

R. F. COOK & J. RIDER.
Revolving Fire-Arm.

No. 215,507.

Patented May 20, 1879.

Fig. 1.

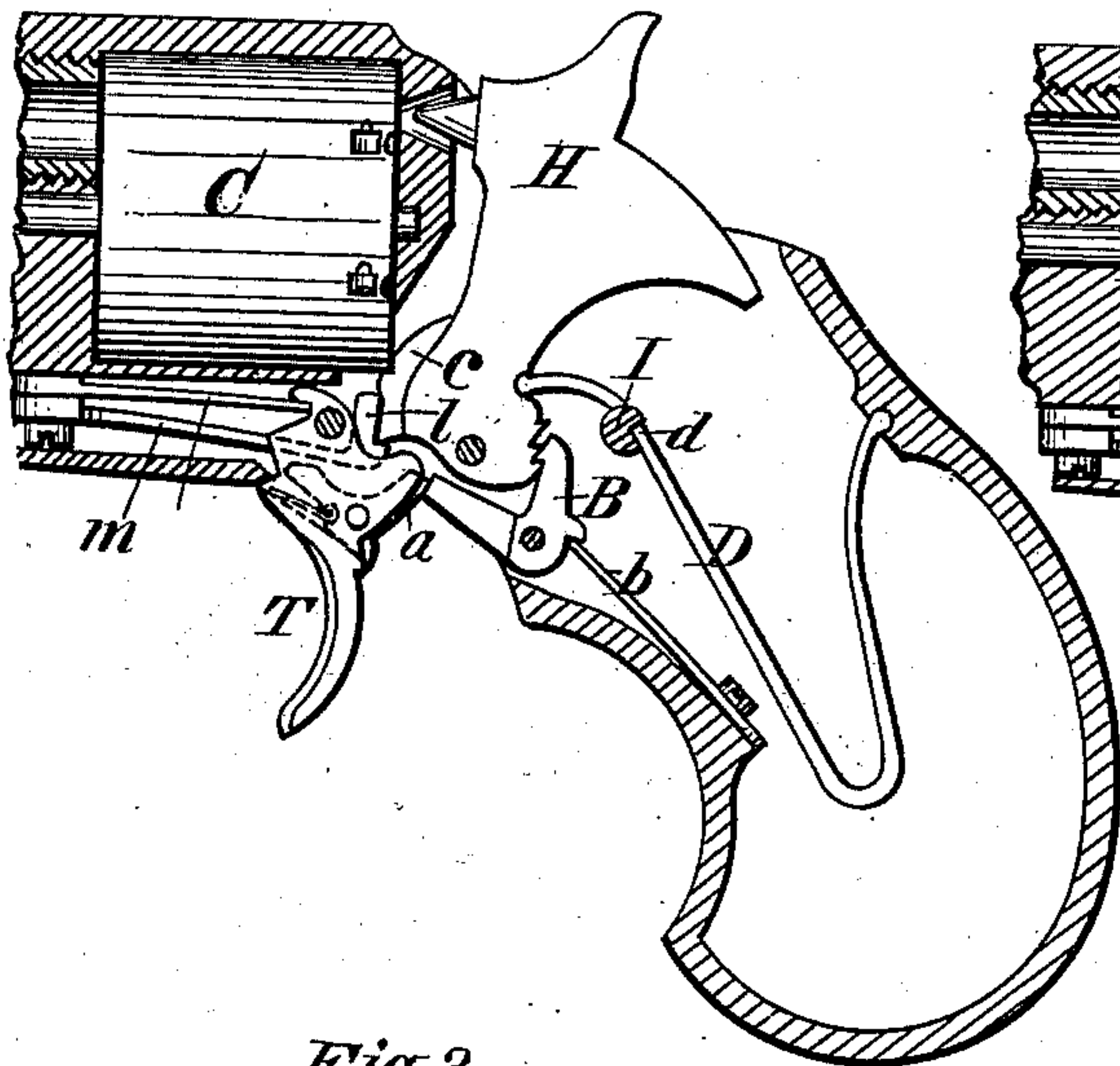


Fig. 2.

