

J. HANSON.
BREECH LOADING FIREARM.

No. 109,731.

Patented Nov. 29, 1870.

Fig. 1.

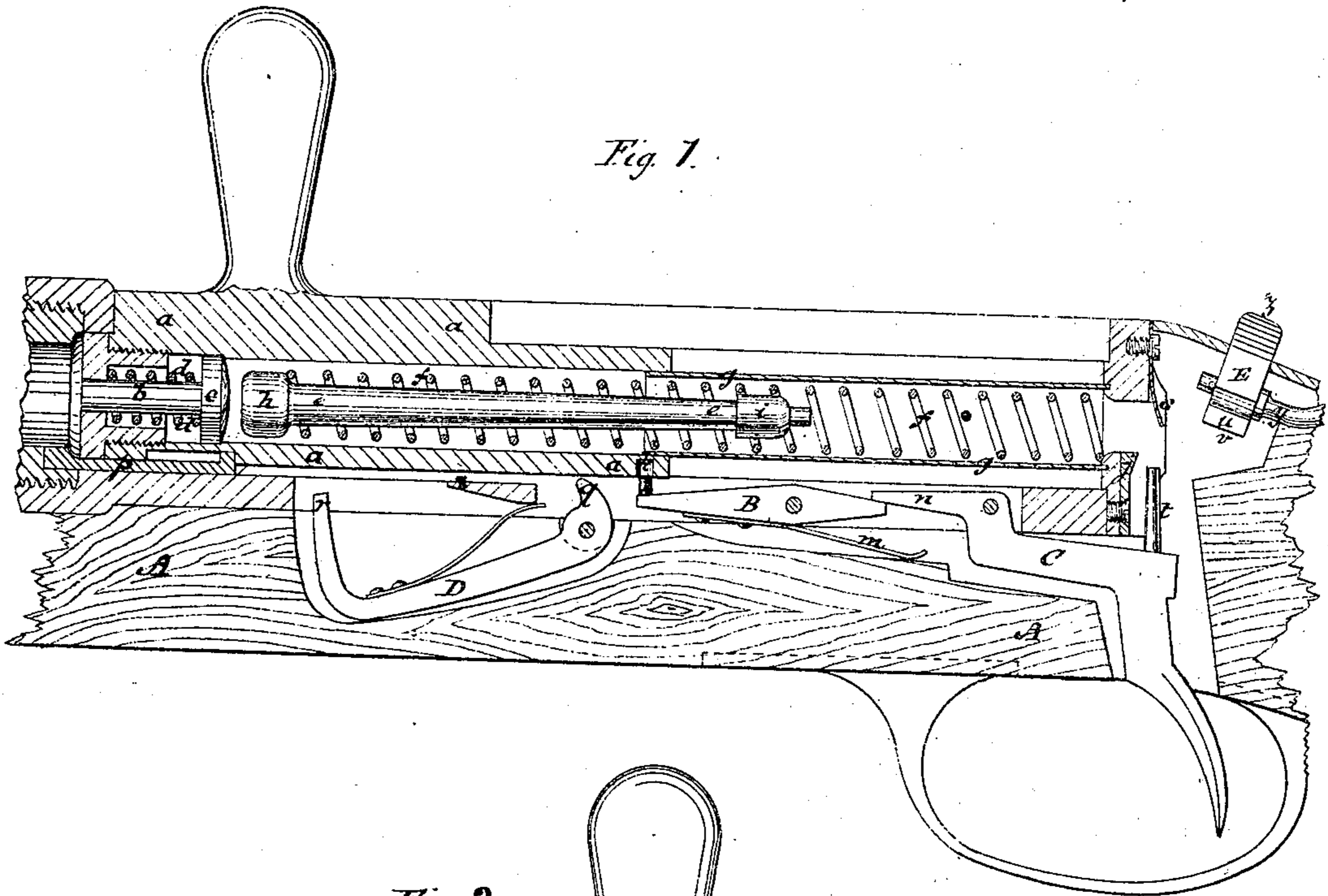


Fig. 2.

