

(No Model.)

W. MASON.
LOCK FOR FIRE ARMS.

No. 260,586.

Patented July 4, 1882.

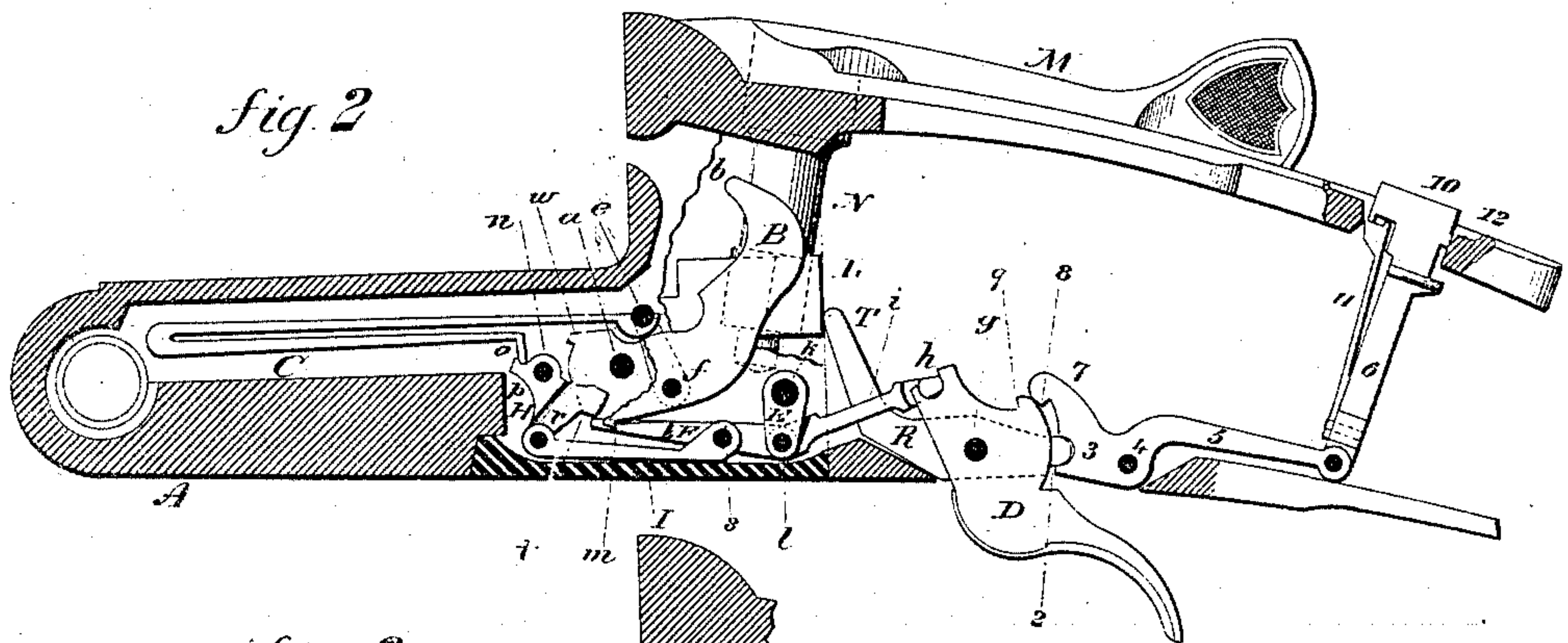
