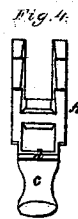
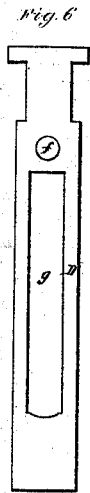
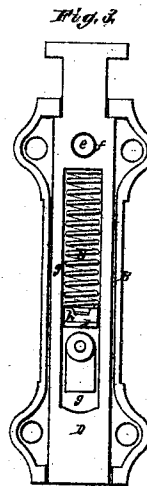
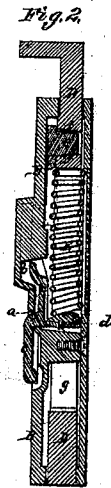
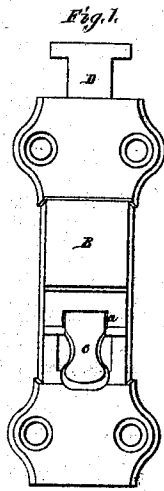


M. Harbster,

Bolt.

No. 105675.

Patented July 26. 1870.



Witnesses.

S. J. Piper
J. Brown

Fig. 9.



Fig. 10.



Matthen Harbster

by his attorney:

N. H. Ledy

United States Patent Office.

MATTHEW HARBSTER, OF READING, PENNSYLVANIA, ASSIGNOR TO HARBSTER BROTHERS & CO., OF SAME PLACE.

Letters Patent No. 105,675, dated July 26, 1870.

IMPROVEMENT IN BOLTS.

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

To all persons to whom these presents may come:

Be it known that I, MATTHEW HARBSTER, of Reading, in the county of Berks, of the State of Pennsylvania, have invented an Improved Bolt or Lock for Doors; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, making part thereof, of which—

Figure 1 denotes a front elevation, and

Figure 2, a vertical and transverse section of it.

Figure 3 is a rear view of the case, with its cover removed from such case.

Figure 4 is a rear elevation, and

Figure 5, a side view of the catch-dog or trigger A.

Figure 6 is a rear view of the bolt D.

Figure 7 is a side view, and

Figure 8, an edge view of the furcated catch C.

Figure 9 is a side elevation, and

Figure 10, an edge view of the wedged saddle *h*, as hereinafter described.

This lock or bolting apparatus is intended for use on the lower part of a door, and is to bolt into a socket formed in the threshold of such door.

In the drawing—

B denotes the bolt-case, it being provided with a pivotal slot, *a*, and a chamber or recess, *b*, arranged in it in manner as represented, for reception of the lever-catch, trigger, or catch-dog A, formed in manner as shown.

The thumb-piece or shank *c* of the catch-dog extends through the slot *a*, and the projection or arm *d* of such dog rests against the lower side of the slot, and not only constitutes a fulcrum for the catch-dog, but a support for one end of the single spring, E, which is used in this lock.

The catch-dog A has its prongs hooked or formed with teeth, to co-operate with those of a furcated catch, C.

The said catch C, formed as represented, has a tenon or stud, *e*, extended from it, into a hole, *f*, made in the bolt D.

The said bolt, shaped as shown, has a long slot, *g*, within it, and is arranged to slide freely within and out of two opposite ends of the case, it being arranged, with reference to the catch-dog or trigger and the furcated catch, in manner as shown in fig. 2.

A helical spring, E, placed within the bolt-slot *g*, rests at its upper end against the upper extremity of such slot, and at its lower end either directly against the arm *d*, or a saddle-piece or wedge, *h*, arranged between the two, as shown.

In this lock the helical spring performs two functions, viz., that of retracting the bolt, and that of moving the trigger into engagement with the furcated catch.

In operating this lock a person is to press the bolt downward, with his foot placed on the head of such bolt. The furcated catch C, moving down with the bolt, will, on the latter having descended a suitable distance, engage with and hook upon the trigger or catch-dog, so as to cause the bolt to be held down.

By pressing the tail of the catch-dog or trigger inward, the disengagement of the trigger and the catch will be effected, and the spring will elevate the bolt.

The purpose of the wedge or saddle *h* is to cause the spring, while being contracted, to bow or bend toward and against the arms of the furcated catch, so as to force them into engagement with or toward the hooked arms of the trigger or catch-dog. The wedge, therefore, causes the spring to exercise another function or duty besides those hereinbefore enumerated.

I make no claim to the combination of a bolt, spring, and dog, in the manner and of the kind as shown and described in the United States patent No. 49,296. In the bolting apparatus or lock shown in such patent, a spring separate from the mainspring is required to the dog to actuate it in one direction, whereas, as hereinbefore stated, in my improved bolting apparatus but one spring is necessary.

My arrangement of the trigger, viz., so as to extend through the front of the case, instead of out of one edge of it, is more favorable for its operation by the foot of a person.

I claim—

My improved arrangement and application of the bolt D, spring E, and the catch-dog or trigger A, whereby the spring is rendered capable of performing two functions, as explained.

Also, the combination and arrangement of the catch C with the catch-dog or trigger A, the spring E, and the bolt D, arranged as set forth.

Also, the combination and arrangement of the wedge or saddle *h* with the spring E, trigger A, and bolt D, arranged to operate as described.

Also, the trigger, as arranged with the bolts and spring, and to extend through and pivot in the front of the case, as set forth.

MATTHEW HARBSTER.

Witnesses:

R. H. EDDY,
S. N. PIPER.