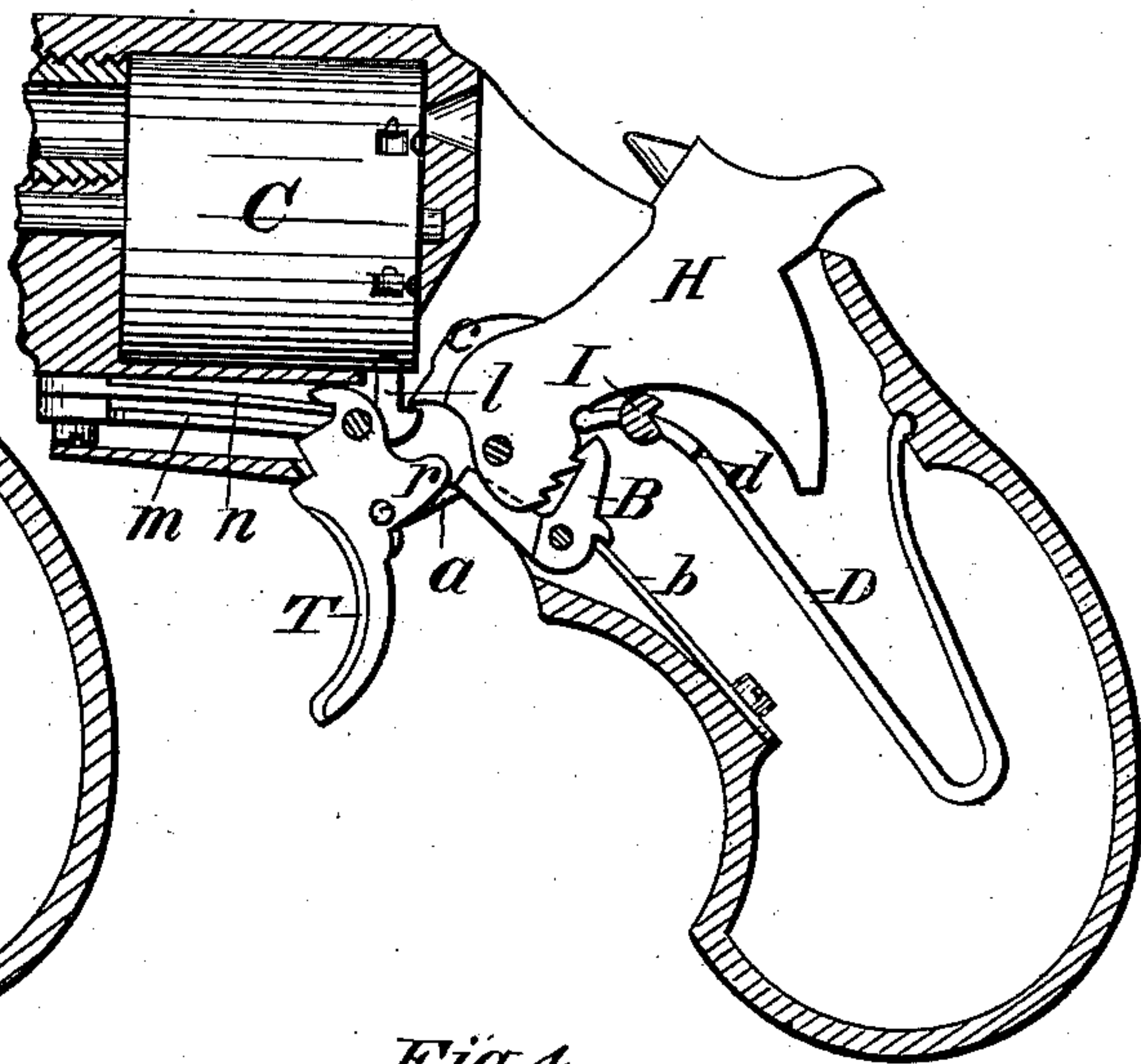


Fig. 3.