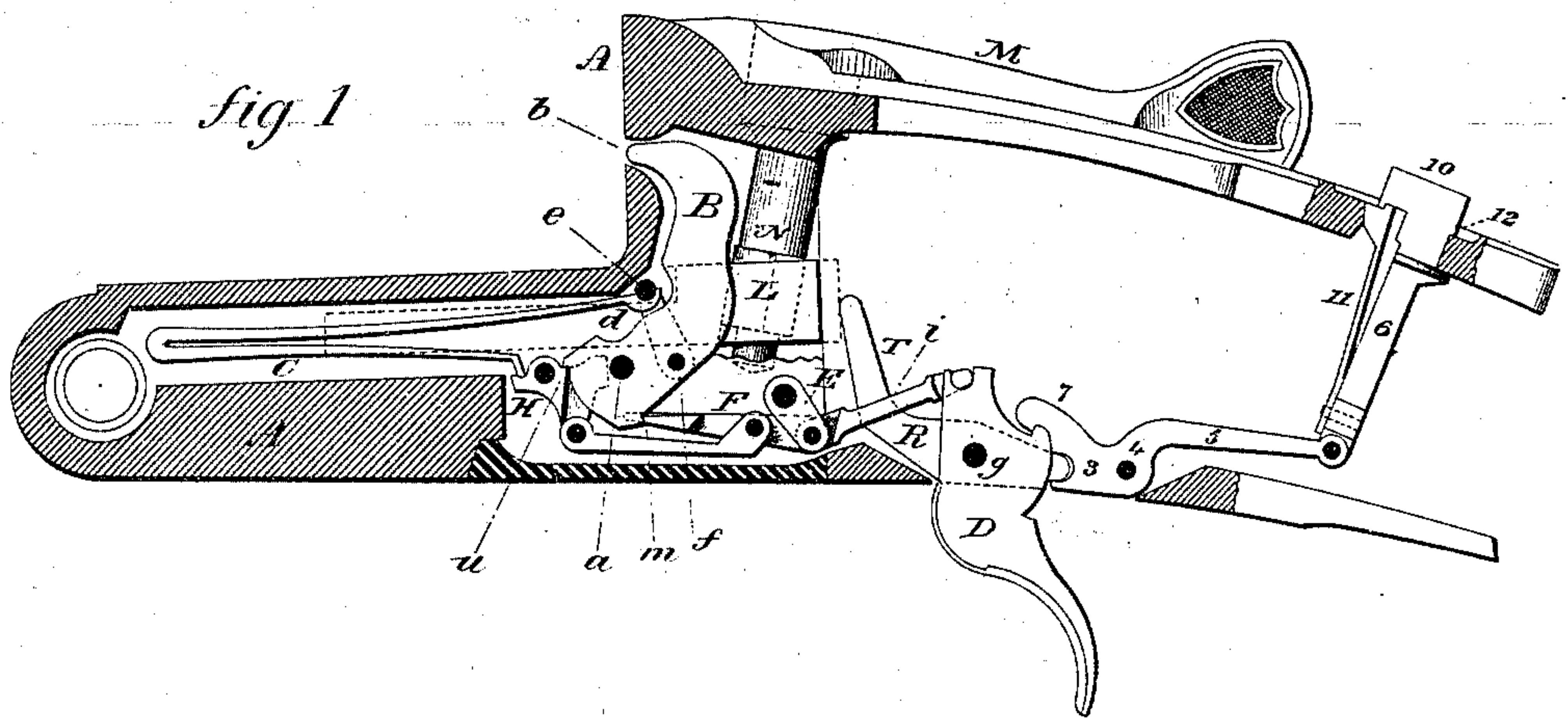
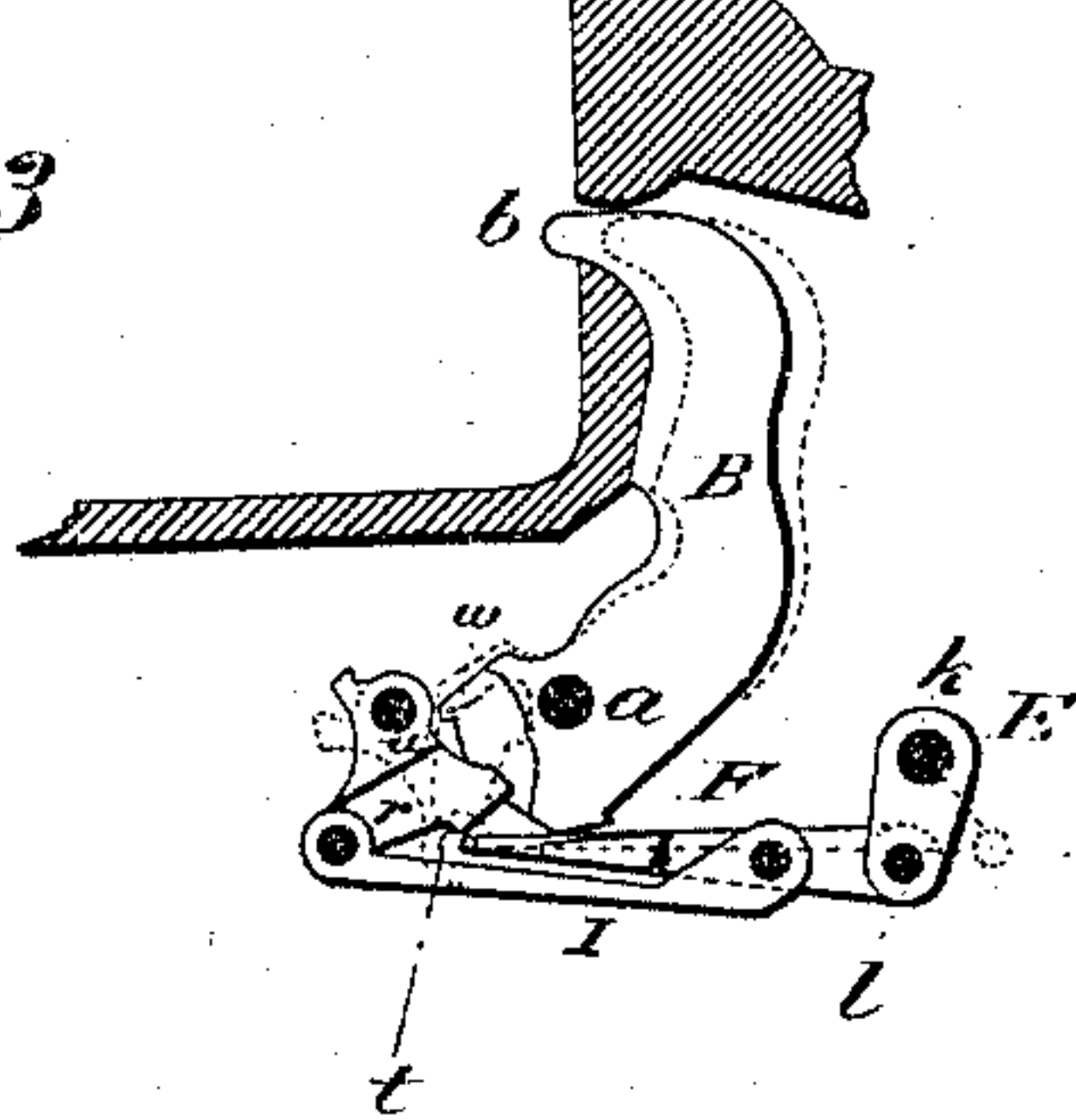


