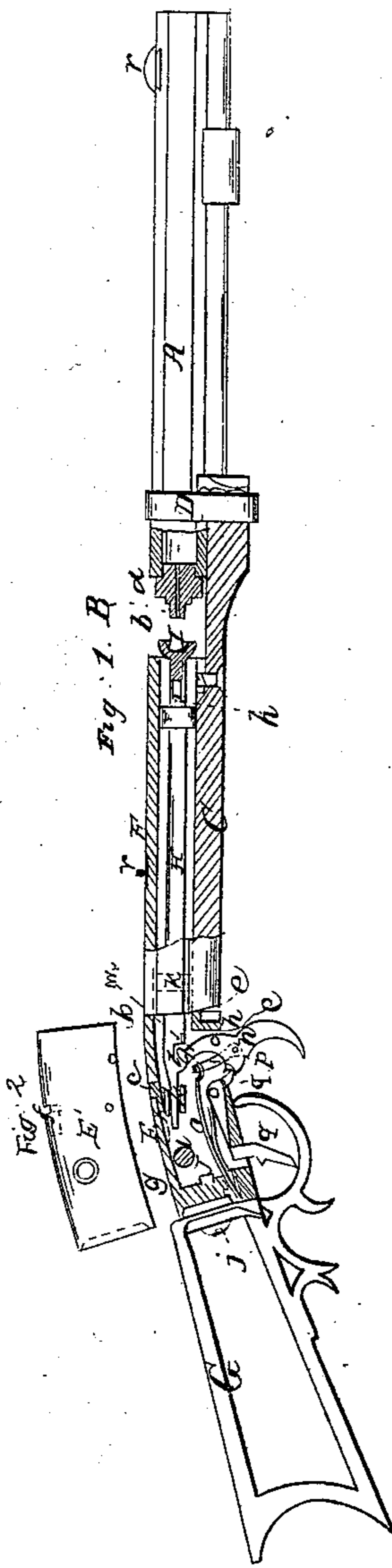


D. KNIGHT.

Muzzle-Loading Fire-Arm.

No. 11,483.

Patented Aug. 8, 1854.



UNITED STATES PATENT OFFICE.

DANIEL KNIGHT, OF SALEM, INDIANA.

IMPROVEMENT IN FIRE-ARMS.

Specification forming part of Letters Patent No. 11,483, dated August 8, 1854.

To all whom it may concern:

Be it known that I, DANIEL KNIGHT, of Salem, in the county of Washington and State of Indiana, have invented a new and useful Improvement in Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of a rifle with my improvements applied to it, one section of the lock-chamber being removed, and a portion of the tube which contains the hammer-rod, and also the rifle-barrel being broken away and section-lined, for the purpose of showing said improvements more fully. Fig. 2 shows an external view of the section of the lock-chamber which was removed in Fig. 1.

The nature of my invention consists in a new and useful improvement in fire-arms, whereby greater safety in firing the same is insured and their construction simplified, and several other new and important objects secured, as will be presently shown.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the barrel of the rifle. It is made about two and a half feet long. In the center of its back end or breech a screw-hole for the nipple B to screw in is formed, as shown in the drawings. The nipple B is made square at *a*, so as to be capable of being unscrewed with a wrench when it is desired to remove a ball which may have been put in without powder, or to clean out the gun at the breech. The barrel A is attached to the part C of the stock by means of a strap, D, as shown. The support or grooved part C is made of malleable cast-iron or other suitable material, and extends back from the nipple about seventeen inches, and couples firmly with the casting forming the lock-chamber E E' in the manner represented.

F is a malleable-iron casting, resembling the upper section of a rifle-barrel divided longitudinally. This casting is arranged on the upper part of the support C a short distance behind the breech of the barrel A, and, with the exception of the space *b* between its front end and the back end of the barrel, appears to form a continuation of the rifle-barrel until it couples

with the casting forming the lock-chamber E E', as represented. The casting F, in connection with the support C, forms a tube for the sliding hammer-rod H to move back and forth in. The lock-chamber E E' is made in two parts, which, when put together, form a cylinder.

c d e are lugs or lips cast on the parts C E F. These lugs fit in suitable recesses, as shown at *f g*, and catch against one another, as shown at *h*, and thereby, in connection with the screw *i*, firmly couple together the parts C, E, E', and F, as shown in the drawings.

G is a skeleton malleable-cast-iron butt or stock. Its front end is fitted in the back end of the lock-chamber E E', and then screwed firmly to said chamber by the screw *j*, as represented.

I is the hammer. Its shank or rod H passes through the tube formed by the parts C F, and is kept in a straight line by the guides *k k k*, formed on the inside of the tube C F and lock E E', as represented. The hammer-rod is provided with a notch, *l*, near its back extremity. In this notch the end *m* of the cock *n* catches, as shown in Fig. 1, and moves the hammer back and forth.

o is the spring for throwing the cock against the hammer-rod. It is arranged and connected to the cock by the swinging link *p* in the manner shown in the drawings.

q is the trigger. It connects with the cock, when the rifle is ready for firing, in the manner shown.

r r are the sights. One is placed on the barrel A, and the other on the tube C F.

The operation is as follows: The gun being loaded and the cap put on the nipple, the thumb is placed against the cock and the cock forced forward until the hammer occupies the position shown in Fig. 1, and the trigger connected to the cock in the manner shown. This being done, the trigger is pulled and the power of the spring *o* thereby caused to act upon the cock and throw the end *m* of the same with sufficient force against the hammer to cause it to explode the cap and fire off the charge in the rifle.

By arranging the barrel forward from the hand that supports it in shooting, there is less danger in case the rifle should burst, and if the barrel splits open and lets the nipple fly

back, the shoulder formed by the tube C E prevents its passing in a direct line toward the shooter; and by having the nipple screwed in the center of the breech or back end of the barrel A, no side jar will be experienced as the explosion takes place, owing to the charge being ignited at the center. The cap will not be so likely to fly into the eyes when exploded, and its explosive material will have no chance to act upon and dirty the lock. A ball can be taken out at the breech, when put in without powder, with ease and facility.

What I claim as my invention, and desire to secure by Letters Patent, is—

The horizontal sliding hammer H I l, constructed as described, and combined with the operating mechanism *m n o p q*, which constitutes the trigger, in combination with the barrel A, which has the nipple in its breech, when said barrel is arranged forward from the hand of the shooter and in front of the protection-shoulder formed by the tube C F at *b*, substantially as and for the purposes set forth.

DANIEL KNIGHT.

Witnesses:

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