

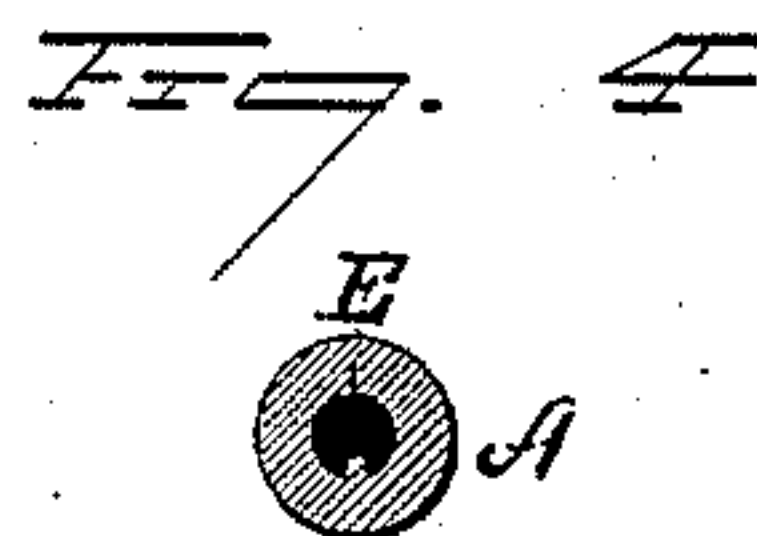
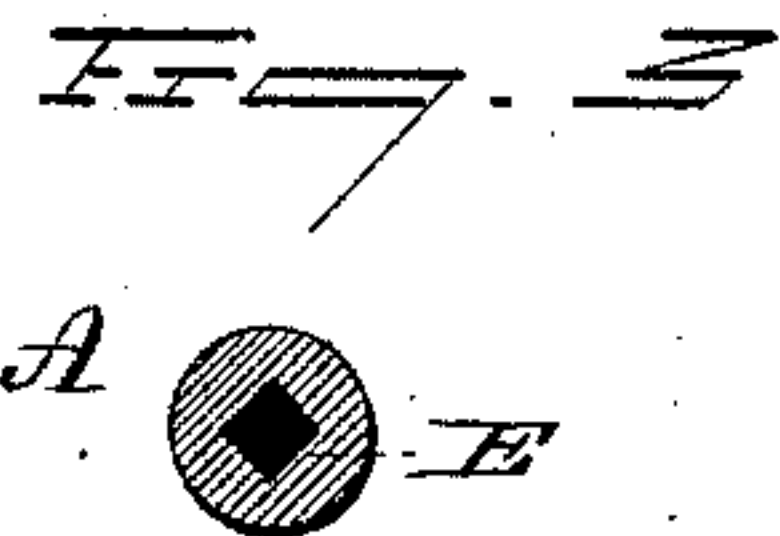
