

M. C. HAWKINS.

PAD-LOCK.

No. 180,875.

Patented Aug. 8, 1876.

Fig. 1

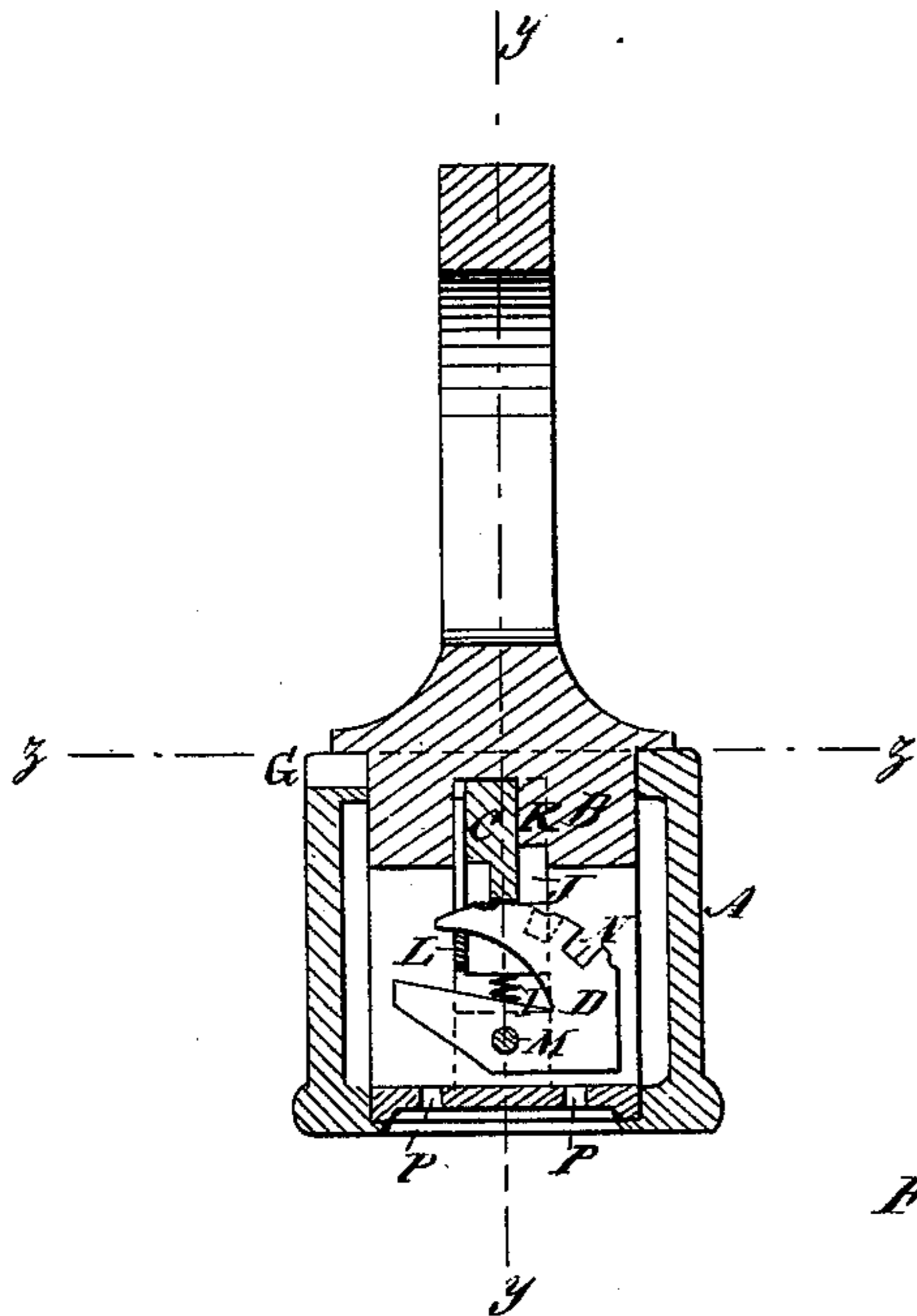