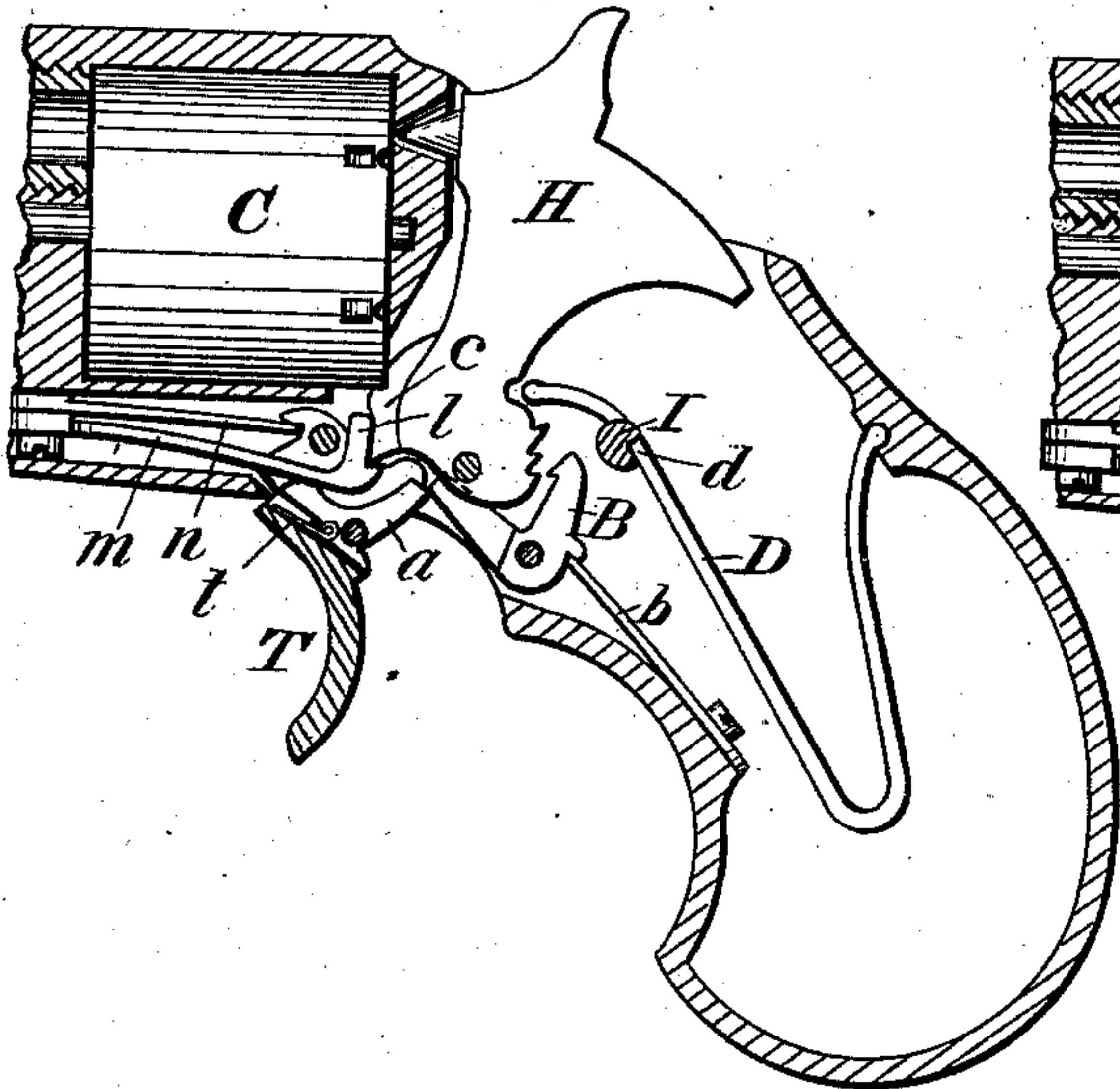


Fig. 4.