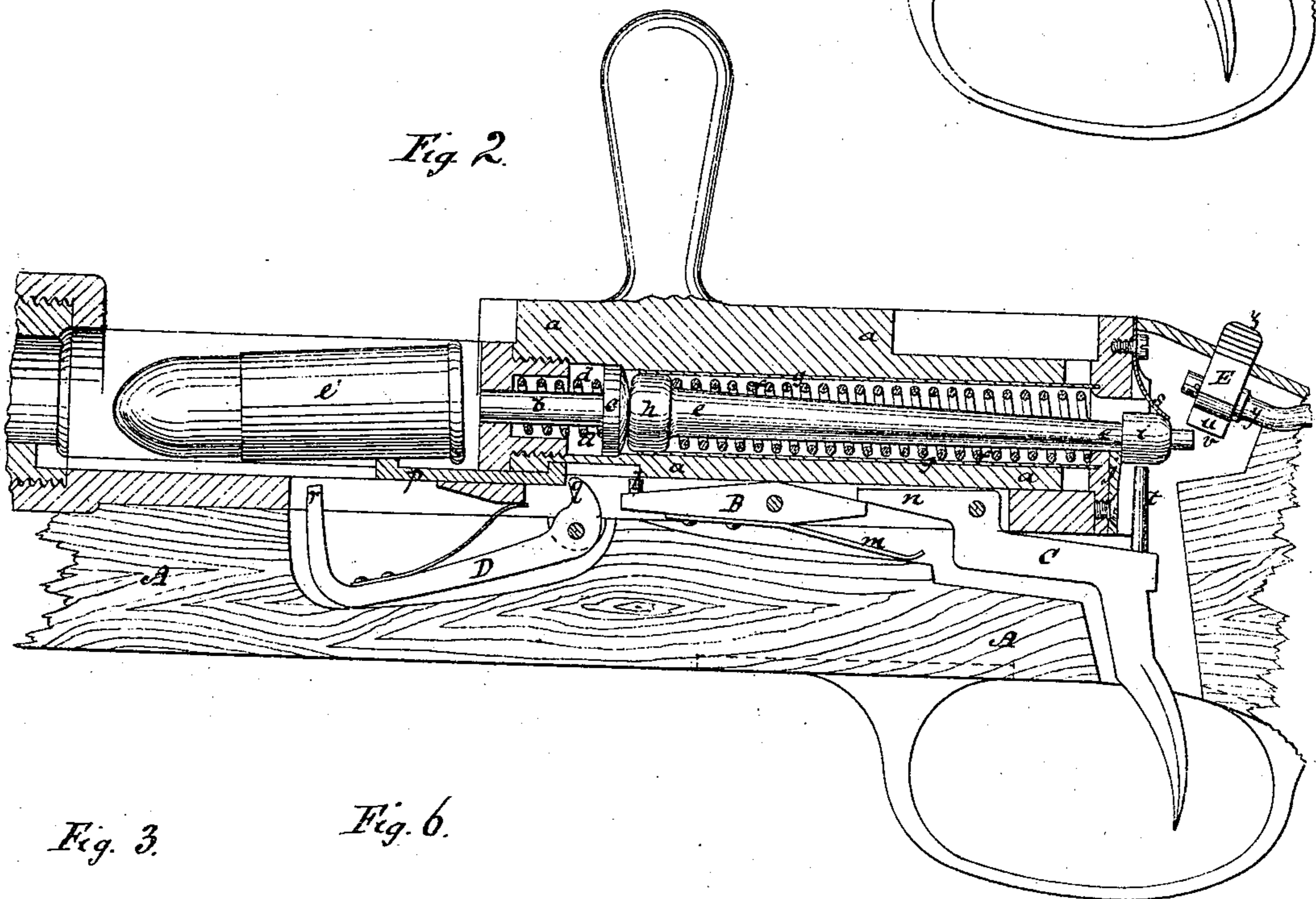


Fig. 3.

