

J. DAVIS.
MAGAZINE FIREARM.

No. 112,127.

Patented Feb. 28, 1871.

Fig. 1.

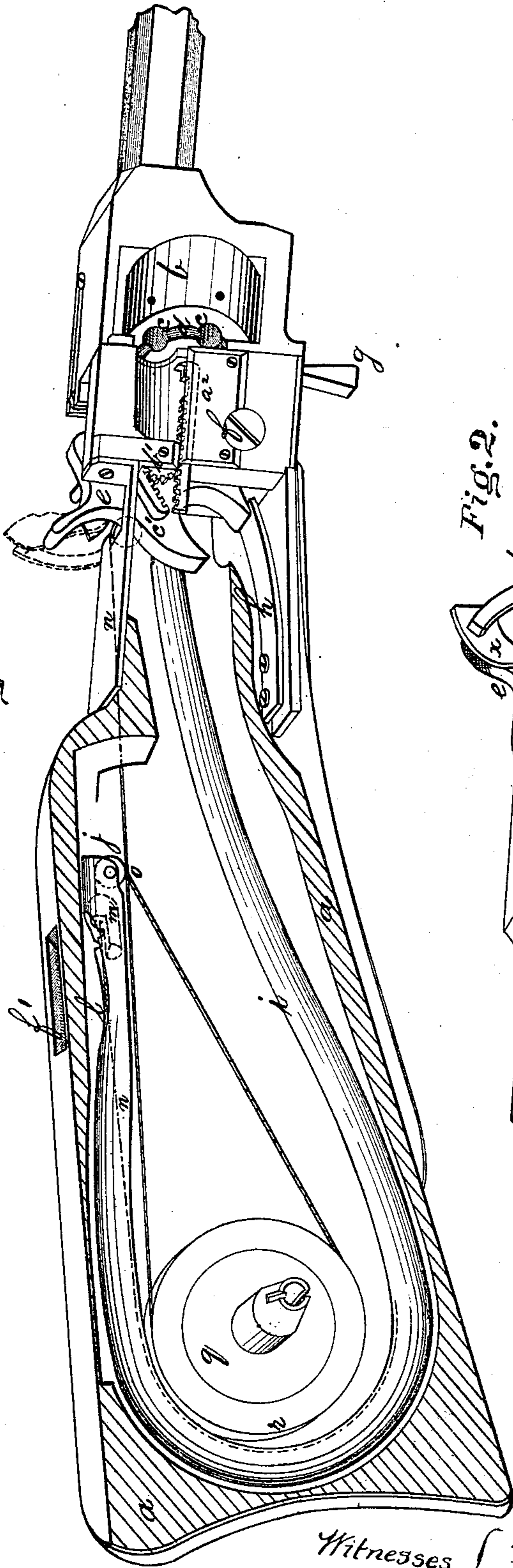


Fig. 2.