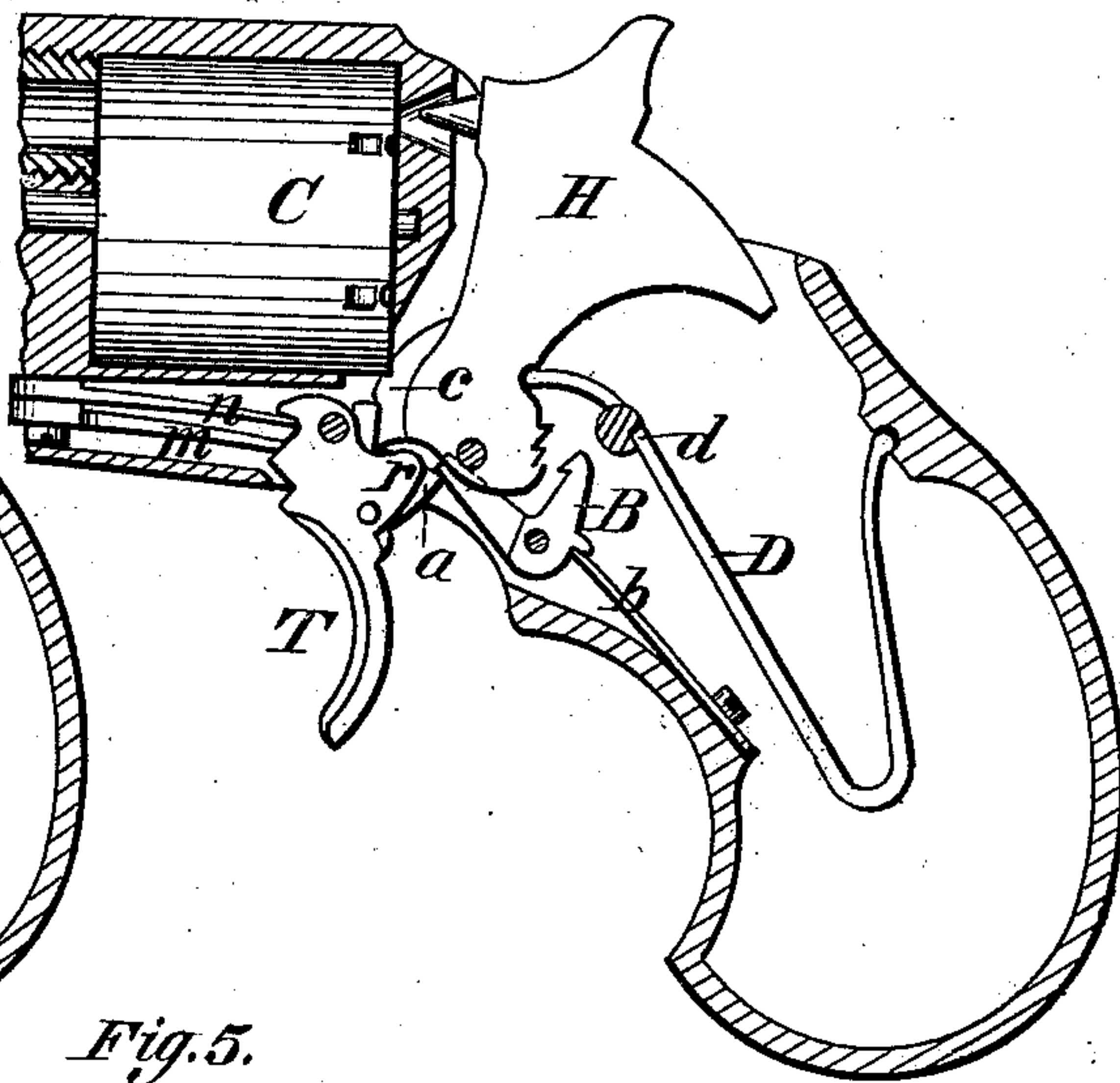
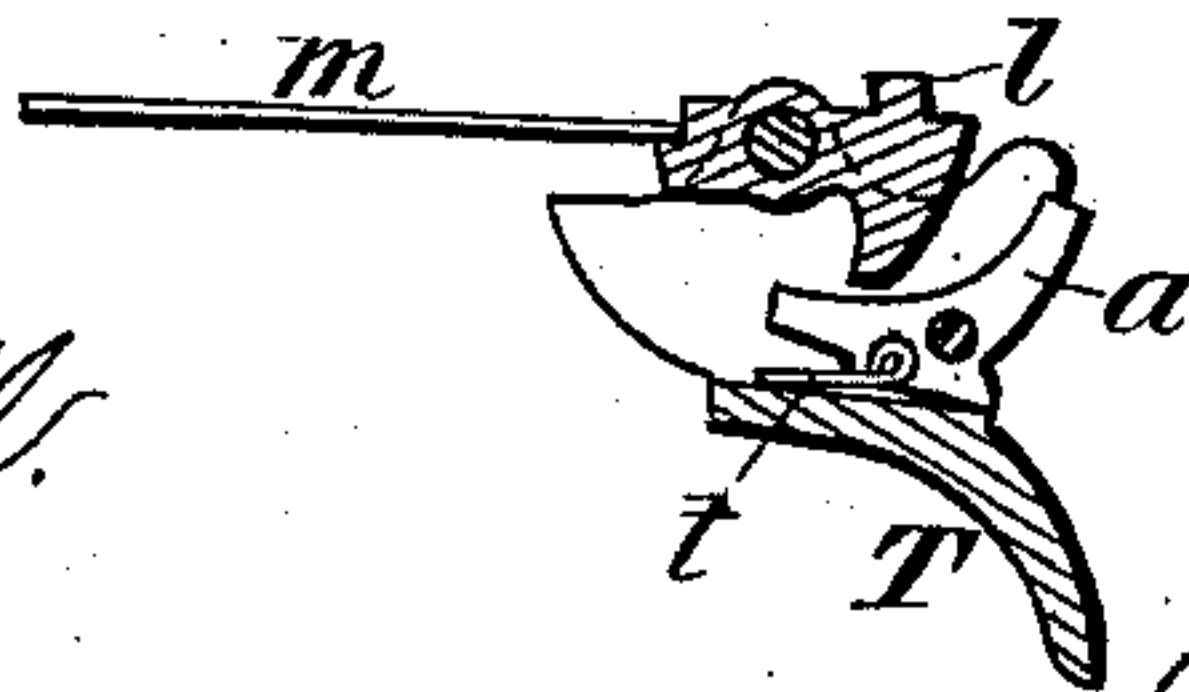


