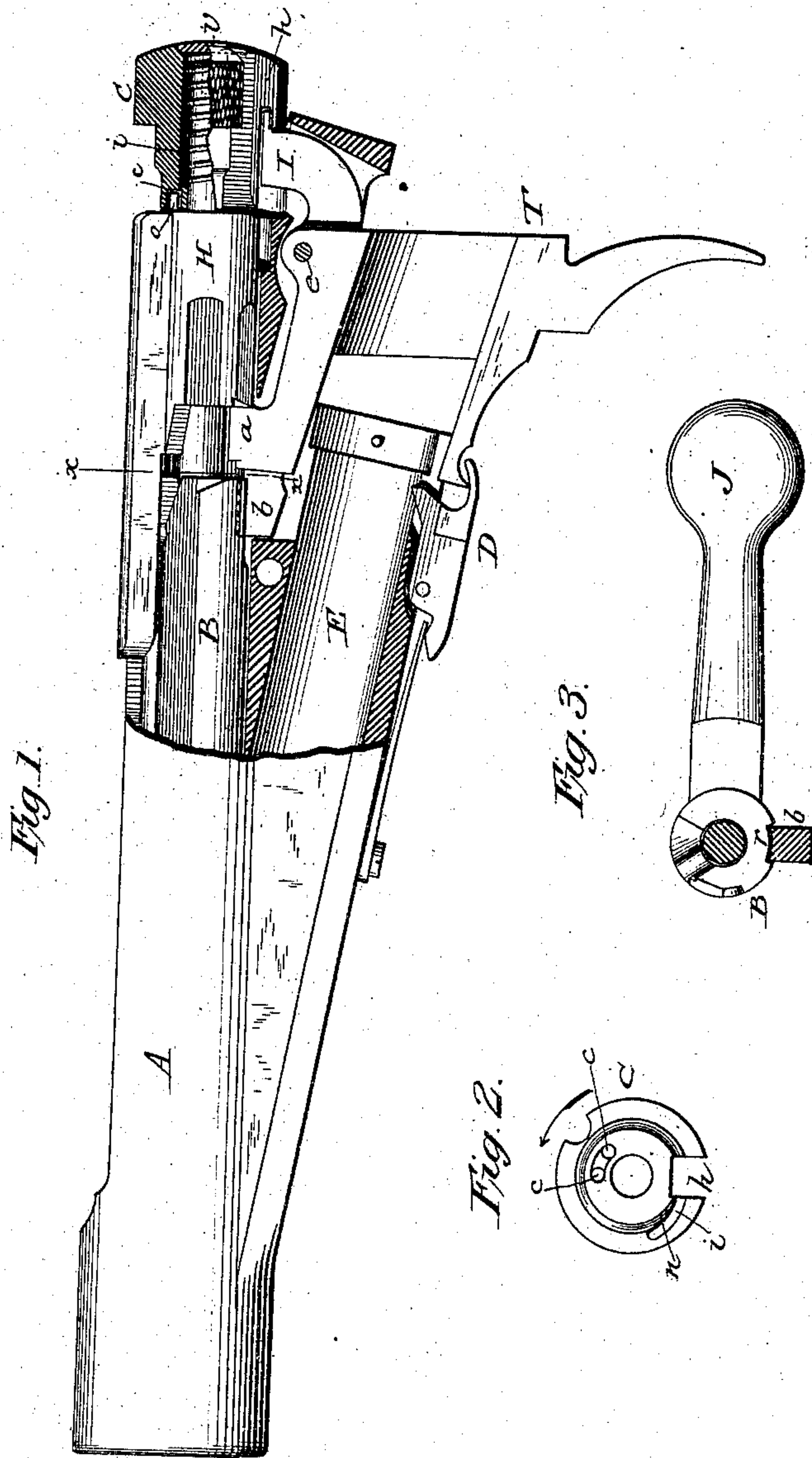


W. W. WETMORE & T. G. BENNETT.
Magazine Fire-Arm.

No. 224,366.

Patented Feb. 10, 1880.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM W. WETMORE AND THOMAS G. BENNETT, OF NEW HAVEN,
CONNECTICUT, ASSIGNORS TO THE WINCHESTER REPEATING ARMS
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MAGAZINE FIRE-ARM.

SPECIFICATION forming part of Letters Patent No. 224,366, dated February 10, 1880.

Application filed December 27, 1879.

To all whom it may concern:

Be it known that we, WILLIAM W. WETMORE and THOMAS G. BENNETT, both of New Haven, in the county of New Haven and State of Connecticut, have invented certain Improvements in Magazine and Bolt Guns, of which the following is a specification.

This invention relates to that class of fire-arms known as "bolt-guns," and is specially designed for use in connection with the magazine-arm known as the "Hotchkiss" gun, though a part of the invention is equally applicable to any bolt-gun.

The invention consists, first, in providing the trigger with a heel or rear projection, which, when the breech is unlocked, will prevent the detent of the magazine from being operated; and, second, in an eccentric arranged to operate upon the heel of the trigger in such a manner as to lock both the trigger and the breech-bolt fast, all as hereinafter described.

Figure 1 is a side elevation, partly in section, of the breech mechanism of a Hotchkiss gun with our improvements applied thereto. Fig. 2 is an end view of a part detached; and Fig. 3 is a transverse vertical section on the line x x of Fig. 1, showing the bolt locked fast by the front arm of the trigger.