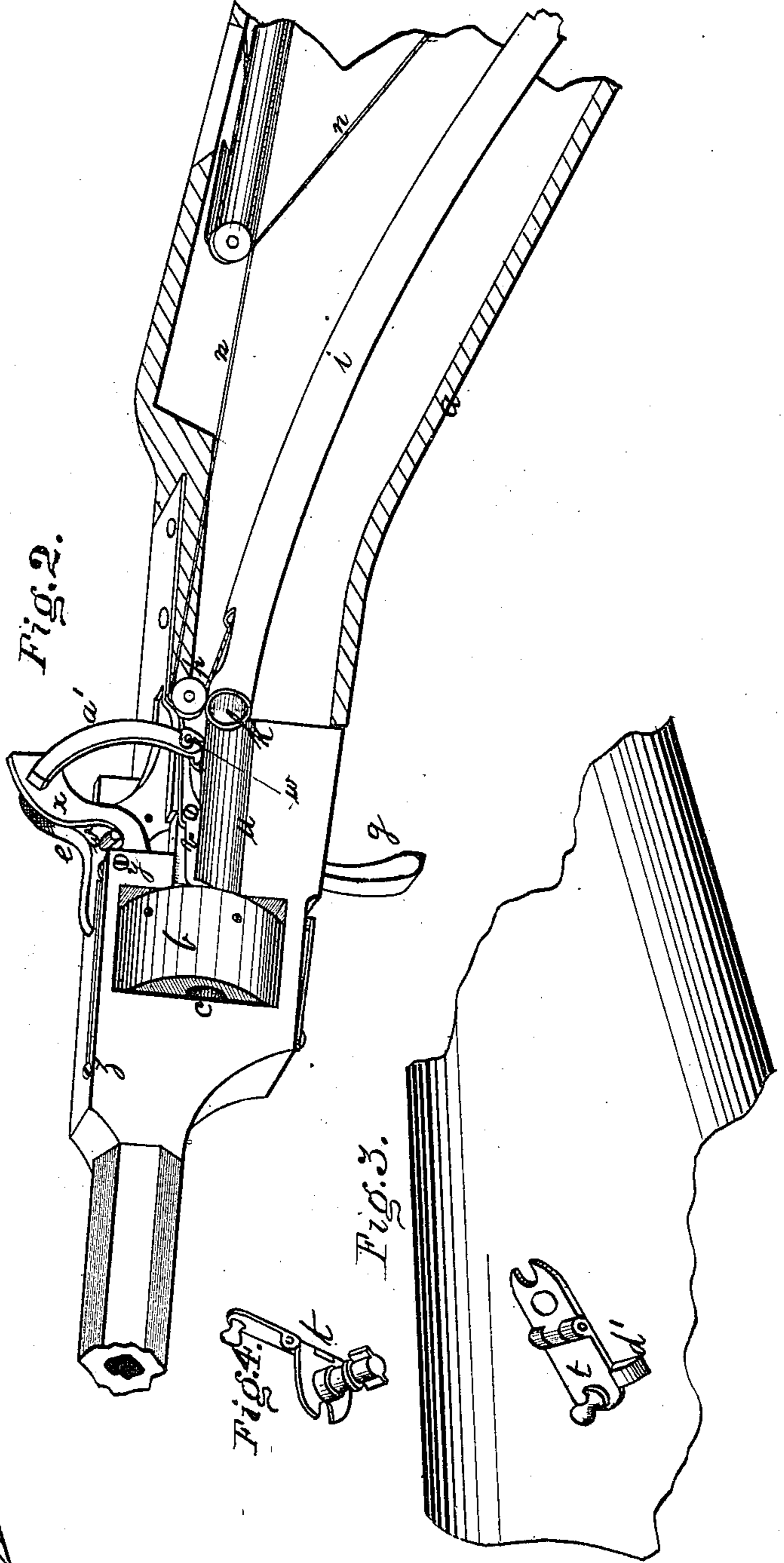
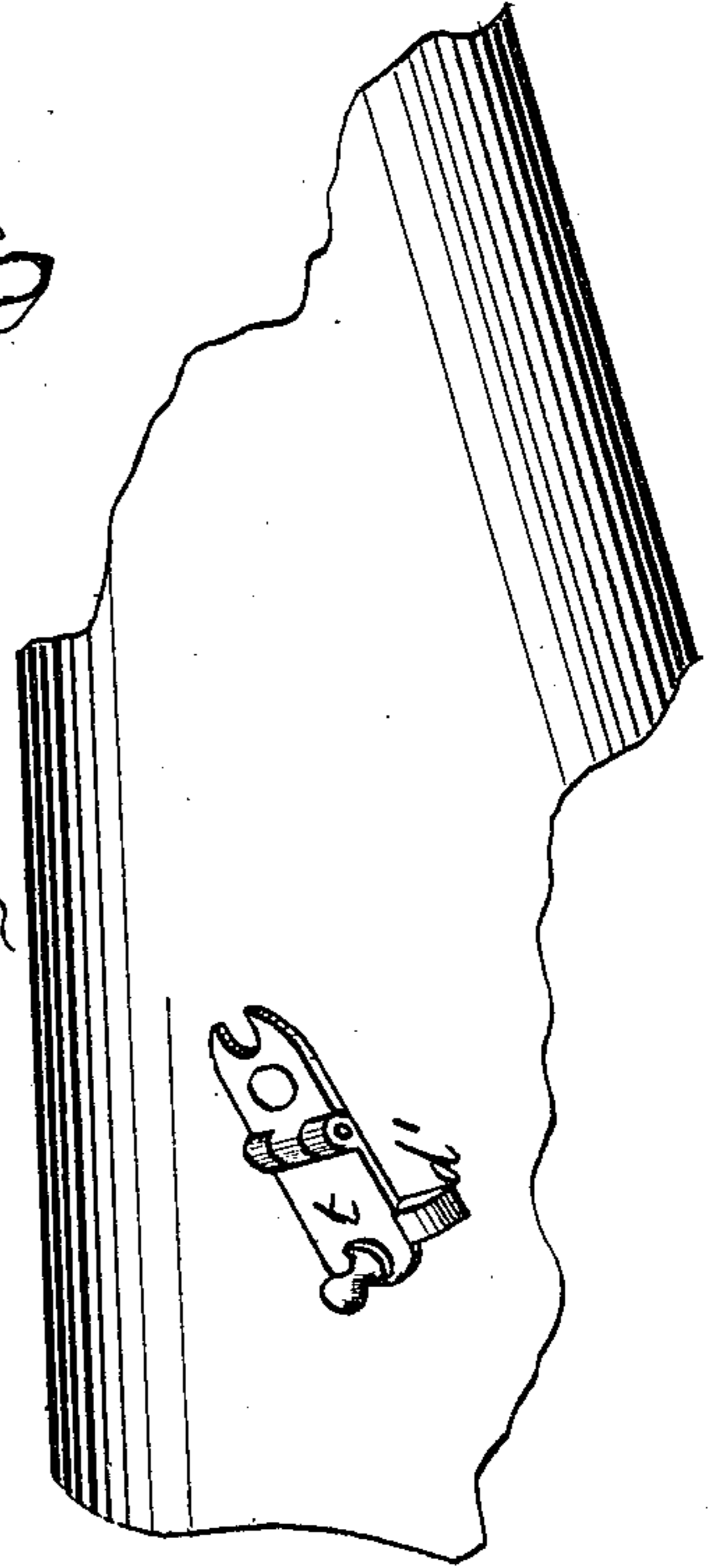


