J. A. NICHOLS & J. W. LIVINGSTON.

Gun-Locks.

No. 198,669. Patented Dec. 25, 1877.

Fig. 1.

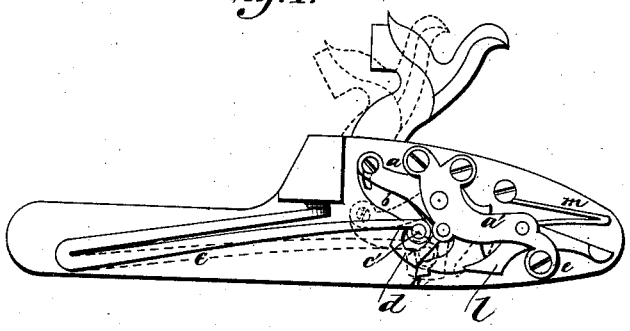
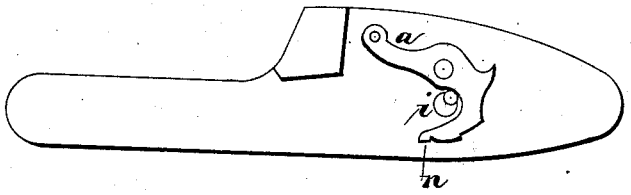


Fig. 2.

Fig. 3.



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JOHN A. NICHOLS AND JOSEPH W. LIVINGSTON, OF SYRACUSE, N. Y.

IMPROVEMENT IN GUN-LOCKS.

Specification forming part of Letters Patent No. **198,669**, dated December 25, 1877; application filed December 11, 1877.

To all whom it may concern:

Be it known that we, JOHN A. NICHOLS and JOSEPH W. LIVINGSTON, of Syracuse, county of Onondaga, State of New York, have invented certain Improvements in Gun-Locks, of which the following is a specification:

Heretofore, in rebounding gun-locks, one arm of the mainspring has been made to act against the other in such a way, upon the action of the hammer before it struck the firing-pin, as to materially weaken it, and often cause a misfire, and in those locks heretofore made the mainspring was liable to become detached from the swivel or broken, by which the action of the lock was stopped.

Our improvements obviate all previous objections, and produce a much more free and perfect action, and greater permanency in the parts.

The construction is as follows, referring to the drawing, in which—

Figure 1 is a view of the inside of the lock. Fig. 2 is the dog *d* detached. Fig. 3 is the tumbler *a'* and a portion of the inner face of the lock-plate, with the bridle and dog removed.

The parts not specifically described or named are similar to those ordinarily used.

The crane *a* of the tumbler *a'* is bifurcated at its forward end, and receives the upper end of the swivel *b* in the recess. This swivel *b* has an oblong slot in its upper end, through which and holes in the end of the crane a pin passes, that unites them. The other end of the swivel *b* is jointed to the end of the lower arm of mainspring *c* by a pin which passes through holes therein at *c'*, by which they are securely united. To limit the downward action of this arm of the mainspring, we provide a movable dog, *d*, which is suspended by a pivot, *d'*, having one bearing in the lock-plate *i*, and the other in the bridle *e*, between which the dog is suspended. There is a small recess in the lock-plate *i* (see Fig. 3) on its inner face, just below the pivoting-hole for the dog *d*. Into this recess a projection, *k*, (see Fig. 2,) upon dog *d*, enters, to limit its range of motion, and guard the mainspring from being thrown out of place at the half-cock. The dog thus formed and placed, while it allows freedom of action to the other parts, receives the end of the mainspring, when the tumbler is released from the sear, and stops and limits its motion, while the slot before named, in the swivel, allows the hammer to be thrown forward by its momentum, as shown by the dotted lines, Fig. 1, without any retarding action to its blow upon the firing-pin. The sear *l*, actuated by the sear-spring *m*, bears upon an inclined surface on the tumbler at *n*, and causes the hammer to recede to half-cock unimpeded by the mainspring and without its aid, as in Fig. 1.

By this construction of the parts, the hammer is free to give the full force of its blow upon the firing-pin without any retarding force, and is retracted simply by the sear-spring, while the several parts are so constructed and connected as to be securely guarded against detachment when in action, and against the danger of breaking the mainspring.

Having thus described our invention, we claim—

1. The slotted swivel, connecting the mainspring with the tumbler, so as to give an unobstructed blow to the hammer, substantially as and for the purpose specified.

2. The pivoted hook or dog *d*, constructed and attached substantially as herein described, and for the purposes specified.

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Witnesses:
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