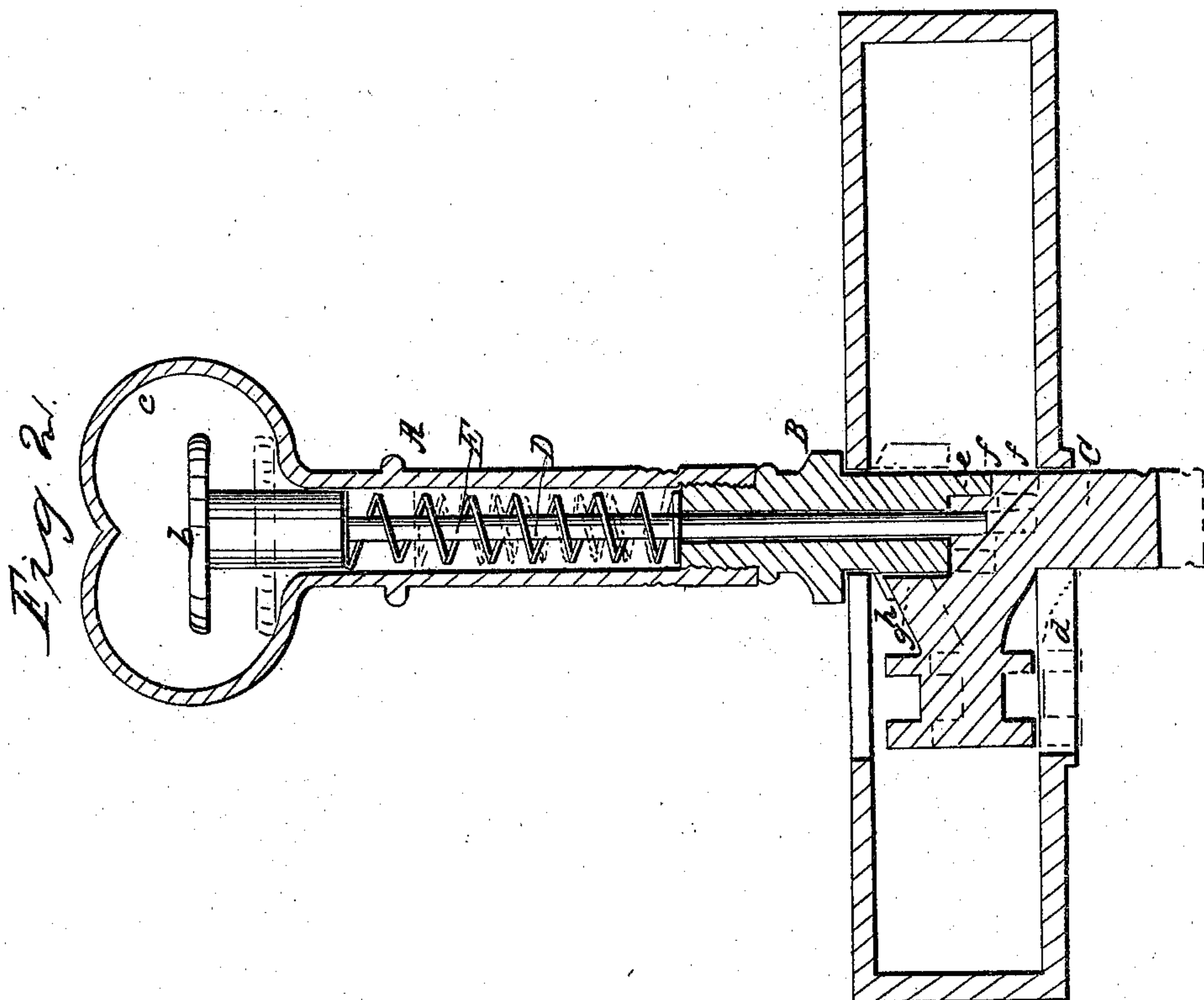
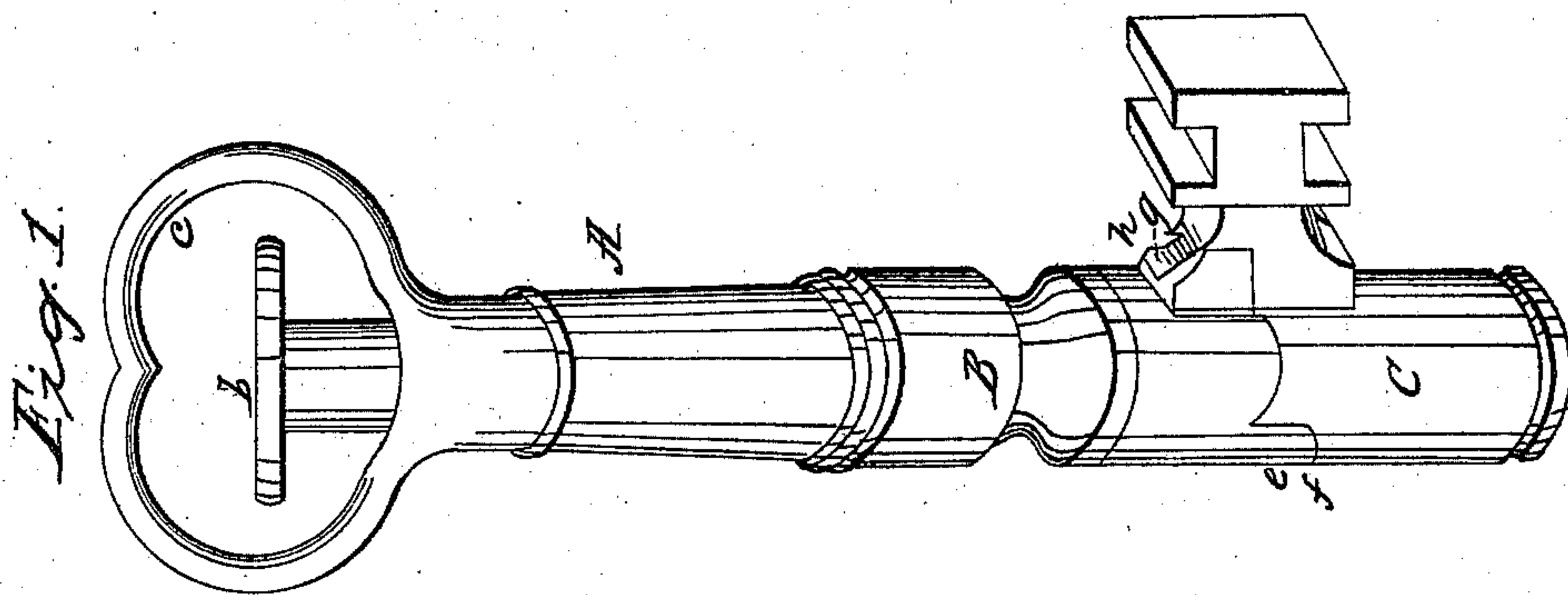