Fig. 5.



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UNITED STATES PATENT OFFICE.

ROSWELL F. COOK, OF ILION, NEW YORK, AND JOSEPH RIDER, OF NEWARK, OHIO, ASSIGNORS OF ONE-HALF THEIR RIGHT TO E. REMINGTON & SONS, OF ILION, NEW YORK.

IMPROVEMENT IN REVOLVING FIRE-ARMS.

Specification forming part of Letters Patent No. **215,507**, dated May 20, 1879; application filed March 29, 1879.

To all whom it may concern:

Be it known that we, ROSWELL F. COOK, of Ilion, in the county of Herkimer and State of New York, and JOSEPH RIDER, of Newark, Licking county, Ohio, have invented certain Improvements in Double-Action Locks and Stops for Revolvers, of which the following is a specification.

Our invention consists in a double-action rebounding lock and stop for revolving fire-arms of novel construction, as hereinafter more fully explained.

Figure 1 is a side elevation, with the frame shown in section to better show the internal mechanism. Figs. 2, 3, and 4 are similar views, showing the hammer and other parts in their various positions; and Fig. 5 represents a modified form of the stop.

In the drawings, C represents the cylinder, mounted in a frame of the usual construction. H indicates the hammer, operated by a main-spring, D, one end of which rests in a notch in the frame, while the front end rests in a rounded notch or recess in the rear side of the hammer, as shown, this spring D being provided on one side, near its front end, with a shoulder, *d*, arranged to strike against a stop, I, just before the hammer completes its stroke, so as to relieve the hammer from the pressure of the spring, and enable it to be easily thrown back on the rebound, as hereinafter explained. This rebounding of the hammer is effected by means of a spring, *m*, located within a cavity in the frame underneath the cylinder, as shown in Fig. 3.

The stop *l*, which locks the cylinder and prevents it from turning, may be secured to or made integral with the spring *m*, as shown in Fig. 3; or it may be made of a separate piece, as shown in Fig. 5, its operation being the same in both cases. In the latter case it is pivoted on the same pin with the trigger T, the latter being recessed, so that whichever form be used the stop can play freely within said recess, and in either case it is provided on its rear face with a shoulder, on which the lower point of a rib, *c*, projecting from the front side of the hammer, at its lower end, strikes as the hammer swings forward, by which means

the stop *l* is depressed and the cylinder released from its locking action. This rib *c* is so shaped that when the hammer is nearly down the rib itself will engage in a recess cut in the edge of the cylinder, so that the cylinder is locked first by the stop *l* and then by the rib *c*; but the rib is so cut away on its edge that it will not engage with the cylinder when the hammer is at half-cock and from that point to full-cock, so that there is an interval after the rib ceases to lock the cylinder and before the stop *l* locks it, during which time it can be rotated by the pawl in the usual manner. It also follows from this arrangement of the stops that when the sear is in the second or half-cock notch the cylinder can be readily removed, as at that time neither of the stops touch it.