Fig. 2

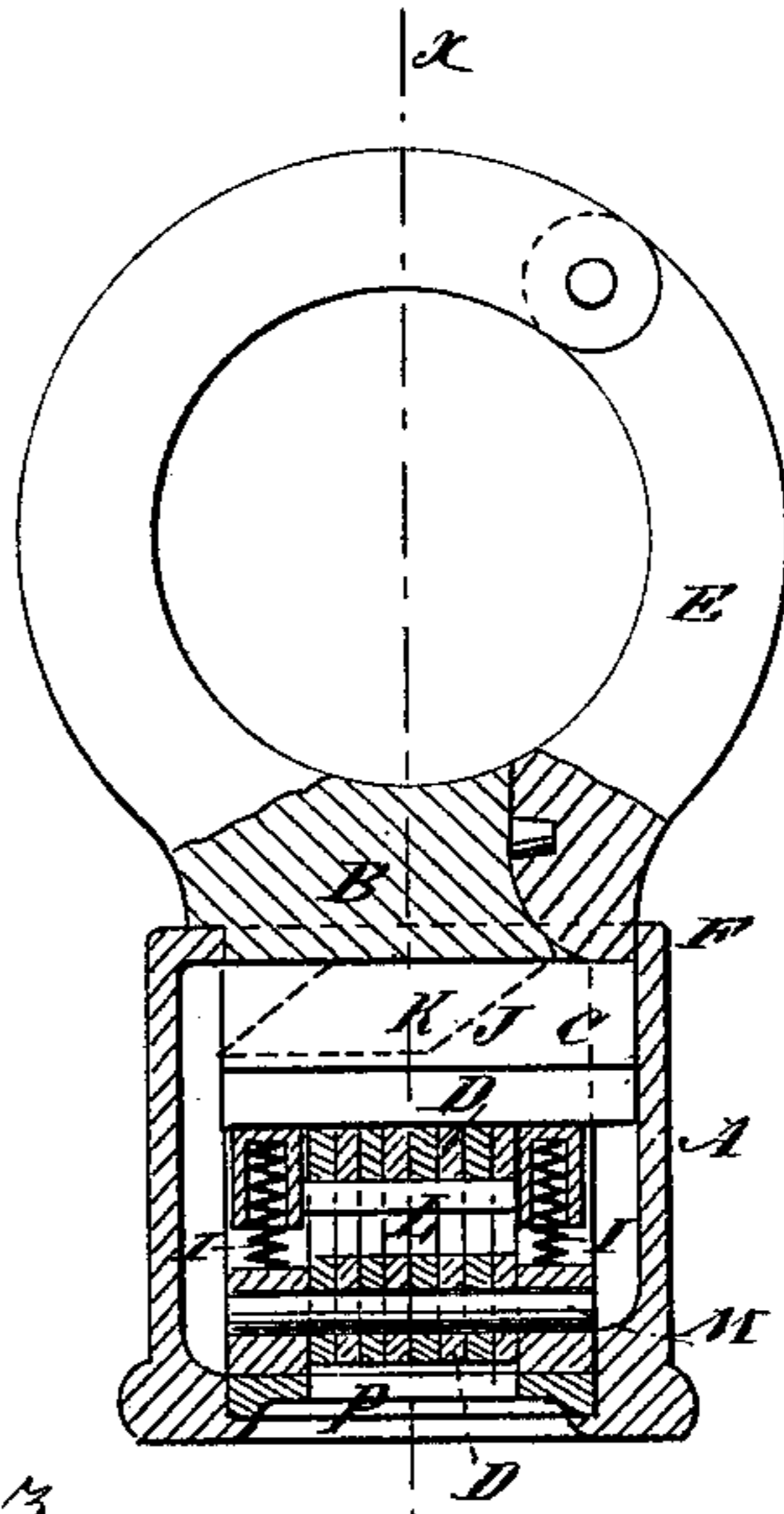


Fig. 3

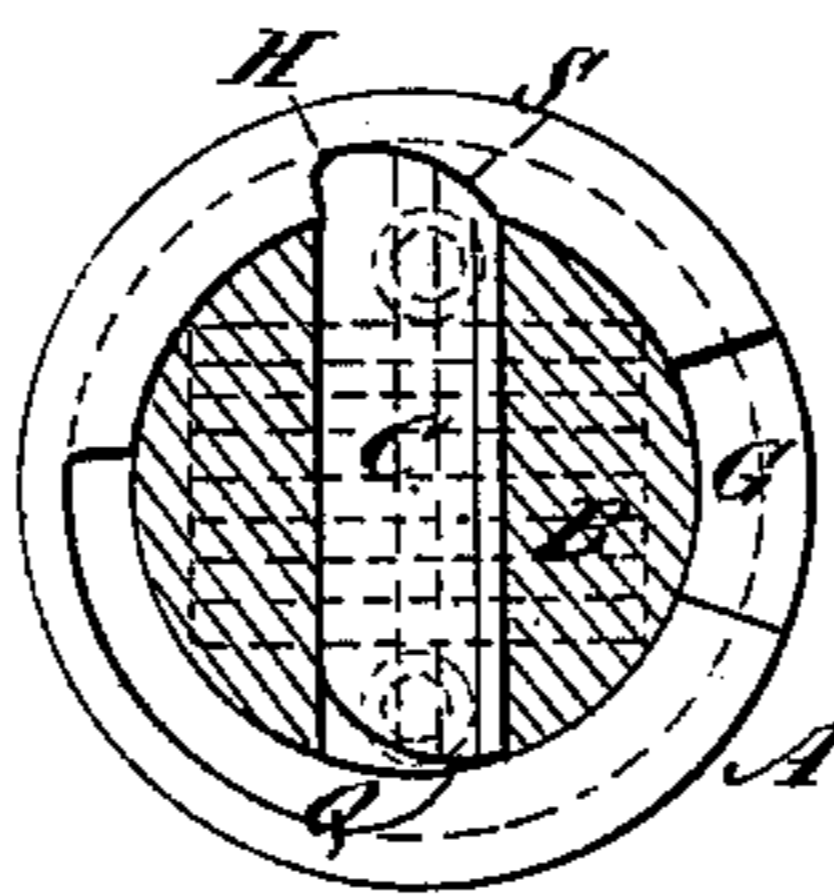


Fig. 6