W. Damerel,
 Door Key,
 No 10,883,
 Patented May 9, 1854.



UNITED STATES PATENT OFFICE.

WILLIAM DAMEREL, OF BROOKLYN, NEW YORK.

EXTENSION-BIT-GUARD KEY FOR DOOR-LOCKS.

Specification of Letters Patent No. 10,883, dated May 9, 1854.

To all whom it may concern:

Be it known that I, WILLIAM DAMEREL, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Extension-Key for Hotel and other Door-Locks; 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 is a perspective view of my improved key, separate from the lock, and as it appears when not extended. Fig. 2 is a vertical longitudinal section of the same placed in a lock, the black lines showing the key in the place it occupies when ready for unlocking or locking the door, and the red lines showing it in the position it occupies when extended and employed as a protection against burglars picking the lock from the outside of the door.

Similar letters of reference in each of the two figures indicate corresponding parts.

A, B, C, represent one of my improved keys, it being made in three sections. The section, A, is made hollow, and screws on the solid section, B, and the section, B, also has a hole bored through it, but of smaller diameter than the hole, *a*, in section A. By thus making section A, separate from B, I am enabled to bore them with greater facility, and of different diameters as is requisite.

D, is a rod passing through the sections, A, and B, and connecting with the section, C, as shown in Fig. 1. This rod is of greater length than the two sections, A, B, and has a button or knob, *b*, on its inner end, which plays in and out, or back and forth, inside the ring, *c*, of section A, and prevents the rod getting out of place. By thus securing the section A, to C, I am enabled to extend the key so as to have section C, occupy a place in the key hole, *d*, formed in the outside plate of the lock, as shown in red lines in Fig. 2, and also to have A, and B, turn independent of C, when extended, and by means of a simple device to turn with it when not extended.