The trigger T is provided with a shoulder, *r*, which bears against the lower curved portion of the hammer in front of its pivot, so that by pulling back on the trigger the hammer is forced back either to the half or full cock notch.

Within a recess in the rear side of the trigger T there is pivoted a fly, *a*, as shown in Fig. 1, it being made somewhat in the form of an elbow-lever, with a small spring, *t*, under its front portion, which tends to throw its rear arm outward beyond the face of the trigger, so as to engage under the front arm of the sear B, as shown in Fig. 2, and thus, by pulling on the trigger, release the sear from its hold on the hammer when at full-cock.

The rear side of the hammer in which the notches are cut for the sear to engage in is made eccentric from its pivot, each successive notch being farther from the pivot, they being so arranged that they will not permit the front arm of the sear to rise high enough to let the fly *a* pass backward under it at any time except when the hammer is at full-cock.

The sear is so constructed and arranged that when the end of the fly bears against the front arm of the sear the pulling of the trigger will press the front arm of the sear B against the pivot of the hammer, where it will be firmly held, as shown in Figs. 3 and 4, there being a recess cut in the lower end of the hammer for the arm of the sear to pass into, and thus rest

against the pivot, as indicated by the dotted lines in said Figs. 3 and 4. The fly is released from this position by the action of the stop *l*, which is forced down upon the front arm of the fly by the shoulder of rib *c* as the latter strikes the shoulder on stop *l*, thereby causing the fly to turn on its pivot far enough to draw its rear end from under the arm of the sear, and which permits the trigger to be drawn much farther back, and, by bringing its shoulder *r* against the under shoulder of the hammer, force it back to full-cock. When this has been done the front arm of the sear, as before explained, is raised high enough to let the fly pass back under it as the trigger swings forward again.

The operation of the device is as follows: Supposing the hammer to be in its normal position, with the sear engaging in the first or safety notch, which is the position it will assume when the arm has been fired, the parts will be as represented in Fig. 1, the cylinder being locked by the hammer, and the fly disengaged from the sear. Now, by pulling on the trigger the hammer will first be cocked; but it cannot be fired until the trigger is allowed to swing forward, because the fly cannot engage under the sear until the trigger is allowed to swing forward, so that by letting it move forward and again drawing it back the hammer is released and the arm fired. At the same time that the sear is released from its notch in the hammer the continued movement of the trigger will again cock the hammer, it having delivered its blow in the meantime, the two stops *l* and *c* performing their operations at each blow of the hammer. It follows that after the first operation the hammer is first released and then cocked at each to-and-fro movement of the trigger.

It will therefore be seen that in firing the arm rapidly the operation is the reverse of that produced by the ordinary double-action lock, which, on pulling the trigger, first cocks and then releases the hammer, whereas in this the hammer is first released and then cocked. The

result of this is that at the instant of firing the pull on the trigger is very slight, as during its first movement it requires only sufficient force to disengage the sear from the full-cock notch, the force required to be exerted to cock the hammer being applied after the discharge has taken place, and previous to the ensuing discharge, thereby enabling the party to fire with greater accuracy, as the pull on the trigger at the instant of the discharge is greatly reduced from that required in ordinary double-action locks. At the same time the arm can be cocked by drawing back the hammer by the thumb in the usual manner, and then pulling lightly on the trigger.

Having thus described our invention, what we claim is—

1. The combination, in a gun-lock, of a hammer, H, a sear, B, and a trigger, T, provided with a fly, *a*, constructed to operate substantially as described, whereby the hammer is first cocked by one pull of the trigger, and then released by a second pull.

2. The spring-stop *l*, provided with a shoulder, in combination with the hammer provided with a corresponding shoulder or projection, *c*, by which the stop also serves to give a rebound to the hammer, as set forth.

3. The hammer H, provided with a projection, *c*, near its lower end, arranged to engage with the cylinder C before the hammer delivers its blow, substantially as and for the purpose set forth.

4. The combination of the fly *a*, stop *l*, and projection *c* on the hammer for operating said fly, as set forth.

5. The combination of the hammer H, sear B, trigger T, with its fly *a* and stop *l*, all constructed and arranged to operate substantially as and for the purpose set forth.

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