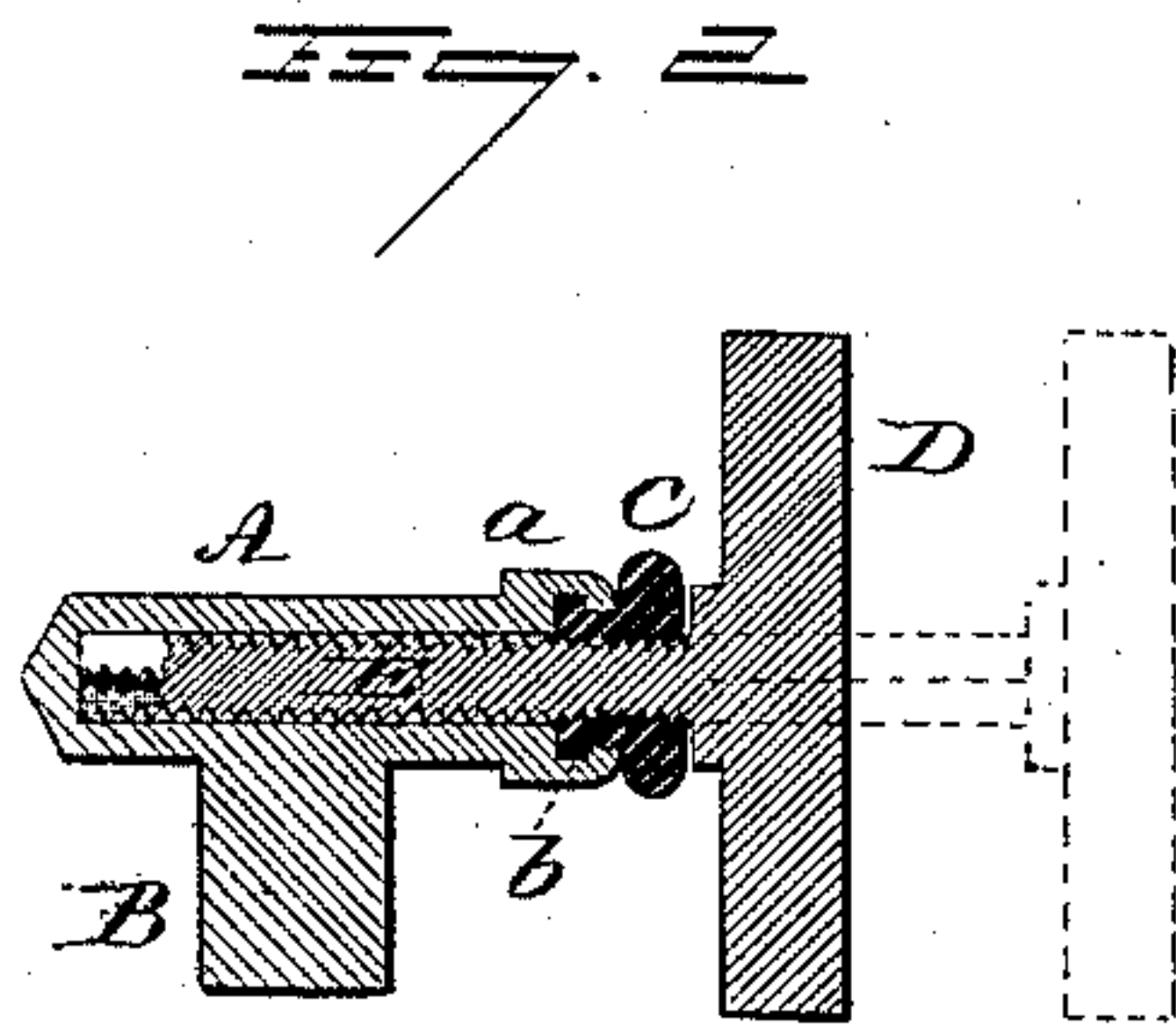
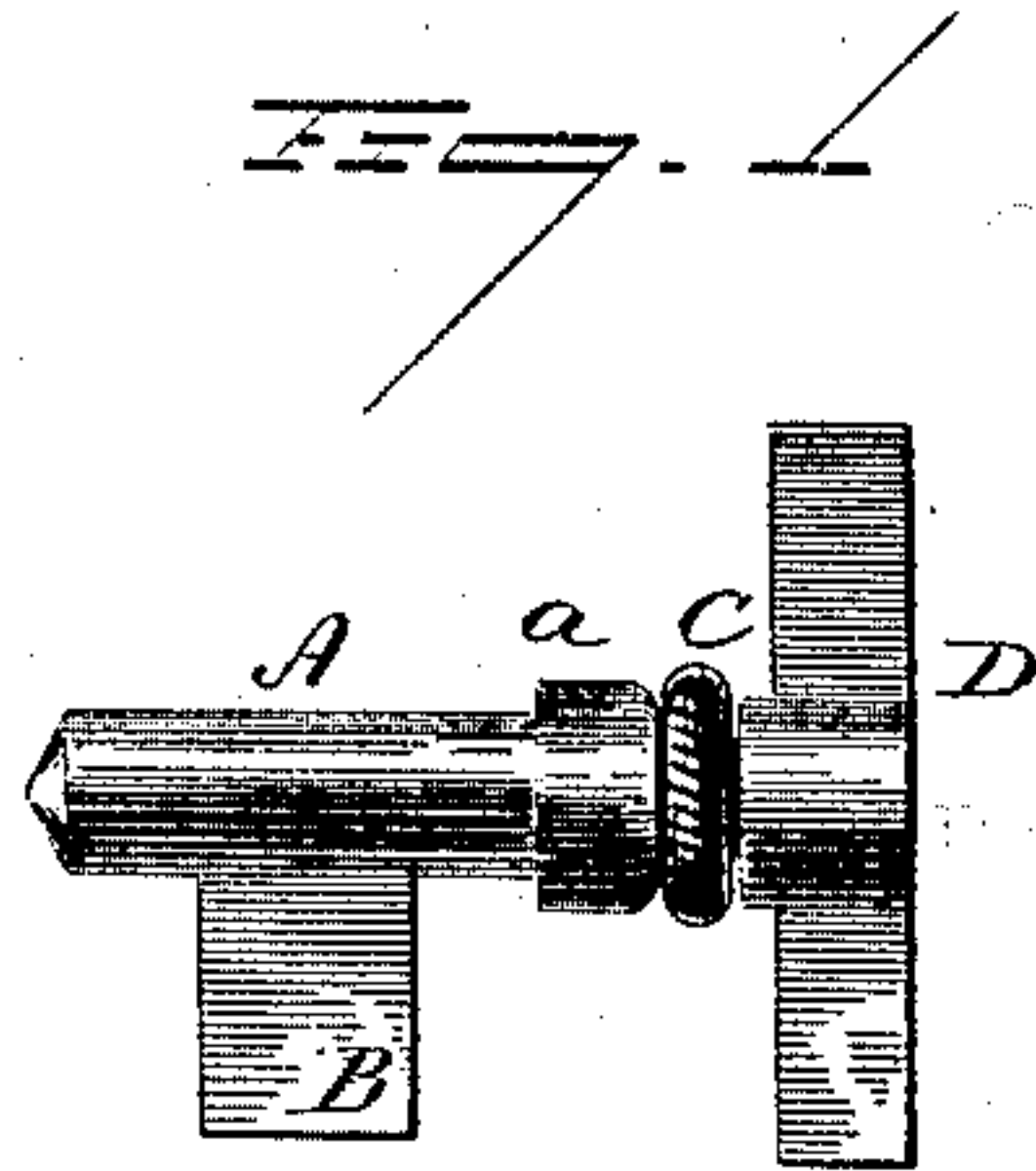
(No Model.)