Fig. 3.



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JOSHUA DAVIS, OF LIMESTONEVILLE, PENNSYLVANIA.

Letters Patent No. 112,127, dated February 28, 1871.

IMPROVEMENT IN MAGAZINE FIRE-ARMS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, JOSHUA DAVIS, of Limestoneville, Montour county, Pennsylvania, have invented certain new and useful Improvements in Breech-Loading Guns, of which the following is a specification.

My improvements relate to guns in which metallic cartridges are used; and

They consist—

First, in a combination of devices for automatically supplying and controlling the supply of cartridges to the chambers of the cylinder.

Second, in a combination of devices for automatically drawing out the empty cartridge-cases successively after the discharge of the cartridges.

In the drawing—

Figure 1 is a perspective view of one side of a gun embracing my improvements, the barrel being broken off, and one side of the hollow stock removed.

Figure 2, a similar view of the opposite side of the same, the hollow stock being shown in section and broken off near the butt.

Figure 3 represents, in perspective, a part of the exterior of the gun-stock, face removed, in fig. 1; also the crank *t* and stop *d'*.

Figure 4 is a perspective view of crank *t*.

a represents the gun-stock, which is made hollow, as shown.

b is a rotary cylinder, containing several chambers, marked *c*, for cartridges.

e is the hammer, which is shown in fig. 1, to be cocked. It turns on a bearing, *f*.

g is the trigger.

h is a spring, bearing on the hammer, as shown in fig. 1; its offices being to force the hammer against the cartridge when the gun is to be fired off; also, to permit a little overcocking of the hammer and force the hammer back to cock as soon as it is relieved from pressure, as explained below.

All these parts are of the ordinary construction, except that I provide cylinder *b* with a hollow or groove, *d*, fig. 1, and give spring *h* sufficient yielding capacity to allow the above-mentioned overcocking of the hammer.

i is a curved tube, one end of which is shown at *j*, fig. 1, and the other end at *k*, fig. 2.

l, fig. 1, is a slot or opening in tube *i*, by which said tube is supplied with cartridges.

m, fig. 1, is a follower or movable block, attached to a chain or string, *n*, which passes over a pulley, *o*, arranged to be close to one side or the other of the shell of tube *i*, so that it (the chain or string) shall be out of the way when cartridges are to be introduced.

One end of the chain or string *n* is led, as shown, through the tube *i* over the pulley *p*, and is attached

to the hollow pulley *q* at or about *r*. The other end of said chain or string is led from the pulley *o*, as shown, to the hollow pulley *q*, to which it also is attached at or about the point *r*.

