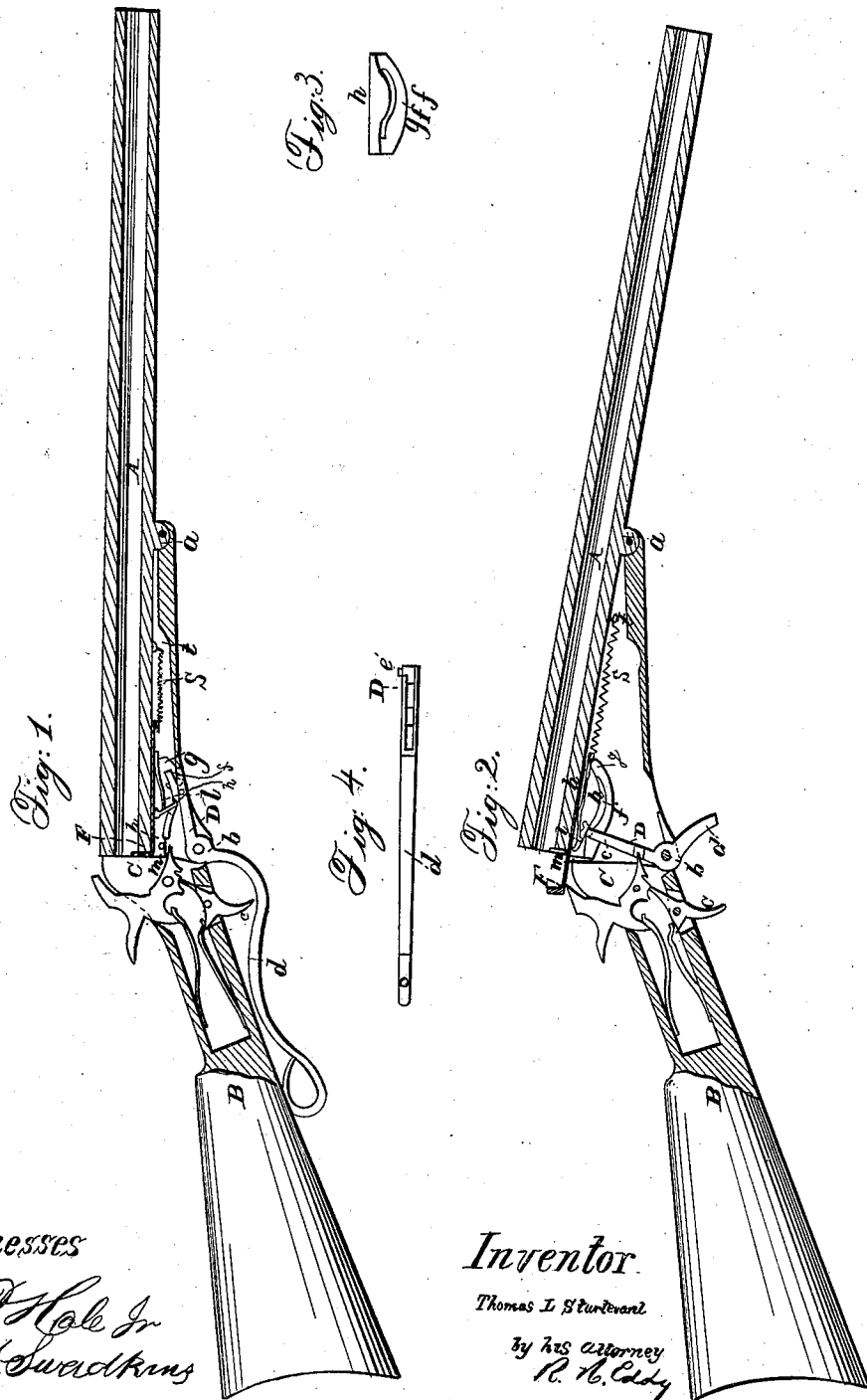


T. L. STURTEVANT.
Breech-Loading Fire-Arm.

No. 50,854.

Patented Nov. 7, 1865.



Witnesses
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UNITED STATES PATENT OFFICE.

T. L. STURTEVANT, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN CARTRIDGE-RETRACTORS FOR BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent [No. 50,854, dated November 7, 1865.

To all whom it may concern:

Be it known that I, THOMAS L. STURTEVANT, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Breech-Loading Fire-Arms; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a longitudinal section of a fire-arm provided with my invention, the barrel in such section being exhibited with its rear end at its lowest position relatively to the stationary breech. Fig. 2 is another longitudinal section showing the barrel raised at its rear above the breech and in a position for reception of a cartridge, which, while being inserted in the barrel, enters it at its rear end, which is open. Fig. 3 is a side view of the grooved cam applied to the barrel. Fig. 4 is an edge view of the trigger-guard lever.