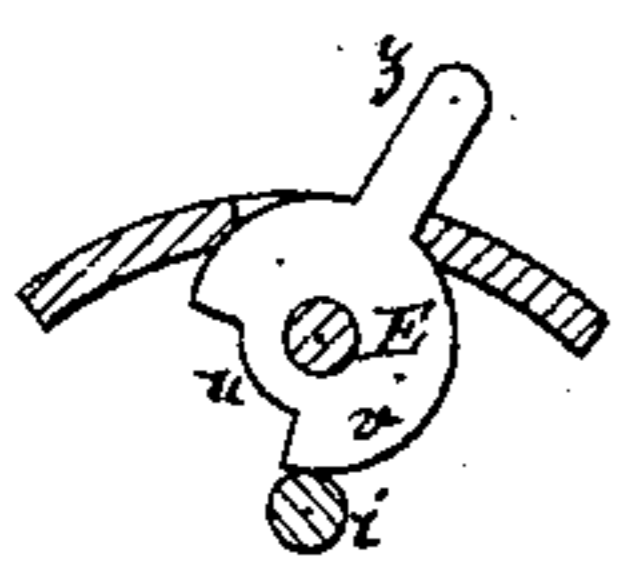
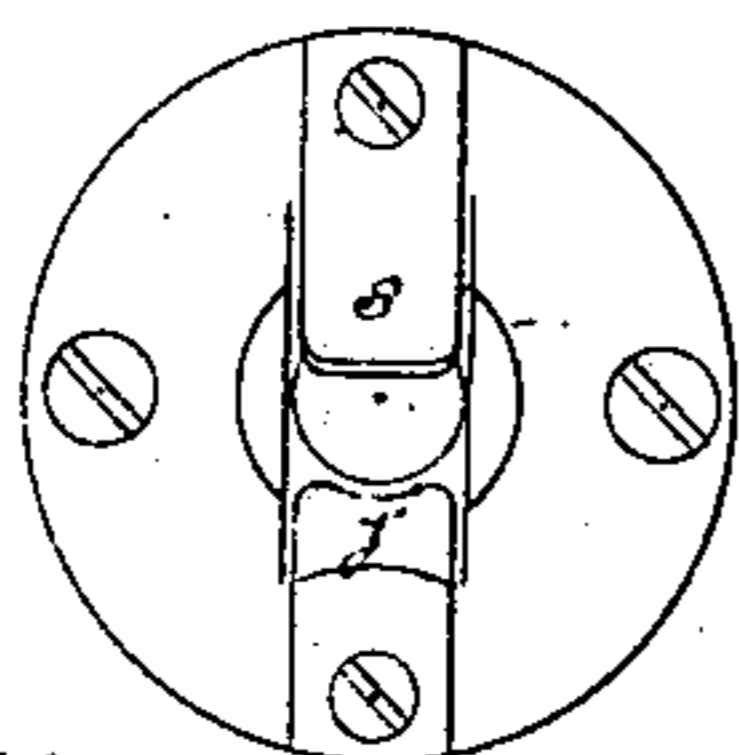


Fig. 6.



Witnesses

James Burnley. Deadwaters John Hanson
Joe Hanson Polly Hall Huddersfield

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Fig. 4.