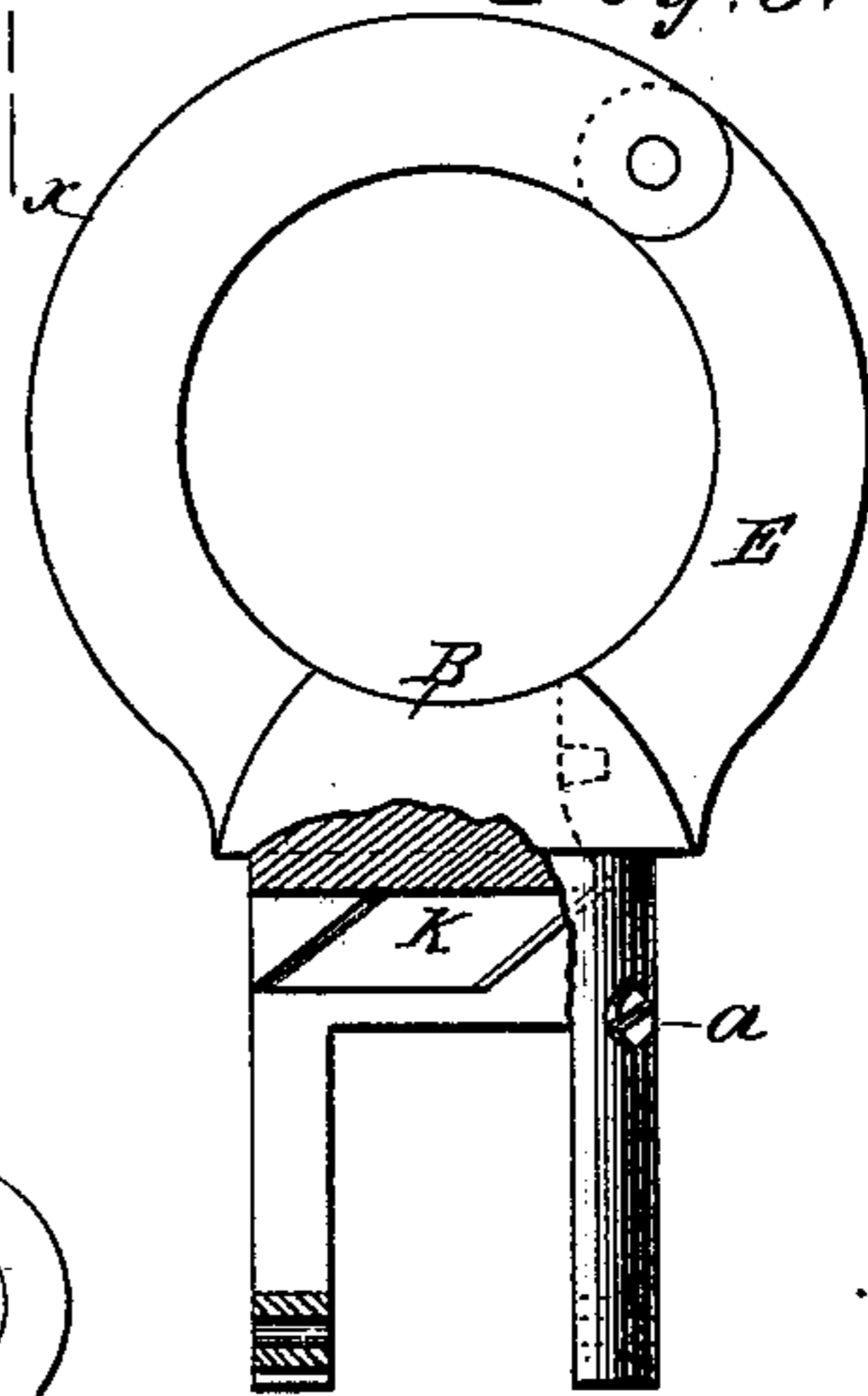


Fig. 4

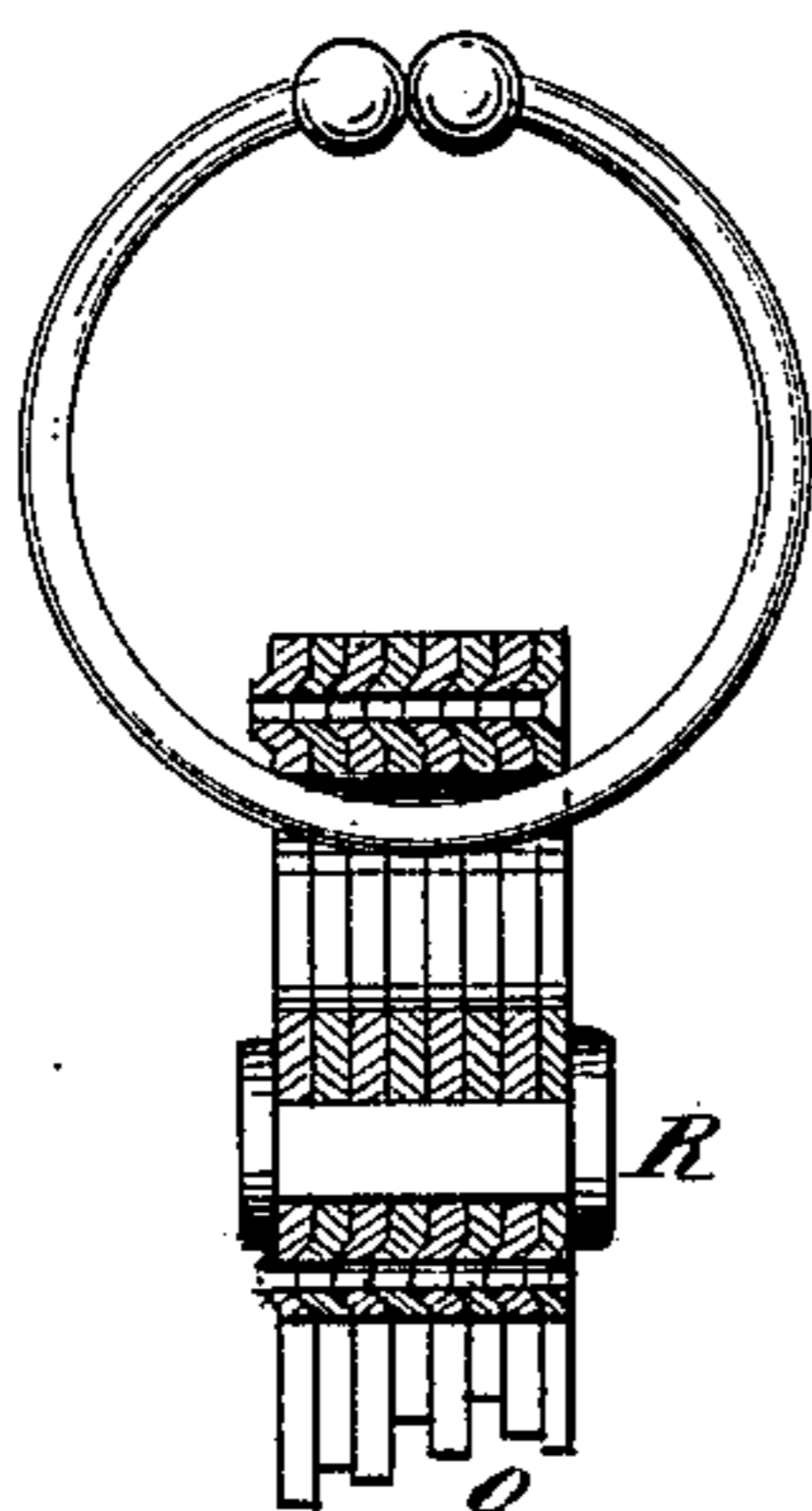


Fig. 5

