedge-block to the rear, taking it out of the way of the hammer when the latter falls; but as soon as pressure on the trigger is relieved the spring m will swing the trigger forward, pushing the wedge-block j at the same time under the hammer and against the projection r on the latter, thus swinging the lower forwardly-extending end of the hammer upward and retracting the nose of the hammer from a position of contact with the primer of a cartridge. As long as the wedge-block occupies the position relative to the hammer shown in Fig. 1 the nose thereof cannot be forced into contact with the primer of a cartridge in the cylinder.

Whether the hammer is cocked by the operation of the trigger or whether it is cocked manually by the thumb is immaterial so far as the result of this operation concerns the actuation of the wedge-block, for in either case the release of the trigger after firing will effect the retraction of the nose of the hammer in the manner described; but there is another element of safety in the use of the wedge-block as herein constructed which results from the fact that its movements are entirely independent of the movements of the hammer, and therefore when it is in operative retracting position—that is to say, in the position shown in Fig. 1—the hammer may be raised by the thumb more or less and let fall again without exploding the cartridge, for the reason that unless by a pull on the trigger the spring m is held against reaction it will always operate to locate the wedge-block

in a position to intercept the fall of the hammer and prevent the nose of the latter from striking the cartridge.

It has been stated in the foregoing paragraph that the movement of the wedge-block is independent of the hammer; but by that it should be understood that it is always free to move into a blocking position relative to the hammer entirely independently of the latter. As a matter of fact, the hammer when it is cocked by hand will cause the wedge-block to be moved to the rear because of the engagement of the lower end of the hammer with the lip w on the upper rear end of the trigger, and thus swing the latter on its pivot; but if the hammer is released at any time before this lip engages the full-cock notch x in the hammer the spring m will move the wedge-block forwardly in time to block the fall of the hammer. Thus it is seen that this wedge-block j in the construction herein described serves not only to retract the hammer under all conditions of operation, but serves also as a safety device under certain conditions hereinbefore described.

The wedge-block not only serves as a safety device when the hammer is cocked by the thumb, but if for any reason the hammer should be partially cocked by a pull on the trigger and then released by the finger slipping off of the trigger the operation would be the same, and the wedge-block would move into blocking position in the same manner as described when the thumb slips off of the hammer.

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

1. In a firearm, a hammer, a trigger, and a retracting device for the hammer consisting of a slidable wedge-block located between the under side of the hammer and the frame, a positive connection consisting of a link extending between said block and the trigger, a spring having a bearing on said block and on a suitable abutment on the frame, to actuate both the block and the trigger.

2. In a revolver, a hammer and a retracting device therefor, and a hand to rotate the cylinder, a trigger, and an elbow-lever pivotally mounted on the latter; one arm of which bears on the hand one side of the pivotal point of the latter, and a link connected to the other arm of the elbow-lever and extending to said retracting device, together with a spring to actuate the latter and the trigger and to hold the hand in operative relation to the cylinder of the revolver.

3. In a revolver, a trigger and a hand thereon to rotate the cylinder, and an elbow-lever pivoted on the trigger one arm of which bears on the hand one side of the pivotal point of the latter, a link pivotally connected to the other arm of the elbow-lever, and a spring to apply endwise pressure to said link

to move the trigger in one direction and through said elbow-lever to hold the hand in operative relation to the cylinder of the revolver.

5 4. In a firearm, a hammer, a trigger, and a retracting device for the hammer, said device having a bearing on and being positively actuated by the trigger but not attached thereto, and a spring to move the retracting device and
10 trigger to retract the hammer after the trigger has been actuated to effect the discharge of the arm.

5. In a firearm, a hammer, a trigger, and a retracting device for the hammer consisting
15 of a slidable wedge-block located between the under side of the hammer and the frame, a connection consisting of a link extending between said block and the trigger, and a spring bearing on the block to move the latter and said trigger to normal position after
20 the trigger has been actuated to fire the arm.

6. In a firearm, a hammer, a trigger, and a

retracting device for the hammer consisting of a slidable wedge-block located between
the under side of the hammer and the frame, 25 a positive connection consisting of a link extending between said block and the trigger, the rear end of said block being provided with a chamber, a spring in said chamber
having a suitable abutment on the frame and 30 serving to actuate both the block and the trigger.

7. In a firearm, a hammer, a trigger, and a retracting device for the hammer connected
with the trigger and movable by the latter to 35 inoperative position, said device constituting also a safety device, and a spring bearing on said retracting device and on the frame to normally hold the device in a position to block the fall of the hammer.

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