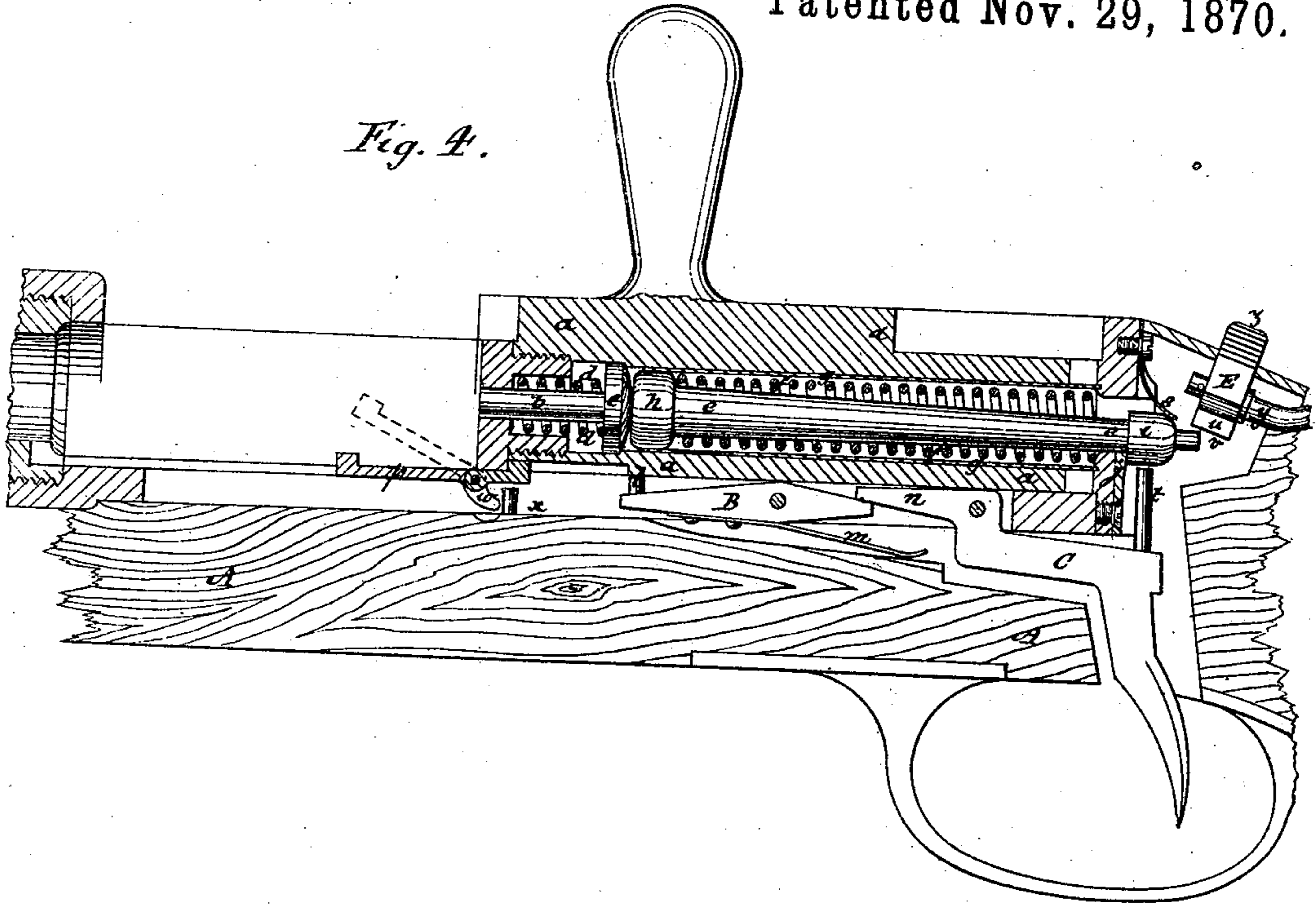
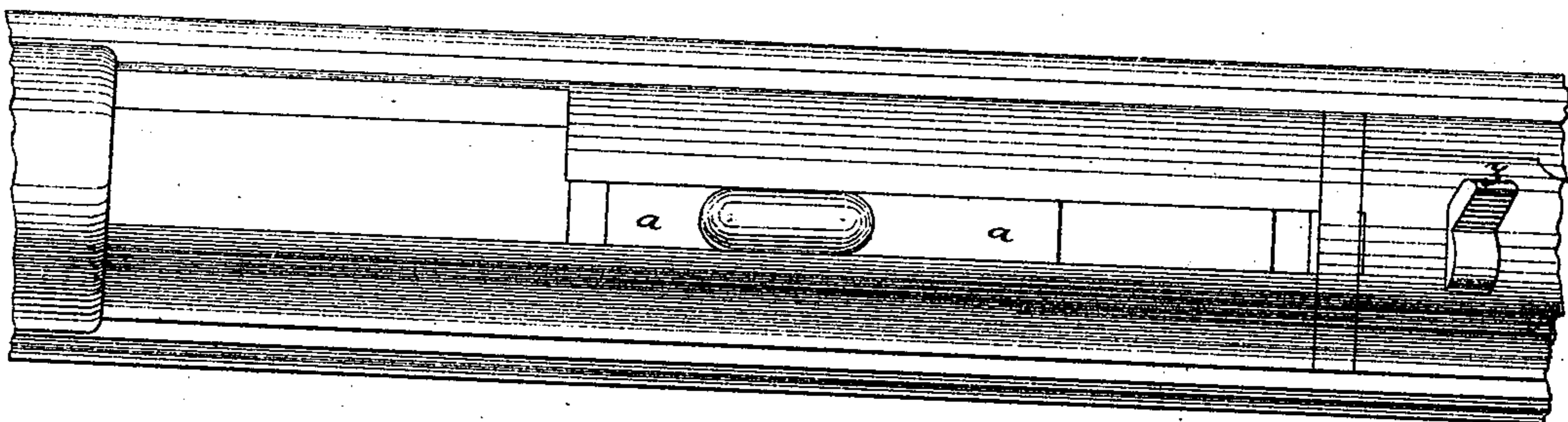


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN HANSON, OF RASHCLIFFE, NEAR HUDDERSFIELD, COUNTY OF YORK,
ENGLAND.

IMPROVEMENT IN BREECH-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 109,731, dated November 29, 1870.

To all whom it may concern:

Be it known that I, JOHN HANSON, of Rashcliffe, near Huddersfield, in the county of York, England, have invented or discovered certain Improvements in Breech-Loading Fire-Arms, and in the Manufacture of Cartridges for the Same; and I do hereby declare that the following is a full, true, and exact description thereof, reference being had to the accompanying drawings, and to the letters and figures marked thereon—that is to say:

My improvements in fire-arms relate to those arms which are furnished with drawback closing-bolts; and it consists in an improved arrangement of mechanism by which the arm is opened ready to receive a charge, the empty cartridge-case extracted and thrown automatically from the arm, and the piece placed in position for firing in one operation.

The invention will be well understood by referring to the accompanying drawings, of which Figure 1 is a sectional elevation of a gun with the parts in the position they occupy after the explosion of a charge; and Fig. 2 a similar view with the parts in the position when the insertion of a cartridge takes place and the striker is set at full-cock.