Fig. 3



Witnesses.

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UNITED STATES PATENT OFFICE.

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LOCK FOR FIRE-ARMS.

SPECIFICATION forming part of Letters Patent No. 260,586, dated July 4, 1882.

Application filed March 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, WM. MASON, of Hartford, in the county of Hartford and State of Connecticut, have invented a new Improvement in Locks for Fire-Arms; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a sectional side view; Fig. 2, the same, showing the parts as at the point of releasing the hammer; Fig. 3, detached parts.

This invention relates to an improvement in locks for that class of fire-arms in which the barrels are hinged so as to tilt up at the breech to open the chambers, commonly called "break-down" arms, and particularly to the class of locks in which the hammer is entirely within the receiver, commonly called "concealed hammers," parts of the invention being applicable to other classes of arms, the object being a simple construction whereby the mainspring serves as the trigger-spring and also to produce the retreat, or, as it is commonly called, "rebound," of the hammer after it has given its blow, and whereby the power to produce the rebound is not applied until after the stroke of the hammer is completed, and therefore does not detract from the force of the blow; and the further object of the invention is to lock the triggers so that the hammer cannot be released by applying the trigger until the barrels are properly locked; and the invention consists in the details of construction, as hereinafter described, and more particularly recited in the claims.

A is the frame, of usual form, too well known to require description in this specification.

B is the hammer, hung upon a pivot, *a*, within the frame, and so that its nose *b* will strike through an aperture in the recoil-plate in the usual manner.

The mainspring extends forward in the frame in a recess, C, one arm, *d*, hung to a link, *e*, engaged with the hammer in rear of its pivot, as at *f*, the other end taking a bearing, so that the lift of the spring is in rear of the pivot,

and consequently forces the nose of the hammer forward.

D is the trigger, hung upon a pivot, *g*, and, above its pivot, as at *h*, connected by a link, *i*, with a rocking lever, E, hung at *k*. To this rocking lever E the sear or trip F is hung, as at *l*, and extends forward so as to engage a notch, *m*, on the hammer below its pivot. Hence a pull upon the trigger will force the sear F forward, as from the position in Fig. 1 to that in Fig. 2, and the sear, being engaged with the hammer, will also turn the hammer to the position seen in Fig. 2.

Forward of the hammer a three-armed lever, H, is hung upon a pivot, *n*. One end, *o*, of the mainspring bears upon the arm *p* forward of the pivot *n*, and from the second arm, *r*, a link, I, extends, and is pivoted to the sear F, as at *s*, so that as the trigger is pulled and the sear moved forward, as before described, it turns the arm *r* of the lever H forward and raises the arm *p*, which correspondingly raises the end *o* of the mainspring bearing thereon. At the same time the hammer draws down the other end of the mainspring, all to the position seen in Fig. 2.

The third arm, *t*, of the lever H comes in contact with the forward end of the sear F at about the time the hammer has reached its full-cocked position. Then by the continued pull upon the trigger the arm *t* forces the sear F downward from its engagement with the hammer and so as to free the hammer, as seen in Fig. 3, and thus freed the hammer flies forward under the full force of the mainspring and before it is possible for the operator to relieve the trigger from the force of his finger which pulled it.

As soon after the discharge of the hammer as the operator releases the trigger from the force of his finger the end *o* of the mainspring acts upon the arm *p* of the lever H, turning that arm downward and the arm *r* forward, which forces the sear backward for re-engagement with the notch of the hammer and the trigger to its normal position, as seen in Fig. 1, and as the lever H approaches its extreme released position a shoulder, *u*, engages a corresponding shoulder, *w*, on the hammer for-

ward of its pivot, and as it completes its movement the said lever H forces the hammer backward to take its nose back from its most forward position, as indicated in broken lines, Fig. 3, to its normal position, as seen in Fig. 1. By this arrangement and combination of parts the mainspring is utilized to operate all parts of the lock.

The pivot *s* of the link I is above the pivot *l* of the sear. Hence the rearward action of the link I induced by the mainspring tends to force the forward end of the sear upward toward the hammer, and the link *i*, engaged with the trigger above its pivot, communicates the power of the mainspring to force the finger-piece of the trigger forward.

The locking mechanism to secure the barrels consists of the usual bolt, as seen in broken lines, Fig. 1. To its head L at the rear and to the bolt a longitudinal movement is imparted by the lever M through the vertical cam-shaft N, in the usual manner—that is to say, when the lever M lies upon the tang of the frame, as seen in Fig. 1, the bolt is in its locked condition and the barrels engaged. By swinging the lever M to one side the bolt is withdrawn by means of the cam on the lever-shaft in the usual manner too well known to require detailed description.

Upon the pivot *g* of the triggers (or it may be at any other point) a lever, R, is hung, one arm, T, of which extends up to a position in rear of the bolt L, as seen in Figs. 1 and 2, and so that when the barrels are properly secured and the bolt L in its locking position the arm T will lie close in rear of the bolt, as seen in Fig. 2; but when the bolt is thrown back, as indicated in broken lines, Fig. 1, to release the barrels, the arm T of the lever will be correspondingly turned backward, as seen in Fig. 1. The other arm, 2, of the lever R is engaged with a latch-lever, 3, hung upon a pivot, 4, in rear of the trigger. One arm, 5, of the said lever, extending rearward, is hung to a finger-piece, 6. The other arm, 7, of the lever is constructed of latch shape and with a shoulder, 8, and the triggers with a corresponding shoulder, 9.