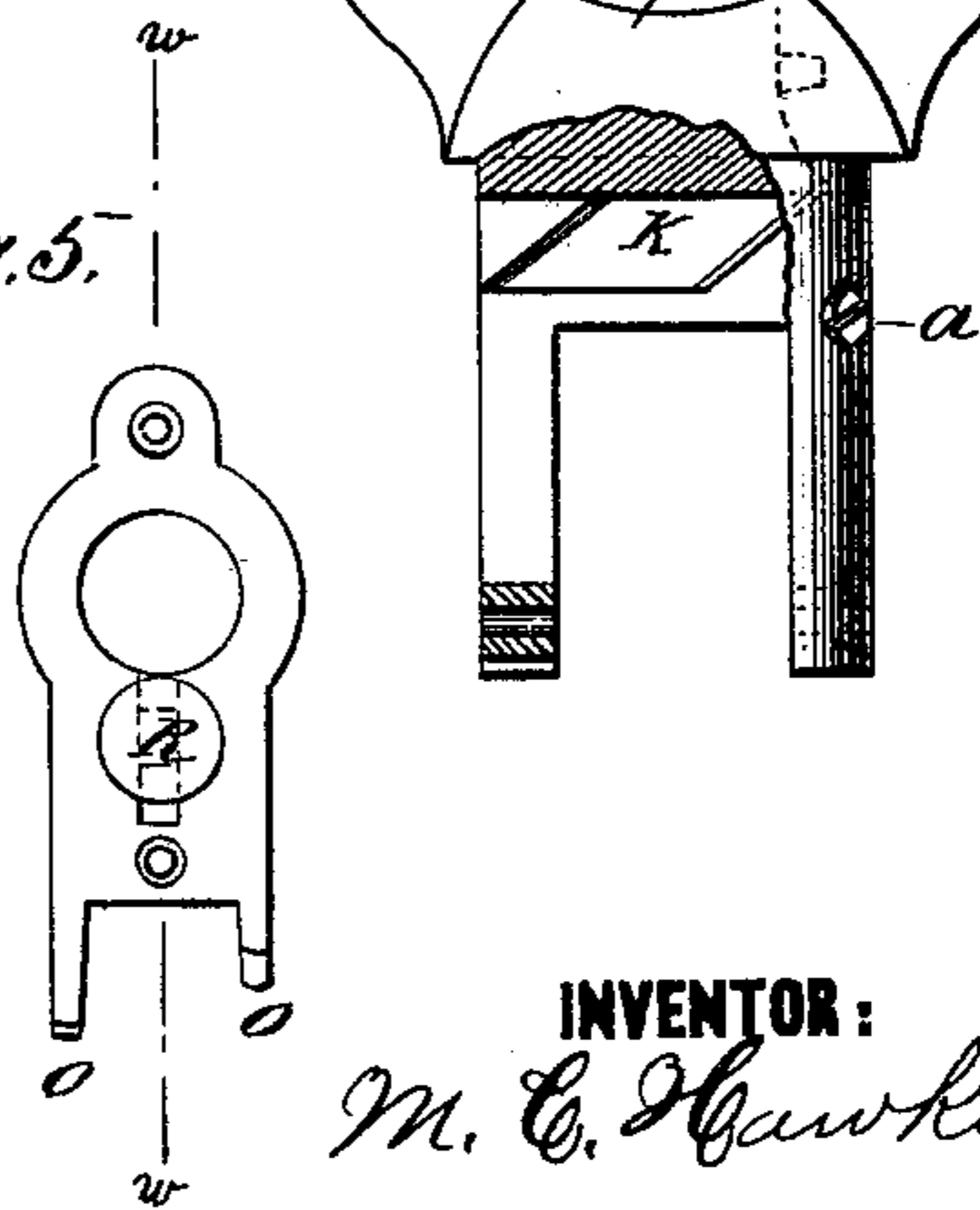
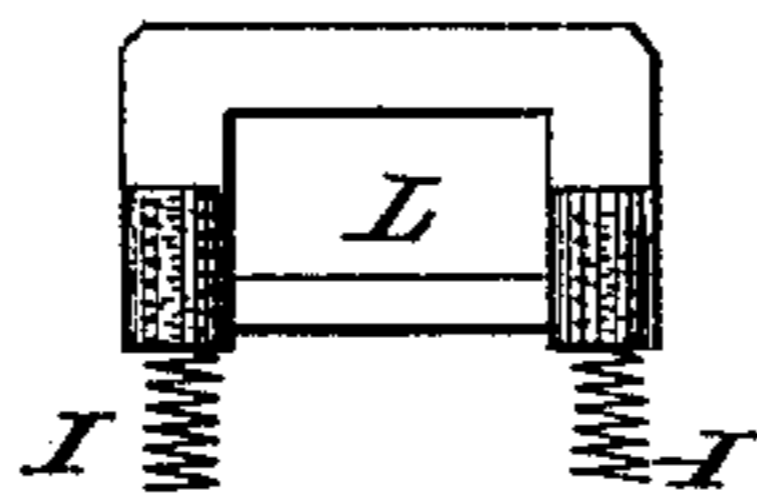


Fig. 7



WITNESSES:

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MOSES C. HAWKINS, OF EDINBOROUGH, PENNSYLVANIA.

IMPROVEMENT IN PADLOCKS.

Specification forming part of Letters Patent No. **180,875**, dated August 8, 1876; application filed January 29, 1876.