I fit in the fore end of the closing-bolt *a* a striker, *b*, formed with a button, *c*, at its back end for a coiled spring, *d*, to act against to keep the point of it flush with the face of the closer *a*. Behind the striker *b* is a bolt or rod, *e*, which is encircled by a coiled spring, *f*, held in a tube, *g*, to direct its action and prevent the coils overlapping. The tube *g* also serves as a guide for the closing-bolt *a* to work upon in its to-and-fro movements. The tube *g* is secured at the back end to the rear portion of the breech-piece, which rests in the stock *A*. The bolt or rod *e* is formed with two heads, *h*, to fit the tube *g* at one end, and the smaller head, *i*, which rides inside the coiled spring *f*, at the other. This smaller head, when the arm is cocked, is caught by a catch, *j*, and held in that position until the arm is ready for firing.

The under side of the closing block or bolt is provided with a hole, *k*, into which a safety-pin, *l*, on a double-inclined lever, *B*, is free to enter when the bolt *a* is entirely closed. The lever *B*, with the pin *l*, is kept balanced by

means of a spring, *m*. In consequence of this safety-pin having no hole to enter into, except the one on the sliding bolt *a*, the gun is locked fast and cannot be discharged, either by accident or intention, until the closing-bolt *a* is placed home in position for firing. Then the pin *l* can enter the hole *k*, and the gun may be discharged. If the closing-bolt is moved but one-eighth of an inch from that position, the gun again becomes locked. This gun offers great facility for examining and cleaning, as the barrel is open at both ends. The double lever *B* is in connection with a projecting tail, *n*, of the trigger *C*.

The fore end of the closing-bolt *a* carries an extractor, *p*, in a slot, the extractor having a certain amount of play allowed it, so that it is free to move when the cartridge is forced home in the chamber to engage itself with it.

There is a bent lever, *D*, fitted in the stock, one end, *q*, of which is struck by the extractor *p* in its backward movement, when it has traveled a certain distance. This striking causes the other end, *r*, of the forked lever to come forcibly against the empty cartridge-case and eject it through the opening in the barrel automatically. When the rod is drawn back, the smaller head is forced downward by means of a spring, *s*, fitted at the mouth of the opening through which it protrudes.

A pin, *t*, on the rear end of the trigger *C*, is made to take under the small head *i* of the rod or bolt *e*, and on the trigger *C* being drawn back the pressure overcomes the action of the spring *s* and the catch *j*, and releases the plug, when the force of the coiled spring *d* drives it to the front of the closing-bolt *a* with sufficient force to shoot the striker-pin *b* against the base of the cartridge, to explode the cap or fulminate.

I fit a lever and disk, *E*, in the top of the stock *A*. A portion of the disk is cut away at *u*, as seen in the detached view, Fig. 3, to allow the small head *i* of the bolt *e* to rise when it is required to fire the arm; but when it is necessary to retain the arm in a loaded and cocked position, the lever is turned partly around to bring a full part, *v*, of the disk upon the small head *i* of bolt *e*.

In some cases it is essential that the extractor should be so made that it shall be

caused to act as an ejector as well as an extractor, and this is accomplished by fitting a tail-piece, *w*, on the under side of it, as shown in the sectional view, Fig. 4, which is similar to Fig. 2 in all other respects. This combined extractor and ejector is acted upon by the stop or end of the slot in which it is engaged, to draw the cartridge-case clear of the bore after each discharge, and when it has traveled a certain distance the tail-piece *w* comes against the fixed stop *x* and causes it to tilt upon its pin, as shown in the figure. The degree of force or speed with which it is necessary to eject the case will of course depend upon the speed and power with which the closing-bolt is drawn back—that is to say, the greater the speed and sharpness of action in opening the breech the more certainty of action is expelling the empty case is obtained. This remark not only applies to this last-mentioned arrangement, but to the first-mentioned one as well. This disk, before referred to, is centered upon a pin or stud, *y*, let into the top of the stock, and it is free to be turned by the

pressure of the thumb against the projecting head *i*, as seen in the plan view, Fig. 5. Fig. 6 represents the back end of the breech with the catch *j* and the spring *s* fitted thereto.

I claim—

1. The plug or rod, with two heads within a tube, to be acted upon in the manner and for the purpose hereinbefore described, and shown in the accompanying drawings.

2. A tube for containing the coiled spring, and to serve as a guide for the closing-bolt to slide upon, in the manner hereinbefore shown and described.

3. The disk with a projecting thumb-piece, and with a portion of the edge cut away for retaining the arm at full-cock, or for freeing it ready for the discharge, as hereinbefore shown and described.

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Witnesses:

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