When the bolt is in its locked position, as seen in Fig. 2, the arm T of the lever R is forward and the shoulder 8 of the arm 7 of the lever 3 is so far above the shoulder 9 of the trigger as to permit the free play of the trigger; but when the bolt is drawn backward, as seen in broken lines, Fig. 2, it turns the lever R and brings the arm 7 of the lever 3 into engagement with the shoulder of the triggers, so that in that condition the pull of the trigger is impossible. At the same time the engagement with the triggers is made the finger-piece 6 is thrown upward, carrying its end 10 through an opening in the tang of the frame, as seen in Fig. 1. This projection of the finger-piece shows that the bolt is not in its unlocked position, hence serves as an indicator of the proper condition of the arm for firing.

When the finger-piece is thrown up it is, by the action of a spring, 11, forced rearward, so that a shoulder, 12, passes over onto the tang, as seen in Fig. 1, which holds the finger-piece 6 into engagement with the tang, and consequently the trigger in the locked position until such time as the operator shall force the head of the finger-piece forward, so that the shoulder 12 may pass down into the opening in the tang, as seen in Fig. 2, and this downward movement of the finger-piece cannot occur unless the bolt be forced forward into its locked position. By this arrangement, therefore, not only are the triggers locked when the bolt is not in its locking position, but the locked position of the trigger and unlocked position of the bolt are indicated to the operator by the projection of the head 10 of the finger-piece 6 through the tang. This mechanism for locking the triggers may be applied to other mechanisms, the invention not being limited to the particular lock herein described.

I claim—

1. The combination of the hammer B, the trigger D, the sear F in connection with the trigger above its pivot, and arranged to engage a shoulder on the hammer below its pivot, the lever H, the mainspring C, one arm hung to the hammer in rear of its pivot, the other arm bearing upon an arm on the lever H forward of its pivot, and the link I, connecting the lever H with the sear F, substantially as described.

2. The combination of the hammer B, the trigger D, the sear F in connection with the trigger above its pivot, and arranged to engage a shoulder on the hammer below its pivot, the lever H, the mainspring C, one arm hung to the hammer in rear of its pivot, the other arm bearing upon an arm on the lever H forward of its pivot, and the link I, connecting the lever H with the sear F, a third arm, *t*, of the lever H, arranged above the forward end of the sear to throw the sear out of engagement during the last part of the forward movement of the sear, substantially as described.

3. The combination of the hammer B, the trigger D, the sear F in connection with the trigger above its pivot, and arranged to engage a shoulder on the hammer below its pivot, the lever H, the mainspring C, one arm hung to the hammer in rear of its pivot, the other arm bearing upon an arm on the lever H forward of its pivot, and the link I, connecting the lever H with the sear F, the said lever constructed with a shoulder, *u*, in rear of its pivot, and the hammer with a corresponding shoulder, *w*, forward of its pivot, substantially as described.

4. The combination of the hammer B, the trigger D, the sear F in connection with the trigger above its pivot, and arranged to engage a shoulder on the hammer below its pivot, the lever H, the mainspring C, one arm hung to the hammer in rear of its pivot, the other arm bearing upon an arm on the lever H forward of its pivot, and the link I, connecting the lever H with the sear F, the said lever constructed with a shoulder, *u*, in rear of its pivot, and the hammer with a corresponding shoulder, *w*, forward of its pivot, substantially as described.

ward of its pivot, and the link I, connecting the lever H with the sear F, a third arm, *t*, of the lever H, arranged above the forward end of the sear to throw the sear out of engagement during the last part of the forward movement of the sear, the said lever H constructed with a shoulder, *u*, in rear of its pivot, and the hammer with a corresponding shoulder, *w*, forward of its pivot, substantially as described.

5. The combination of the bolt L, by which the barrels are locked in their closed position, the lever R, the latch-lever 4, and finger-piece 6 with the trigger, substantially as and for the purpose described.

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Witnesses:

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