To all whom it may concern:

Be it known that I, MOSES C. HAWKINS, of Edinborough, in the county of Erie and State of Pennsylvania, have invented a new and Improved Combination-Lock and Key, of which the following is a specification:

The invention consists of a combination-padlock, consisting, essentially, of a cylindrical shell or casing, adapted for receiving and locking a bolt carrying a hasp and a series of tumblers, which are shifted or moved by a key of a peculiar construction, as will be hereinafter more fully described.

Figure 1 is a sectional elevation of my improved lock, taken on the line *xx* of Fig. 2. Fig. 2 is a section taken on line *yy* of Fig. 1. Fig. 3 is a horizontal section on line *zz* of Fig. 1. Fig. 4 is a sectional elevation of the key, taken on line *ww*, Fig. 5; and Fig. 5 is a side elevation of the key. Fig. 6 is a detail view of the hasp and its bolt portion. Fig. 7 represents the staple-shaped device for distributing the tumblers, and the springs for exerting pressure on the tumblers and on the sliding bolt.

Similar letters of reference indicate corresponding parts.

A represents the hollow cylinder forming the case of the lock, which is made open at its end for the purpose of receiving the bolt-shaped portion B, containing the locking-bolt C and tumblers D, and carrying the hasp on the outer end. The portion B, with its hasp, is prevented from sliding out of the case A, when unlocked, by means of the stop screw or pin *a* on the portion B and the top ledge or flange of the case A. The end of the hasp enters the case through the notch G, and then, by turning the bolt portion B and the hasp, the latter will be retained by the edge or top flange of the casing A, as shown at F. When the hasp is turned the bolt C is projected from the portion B and caused to enter a notch, H, in the case A, which serves to lock the hasp. The bolt is made to slide into this notch by the springs I pressing its inclined shoulder J against the cam K, applied to the bolt portion B. The tumblers are at the same time shifted by the springs and staple-shaped bar L, so that they hold

the bolt up against cam K, which keeps it in the notch.

The tumblers are pivoted on the rod M, and have notches N in the edges, which swing along the bolt to let the bolt be pushed down into them, so as to slide back out of notch H, for unlocking when they are adjusted in line with it by the key. Said key has two sets of bits, O, which act on the tumblers through the holes P, on opposite sides of the pivot M, to adjust the notches of the tumblers to the bolt, some of the tumblers being swung in one direction and some in the other, and all being brought into position when the two bits for each tumbler are brought into contact with it. The tumblers are by this arrangement set wholly by the key alone, thus dispensing with springs to each tumbler for this purpose; but they are displaced by springs when the bolt is locked.

When the bolt is shifted into the notch H, the opposite end swings out of the notch Q, the inclined wall of which helps to slide it; but this notch is mainly to provide space in which the bolt can swing around when unlocked, to let the hasp come to the notch G.

When the bolt is unlocked it is pushed back out of the notch H by the inclined wall S, against which it is pressed by turning the hasp to notch G.

The tumblers are shifted on the pivot M for changing the combination, and the key is constructed of as many interchangeable plates as there are tumblers, which are changed when the tumblers are. The pivot is taken out for changing the tumblers.

The plates of the key may be locked by a stud, R, so as to be used as a solid key, or they may hang loose on the key-ring, so that any one of the plates may be pushed through the others to change the combination.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A lock-body in one piece, with one portion of hasp jointed to the other portion, and centrally locked by the revolving shell or outer case, as shown and described.

2. The bolt C, cam K, and tumblers D, combined with part B and the case A, having

notches H Q, and arranged to turn on part B, substantially as specified.

3. The springs I and bar L, combined with tumblers D and bolt C, substantially as specified.

4. A key consisting of a series of plates, each provided with a central opening, whereby the relation of the plates, when hung on a

key-ring, may be changed by passing one plate through the opening of another, substantially as described.

MOSES CHAMPEN HAWKINS.

Witnesses:

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H. C. GERRISH.