The hollow pulley *q* contains an ordinary watch-spring, (not shown,) one end of which is attached to the stud on which said pulley *q* turns, and the other end of which spring is attached to the inside of the shell of the pulley.

t, figs. 3 and 4, represents the crank, by which the spring inclosed in the pulley *q* is wound up.

u, fig. 2, is the connecting chamber or passage-way through which the cartridges pass on their way from the tube *i* to the chambers *c*. A removable plate necessary to complete this passage is not shown.

v, fig. 2, is a pivoted lever, hooked at each end, provided with a stud, *w*, and arranged just over the connecting-chamber *u*, as shown.

x is a lever, working on a center at *y*. It is acted on by a spring, not shown, attached to the lock-frame at *z*.

The curved arm *a'* is rigidly attached to the lever *x*, and is provided at or near its lower end with a notch or recess, into which the stud *w* enters, when the lever *x* occupies the position shown in fig. 2.

a'', fig. 1 is a hook, for drawing out the empty cartridge-cases. It slides horizontally in a groove in the lock-frame, and is provided with cogs, as shown.

b' is a cog-wheel, gearing into the cogs of the sliding-hook *a''*.

c' is a cogged segment, attached to the side of the hammer *e*, and gearing into the cog-wheel *b'*.

To prepare the gun for use, the spring inclosed in the pulley *q* is wound up by the application thereto of the crank *t*, bringing the follower *m* into the position shown in fig. 1. The crank *t* is caused to abut against the stop *d'*, and thus hold the follower in the position shown.

The cartridges are introduced through the aperture *f'* and slot *l* into the tube *i*, sufficient in number to fill said tube, or in less number as desired.

The crank *t* is then released from the stop *d'*, and the follower *m*, through the action of the spring inclosed in the hollow pulley *q*, is caused to press the cartridges contained in the tube *i* toward the connecting-chamber *u*, where their forward progress is stopped by the front hook of the lever *v*. The hammer is then cocked. In cocking the hammer, the stud *w'* is caused to press back the lever *x*, so that both hammer and lever occupy the positions shown in fig. 1.

The first effect of pressing back lever *x* is to cause the forward hook of the lever *v* to be raised enough to clear the cartridge abutting against said hook, and as the lever *x* is further pressed back, the notch in

the curved arm a^1 passes the stud w , and, the arm a^1 continuing to slide in contact with said stud, presses down the rear hook of lever v sufficiently to separate the cartridge intended to be inserted into the presented chamber from those pressing it (the cartridge) in the rear. The end of the arm a^1 at the same time, presses home the cartridge so separated into the presented chamber of the cylinder.

The hammer has the capacity of being over-cocked or pressed back a little beyond the point where it is caught by the trigger. This capacity is due to the contact of the hammer with the spring h , which yields sufficiently for the purpose.

In cocking the hammer, the slide a^2 is, by the action of the cogged segment c and cog-wheel b , advanced quite up to the cylinder b , and by continuing to press back the hammer or over-cocking it, as above mentioned, the hook at the forward end of the slide a^2 is caused to enter the groove d , and come in contact with the cylinder b .

The empty cartridge-cases are, simultaneously with the advance of slide a^1 , brought by the rotation of cylinder b , so that the hook at the forward end of said slide a^2 occupies a position ahead of the cartridge flange. As soon as the hammer is released from the pressure necessary to overcock it, as described, it re-

turns to cock, and in so doing draws the hooked slide a^2 quickly back a little, starting the cartridge-case from the chamber.

The falling of the hammer in the discharge of the gun completes the backward motion of the slide a^2 , and entirely withdraws the cartridge-case.

The advantage of the described arrangement for withdrawing the empty cartridge-case is due to the fact that the power necessary to start the case is exerted before the hammer leaves cock on its downward motion.

I claim—

1. The curved tube i , follower m , friction-pulleys o and p , chain or string n , hollow pulley q and its inclosed spring, in combination with the hooked lever v , and lever x , with its curved arm a^1 , in the manner and for the purposes substantially as set forth.

2. The combination of the hooked slide a^2 , cog-wheel b , and cogged segment c , with the hammer e and spring h , for drawing out the empty cartridge-cases, substantially as set forth.

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Witnesses:

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