In the accompanying drawings, A indicates the receiver or shoe; B, the breech-bolt, and E the channel through which the cartridges pass from the magazine in rear to the chamber in front, D being the detent, which, as shown, is operated by the trigger to release a cartridge each time the gun is fired, as more fully described in Patent No. 206,202, and dated July 23, 1878.

As shown in Fig. 1, the trigger T at its upper side has an arm, b , which extends forward under the breech-bolt B, and on which is the sear or locking-point a , that engages with the hammer or firing-bolt H, the same as in the patent referred to; but in this case we extend this arm backward from the pivot-pin e of the trigger, so as to form a rear projection or heel, I, as shown in Fig. 1. The result of this arrangement is that whenever the breech-bolt is unlocked and moved back far enough to bring the rear end of the part H over the projection

I the trigger is prevented from being moved on its pivot, the projection I resting against the under side of part H, and thus preventing it from tipping or moving; and, as shown in Fig. 1, this occurs as soon as the bolt is moved back about a quarter of an inch. The object of this is to prevent the detent D from being operated when the breech is opened, and thereby prevent the possibility of letting another cartridge pass from the magazine into the passage E under the bolt before the proper time.

It will be seen that if the bolt be drawn back to any point after it has been moved a quarter of an inch, more or less, the trigger will be thus locked, and that consequently the detent cannot be accidentally moved by pulling on the trigger when the breech is opened, whether the breech-bolt be part way or all the way back. In addition to this, we also make the trigger, with its arms b and I, lock the bolt fast when the breech is closed and locked, so that the bolt cannot be turned to unlock it nor the trigger pulled until released, the object of this being to render the arm more safe when riding, or when not desired for immediate use. This we accomplish by means of a knob, C, which, as shown in Fig. 1, is mounted loosely on the rear end of the firing-bolt H, so as to turn thereon. A spiral spring, i , is arranged to bear at its front end against an internal shoulder at the front portion of said knob, and at its rear end against the head of the screw v , by which the knob is fastened to the firing-bolt, as shown in Fig. 1, the knob being arranged to have a little end play as well as a rotary motion.

Fig. 2 represents a front-end view of this knob detached, and, as there shown, it has a notch, h , cut in its under side, of such a size as to permit the heel I of the trigger to play freely therein when the knob is turned, so as to bring said notch directly over the heel I, and which is its proper position when it is desired to operate the gun. This notch or groove h is cut of such a depth as to permit the heel I to rise far enough to permit the trigger to move the requisite distance to release the firing-bolt H and operate the detent D, as is required in firing the arm.

As shown in Fig. 2, there is a circular recess, *l*, cut laterally from the notch *h*, into which a rearwardly-projecting lip on the heel *I* engages, as shown in Fig. 1, when the knob *C* is turned to lock the bolt and trigger. This recess *l* and its inner wall, *n*, as shown in Fig. 2, are made eccentric, so that when the knob *C* is turned to the right this eccentric portion will act on the heel *I* to press it down, thereby throwing up the arm *b*, which is thus made to rest firmly in a notch, *r*, cut in the side of bolt *B*, as shown in Figs. 1 and 3, the latter showing the bolt with its handle *J* turned to the right, as it is when the breech is closed and locked.

In order to hold the knob *C* in these two different positions—one for firing the arm and the other for locking the trigger and bolt—it has in its front face two small holes, *c c*, as shown in Fig. 2, arranged to engage with a pin, *o*, which projects from the rear shoulder of the firing-bolt, as shown in Fig. 1.

By pulling back on the knob *C* it is at once disengaged from the pin *o*, when it can be turned to its other position, and as soon as released from the grasp the spring *i* will force it forward, causing the other hole *c* to engage with the pin *o*, and thus lock the knob, so as to prevent it from being accidentally turned.

It is obvious that instead of the holes *c* and pin *o* any other form of recesses and projections may be used to hold the knob from being turned, and also that the lateral recess or groove *l* and the corresponding lip on the heel *I* may be omitted without affecting the operation of the parts, as all that is requisite is that the knob *C* shall have an eccentric or cam surface arranged to bear upon the heel *I* and depress it sufficiently to throw the arm *b* up into the notch *r* in the bolt *B* and hold it there. So, too, it is obvious that the part *C*,

instead of being made in the form of a knob, may be made in the form of a hook or thumb-piece, or in any form desired, so long as it is made to operate on the heel *I* and depress it, as described; and by making the heel *I* correspondingly lower the groove *h* may be dispensed with, these being modifications which any mechanic skilled in the art can readily make, if desired.

Having thus described our invention, what we claim is—

1. In combination with the sliding breech-bolt *B*, the trigger *T*, provided with a rear projection, *I*, arranged to bear against the under side of the firing-bolt *H* or breech-bolt *B* as the latter is drawn back, whereby the trigger is prevented from operating the detent of the magazine except when the breech is closed, or nearly so, as set forth.

2. In combination with the sliding breech-bolt provided with a notch, *r*, the trigger *T*, provided with a front arm, *b*, and a heel or rear projection, *I*, and the knob *C*, or equivalent device, provided with an eccentric or cam projection arranged to operate upon the arms of the trigger, substantially as described, whereby both the trigger and the breech-bolt can be locked fast whenever desired.

3. In combination with the trigger provided with the rear projection, *I*, the firing-bolt *H*, and the sliding and rotating knob *C*, or equivalent device, provided with a spring, *i*, and the interlocking holes *c* and pin *o*, or equivalent means for locking the knob *C* in position, said devices being constructed and arranged to operate substantially as described.

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Witnesses:

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