R. G. SHURTLEFF.

Tompion.

No. 37,645. Patented Feb. 10, 1863.

Fig: 1.

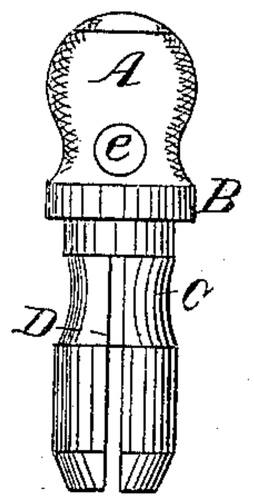
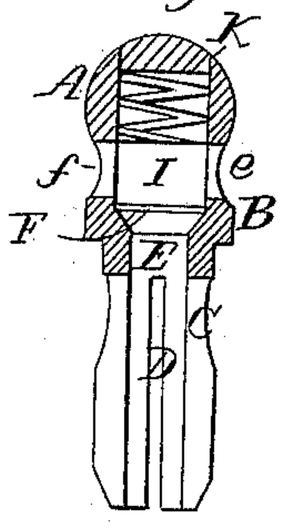


Fig: 2.



Witnesses.
C. A. Warner
Frank R. Young

Inventor:
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UNITED STATES PATENT OFFICE.

R. G. SHURTLEFF, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN TAMPIONS FOR FIRE-ARMS.

Specification forming part of Letters Patent No. **37,645**, dated February 10, 1863.

To all whom it may concern:

Be it known that I, R. G. SHURTLEFF, of Springfield, in the county of Hampden and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Tampions for 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, making a part of this specification.

It has been found by experience that wood combines more desirable qualities than any other material for a tampion. Many different kinds have been constructed, (and are now in use,) not one of which is free from a very serious objection, which the following-described invention will entirely overcome. It is well-known that the ordinary tampion, when exposed in a gun to moisture for any considerable time, absorbs so much as thereby to fix itself in the muzzle so firmly as to resist the unaided force of the fingers to withdraw it. This may occur when there is no other remedy than to remove it by the discharge of the piece, which, if not burst, (as is frequently the case,) must be so strained in various degrees as to impair its accuracy ever after. It is not unfrequently the case that soldiers in the excitement of an engagement neglect to remove the tampion from their muskets, the bad results of which vary in proportion to the good or bad condition of the tampion, which may burst or only imperceptibly strain the piece. Now, I claim to have constructed a "valve-tampion" having all the desirable qualities of the wooden tampion now in common use, with the addition of a valve so arranged as to admit of its being forced from a musket without in any way doing injury to the piece, as has been proved by test experiments at the Springfield armory.

The invention is simple, and will be readily understood by reference to the accompanying drawings, in which—

Figure 1 is an outside view, and Fig. 2 a section, of my tampion.

A is the head; B, the shoulder, and C the body, made of wood. D is a saw-kerf in the body, forming a spring to hold the tampion in the barrel. E is a hole passing entirely through the tampion from end to end, which hole is counterbored larger from the upper end a short distance, forming a shoulder or valve-seat, F. Now make a solid valve, I, of leather or other suitable material, and insert at the upper end, afterward insert a spring, K, and follow that with a plug to close the upper end of the opening, which confine with cement. Thus the valve I is held in contact with the seat F by the spring K, so as to exclude the moisture from the barrel as effectually as if the tampion-head was solid; yet when the valve is forced up against the spring an opening is formed communicating with the interior of the barrel through the holes *e* and *f*. The operation in either case is as follows: Supposing the tampion to have become fixed in the muzzle, or to have been left in through mistake, and the arm to be discharged. When the powder commences to ignite and the charge to move, a pressure of the confined air on the tampion ensues, and immediately the valve is forced up, and the air is free to escape, thus relieving the barrel of all unusual strain, and when the ball reaches the tampion it takes it out without the least danger to the fire-arm.

I am aware that valve-stopples operated by springs are not new, and I do not desire to claim, broadly, such device; but, for the purpose of guarding against the bursting of small-arms,

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

The tampion A, with its slits D and cylindrical interior E, having lateral openings *e*, in combination with the valve I and spring K.

R. G. SHURTLEFF.

Witnesses:
E. A. WARNER,
FRANK R. YOUNG.