When the section, C, occupies the position shown in red in Fig. 2, it is impossible to turn it from the outside by its nipple as must be evident from the fact that it comes in contact when moved with the metal forming the back of the lock, and consequently cannot be turned.

E, is a spiral spring placed around the rod, D, inside of the section, A, as shown in Fig. 2. This spring serves to draw the section, C, back to its place, shown in black lines in Fig. 2, when the section, A, is turned from the inside of the door. By means of this spring, no matter in what direction the section, A, is turned, the section, C, will be caused to take its place; thus, the key is self adjusting, and in case of excitement or alarm, the door can be unlocked almost as speedily as if the ordinary key was used.

e, is a stop formed on the lower end of section, B; and *f*, is a recess of similar shape, cut in the periphery of the circular portion of section, C. In this recess, the stop, *e*, fits snugly, and thereby prevents the sections from turning independent of each other when the key is in use for unlocking the door. The stop, *e*, also serves for extending the key, and holding the section, C, in the position shown in red lines in Fig. 2, said stop resting on the solid portion of the section, C, when the section, A, is turned to the position shown in red in Fig. 2, and the key extended. When the section, A, is turned to the position shown in black in same figure, said stop, *e*, is caused by the spring to jump into the recess, *f*, in the section, C, and thereby lock the whole together. *g*, is another stop formed on the section, C, and *h*, is a recess or groove of similar shape as the stop, *g*, formed on the section, B. In this groove, the stop, *g*, fits snugly, as shown in the drawing, Figs. 1 and 2, and also serves for locking the sections together when the key is not extended.

To operate this key so as to make it serve as a protection against burglars and others, it is necessary to bring the section, C, in line with the key hole, *d*, after the manner shown in black in Fig. 2, then press with the thumb against the knob, *b*, until the section, C, occupies the position shown by red lines, in the hole, *d*, when the sections, A, must be turned to the position shown in red in Fig. 2. This latter operation effectually prevents the section, C, getting back into the chamber of the lock, unless the key is turned from the outside.

By this construction and arrangement of the parts, operating and operated as described, the bit proper, as it may be called, or that portion which operates the bolt, is expeditiously thrown in and out of gear with the shank and, when out of gear so as not

to turn with the shank, serves to plug the key hole on the outside, instead of using an extra swivel guard bit attached to the key in front of the ordinary bit, as has before
5 been used for that purpose, whereby a plug of greater firmness and strength is obtained while no weighty overhanging bit in gear with or attached to the shank is left in the lock to induce by its overhanging position
10 or weight (assisted, as might easily be done, by jar) the turning of the key so as to place it in a position admitting of the key being forced inward out of the lock when the lock might be picked—a condition of things to
15 which the extra swivel guard bit arrangement to which I refer is particularly liable—the spring (E), by my arrangement, further assisting to hold the bit and shank in their relative set positions, so that it is next to
20 impossible for the key to be turned from the outside or by accidental blow or touch upon the bow from within; and the spring and clutch contrivances connecting the bit with the shank insure the same freedom and
25 expedition in withdrawing and entering the key as belongs to the common key having no guard bit or plugging arrangement, the spring shooting the bit into firm gear with the shank and, in conjunction with the
30 clutch contrivances, holding it there, so that the bit is made self adjusting, by turning

the shank, in unlocking the door, and the key may be drawn as freely out of the door as the common key and is always ready for
as freely entering, which is not the case with 35 the extra swivel guard bit arrangement that takes time to bring the guard bit in line with the ordinary bit to enable it to enter and leave the key hole.

I am aware that the key hole has before 40 been plugged on the outside by the key from within,—by means of an additional or swivel guard bit in front of the ordinary or main bit which operates the bolt,—such therefore I do not claim. But 45

I do claim as new and useful, and desire to secure by Letters Patent—

So arranging and connecting the main bit of the key or that portion which operates the bolt with the shank of the same as that the 50 main bit may be thrown in or out of gear at pleasure with the shank and extended so as to plug the key hole or be moved inward to form a firm connection with the shank to operate the bolt, substantially as herein 55 set forth and whereby the many advantages specified are obtained.

WILLIAM DAMEREL.

Witnesses:

S. H. WALES,
JNO. W. HAMILTON.