T. TAYLOR.

DOOR KEY.

No. 313,692.

Patented Mar. 10, 1885.



Witnesses:
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UNITED STATES PATENT OFFICE.

THOMAS TAYLOR, OF NORWALK, CONNECTICUT, ASSIGNOR TO THE NORWALK LOCK COMPANY, OF SAME PLACE.

DOOR-KEY.

SPECIFICATION forming part of Letters Patent No. 313,692, dated March 10, 1885.

Application filed October 20, 1884. (No model.)

To all whom it may concern:

Be it known that I, THOMAS TAYLOR, of Norwalk, in the county of Fairfield and State of Connecticut, have invented a new Improvement in Door-Keys; and I do hereby declare the following, when taken in connection with accompanying drawings, and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view of the key complete; Fig. 2, a longitudinal central section thereof; Fig. 3, a transverse section through the body of the key and spindle E; Fig. 4, a modification.

This invention relates to an improvement in that class of door-keys which are specially adapted to sliding doors, such as are intended to slide entirely into the pocket in the partition, and so that the key will not interfere with such opening of the door. In the more general construction of this class of keys and the escutcheon therefor the key is provided with a bow hinged to the body of the key, and so as to be turned down into a recess in the escutcheon when in the door, the shank or body of the key made so long as to be adapted to various thicknesses of doors. The bow being hinged to the body of the key, is turned into the plane of the axis of the key when it is necessary to lock or unlock the door, and then the bow turned down into the recess, so that in opening the door the key will clear the pocket; but if the bow of the key be not thus turned down, then the bow will strike the partition at the pocket and interfere with the proper opening of the door, and as the key strikes the jamb it is liable to be bent or injured, so as to prevent its practical working.