In carrying out my present invention, I combine with the barrel and stock and the trigger-guard lever, substantially as hereinafter specified, a pin or stud and a grooved cam or projection, so made that during the movements of the lever on its fulcrum such cam and stud will not only raise and depress the barrel relatively to a stationary breech, but maintain such barrel in a position above the breech for a period long enough for a cartridge or the shell or remains of a cartridge to be expelled from its rear end and a fresh cartridge to be introduced at such end into the barrel.

My said invention avoids the employment of a spring to depress the barrel, and causes its depression to be effected wholly by the means adopted for raising it.

By dispensing with the spring acting separately from the lever or means employed for elevating the barrel, I avoid the difficulties incident to a spring and insure a positive and determinate action of the barrel at all times with respect to the stock and breech; and in further carrying out my invention, I apply to the cartridge-shell discharger an arm and spring, and to the barrel a pin or its equivalent, and I so arrange the same together and with respect to the trigger-guard lever that such lever, during its movement for raising the breech end of the barrel, shall so operate against

the said arm as to cause the cartridge-shell discharger to be forced rearward, the arm in the meantime being released from the lever by means of the pin, against which the arm will be moved by the discharger. During the forward movement of the discharger the spring of the arm will restore the said arm to its rear-most position or that in which it will be ready for being moved by the lever.

In the drawings, A denotes the barrel, and B the stock, of a fire-arm, such barrel being held to the stock by such a hinge-joint, *a*, as will enable the barrel to be moved with respect to the stock from the position as shown in Fig. 1 into that as represented in Fig. 2, the rear end of the barrel in the one case being against and so as to be closed by a stationary breech or abutment, C. In the other case the said end is shown as elevated above such abutment, and open to allow either the expulsion of a cartridge-shell from the barrel or the introduction of a cartridge at such end into the barrel.

For elevating the barrel, I make use of a lever, D, which turns on a fulcrum, *b*, extending transversely through the stock. The longer arm, *d*, of this lever answers as a guard for the trigger *c* of the lock. The shorter arm, *e*, has a pin or stud, *e'*, extending from it laterally and into a curved groove, *f*, made in a plate, *g'*, which is attached to one side of a projection or block, *h*, applied to the lower part of the barrel and arranged with respect to the lower edge of such block in manner as shown in the drawings.

The block *h* is channeled lengthwise to support the cartridge-shell discharger F, which slides freely within the block, and has a spring, *s*, for retracting it, such spring being applied to the discharger F at its front end and also to a pin, *t*, extending from the barrel. At its rear end the discharger extends up into the rear part of the barrel, so as to come in front of the flange of a cartridge-shell when in the barrel. Furthermore, there is hinged to the discharger an arm, *k*, which is pressed downward by a spring, *l*, arranged as shown in Figs. 1 and 2. A pin or stud, *m*, goes through the block *h*, and is so disposed therein that during a rearward movement of the cartridge-shell discharger caused by the lever D such pin

shall force the arm *k* upward and away from the lever in order that the spring *l* may retract the said discharger. By laying hold of the longer arm of the lever *D* and moving it downward in a direction away from the stock the action of the stud *e'* on the upper side of the groove *f* will cause the elevation of the rear end of the barrel above the breech *C*. A reverse motion of the lever will cause the said stud, by its action on the lower side of the groove *f*, to depress the barrel back into place into the stock. By means of the groove *f* and the stud *I* am enabled to dispense with a spring for effecting the depression of the barrel and to insure such by means of the lever. So, by means of the stud *m*, combined with the block *h* and with the arm *k* and spring *l*, applied to the cartridge-shell discharger, as specified, and also with the groove *f* and the pin *e'*, I am enabled to insure the reversed motion of the discharger. When a spring is employed to depress the barrel and the barrel has no direct connection with the trigger-guard lever the barrel will be liable to be thrown up so as

to prematurely disengage the cartridge-shell discharger from the lever, in which case the said discharger may fail to expel the cartridge or its shell from the barrel; but with my improved mechanism the movements of the barrel are so controlled by the stud *e'* and the groove *f* as to render certain the proper action of the discharger with respect to the cartridge or its shell.

What, therefore, I claim as my invention is—

1. The combination and arrangement of the tripping-stud *m*, the arm *k*, and the spring *l* with the block *h* or the barrel *A*, the cartridge-shell discharger *F*, and the lever *D*.

2. The combination and arrangement of the groove *f* and the stud *e'* with the barrel *A* and the lever *D*, the cartridge-shell discharger *F*, and the stud *m*, the arm *k*, and the spring *l*, arranged and applied to the said discharger and barrel substantially as specified.

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Witnesses:

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