The object of my invention is the construction of a key which may be extensible, and adapted to different thicknesses of doors, and yet the bow or handle always stand within the outside plane of the pocket; and it consists in the body or spindle of the key having the bit formed as a part thereof, the said spindle having a longitudinal recess of angular shape in transverse section, combined with a nut at the outer end of said spindle, fixed to prevent

longitudinal movement, but free for rotation, and a handle or head having an angular spindle corresponding to the angular recess in the body of the key, the angles of the said spindle screw-threaded corresponding to said nut, and whereby by the turning of the said nut the handle may be moved toward or from the body of the key to extend or contract the extreme length of the key, as more fully hereinafter described.

A represents the spindle of the key, which is provided with a bit, B, in shape corresponding to the mechanism of the lock. The spindle is constructed with the usual shoulder, *a*, to take a bearing on the lock-case when the bit is in the proper position for turning. The length of this spindle is only sufficient to form the shoulder *a* and carry the bit B. At the outer or rear end of the spindle a nut, C, is provided. This nut has a shank, *b*, extending into a corresponding recess in the end of the body of the key, and is there held to prevent its longitudinal movement, but so that it may rotate freely in said recess as a bearing, and this is best held by forming an annular groove around the shank of the nut, and spinning or turning the extreme end of the body of the key into the groove, as seen in Fig. 2, and so that the nut becomes, substantially, a part of the body of the key.

Into the body of the key a longitudinal recess is made concentric with the axis of the nut, and of angular shape.

D is the handle of the key, here represented as a straight bar at right angles to the axis of the body of the key. It is constructed with a spindle, E, of angular shape corresponding to the angular recess in the body A, its angles screw-threaded corresponding to the thread of the nut, the relative size of the spindle E, the recess in the body, and the opening through the nut being such that the nut will engage the threaded angles of the spindle, but the spindle take a bearing in the angular recess in the body, so as to prevent the rotation of the handle independent of the body. As the head is drawn down upon the nut the key is in its most contracted position, and is then adapted to the thinnest door, and so that it may stand in the usual recess in the

escutcheon inside the plane of the door. If the thickness of the door be greater than this length of the key would permit, then the nut is turned to throw out the handle, as indicated in broken lines, Fig. 2, which takes the handle from the nut to an extent corresponding to the increased thickness of the door; but such extension in no way interferes with the engagement between the spindle E and the body of the key; hence the key is readily turned by the handle D irrespective of the position of the handle with relation to the body of the key. This extensible key is therefore adapted to various thicknesses of doors, and once fitted to the door is never in the way of opening the door or liable to the accidents occurring in the use of a folding key.

While this extensible key is adapted to and designed for sliding doors, it may be advantageously used for other purposes.

While I prefer to make the spindle E angular and the recess in the body of the key of corresponding shape, any non-cylindrical shape of the two whereby one will positively engage the other may be substituted—as, for illustration, the spindle may be cylindrical except as to a longitudinal groove and the body of the key with a longitudinal rib or pin corresponding to the said groove, as seen in Fig. 4, and so that the spindle will engage the body by means of said rib and groove. In this

case the surface of the spindle will be threaded except as to the groove, it only being essential to my invention that the spindle shall be of non-cylindrical shape and the recess of corresponding shape, so that one will engage the other, leaving the nut free for rotation on the screw-thread of the spindle.

I am aware that keys have been constructed with a tubular body and having the handle constructed with an angular spindle to enter the body of the key, and be adjustable therein longitudinally by means of a screw, and therefore do not, broadly, claim such a key.

I claim—

The herein-described door-key, consisting of the body A, provided with the bit B, combined with the nut C at the end of said body, fixed as to longitudinal movement, but free for rotation, the body constructed with an angular longitudinal recess corresponding with the opening through the nut, and the handle D constructed with the spindle E corresponding in shape to the non-cylindrical recess in the body of the key, and the said spindle externally screw-threaded corresponding to the nut, substantially as described.

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Witnesses:

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