

F. MUSSER.  
Lock-Hinge.

No. 220,303.

Patented Oct. 7, 1879.

Fig. 1.

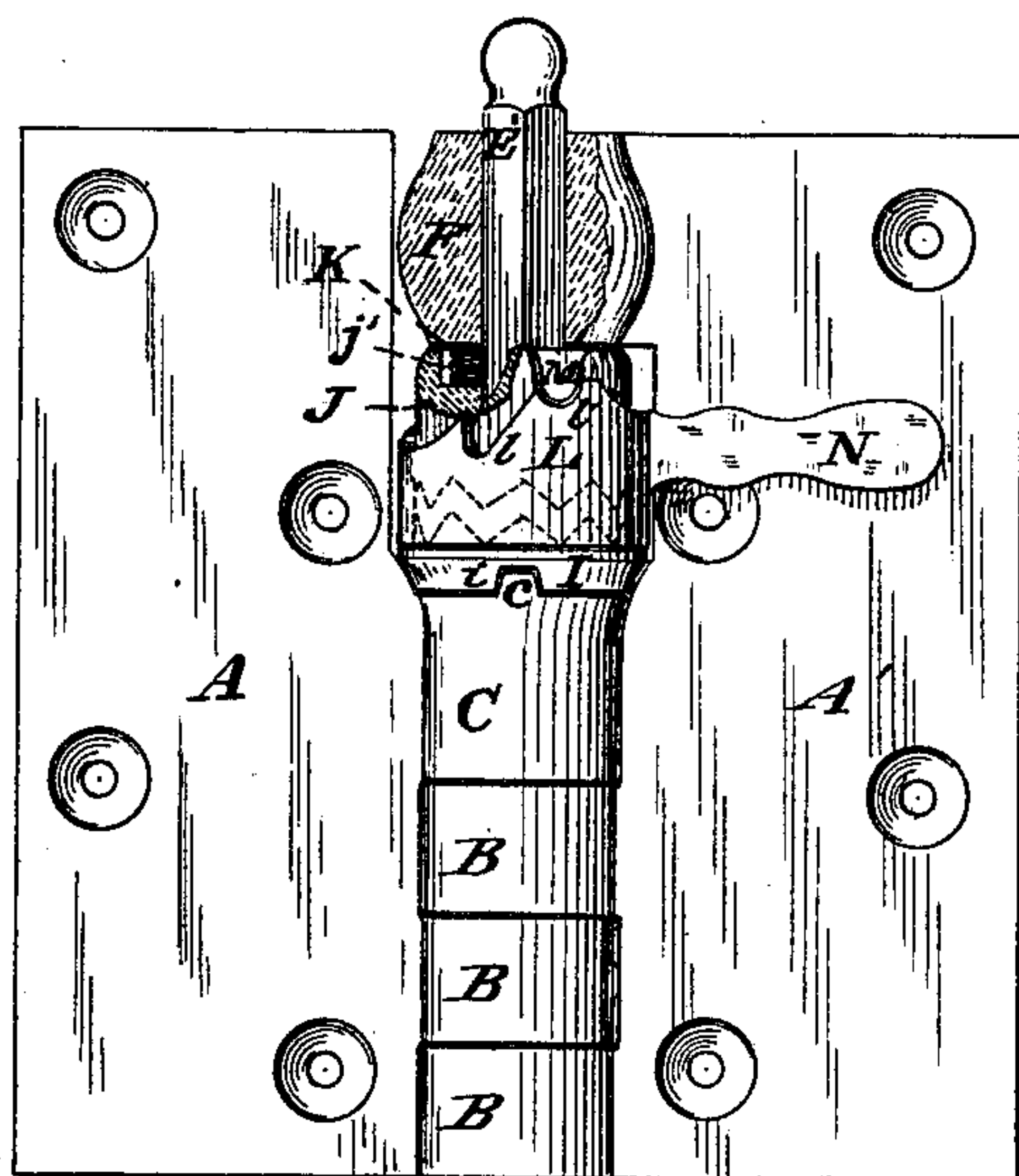
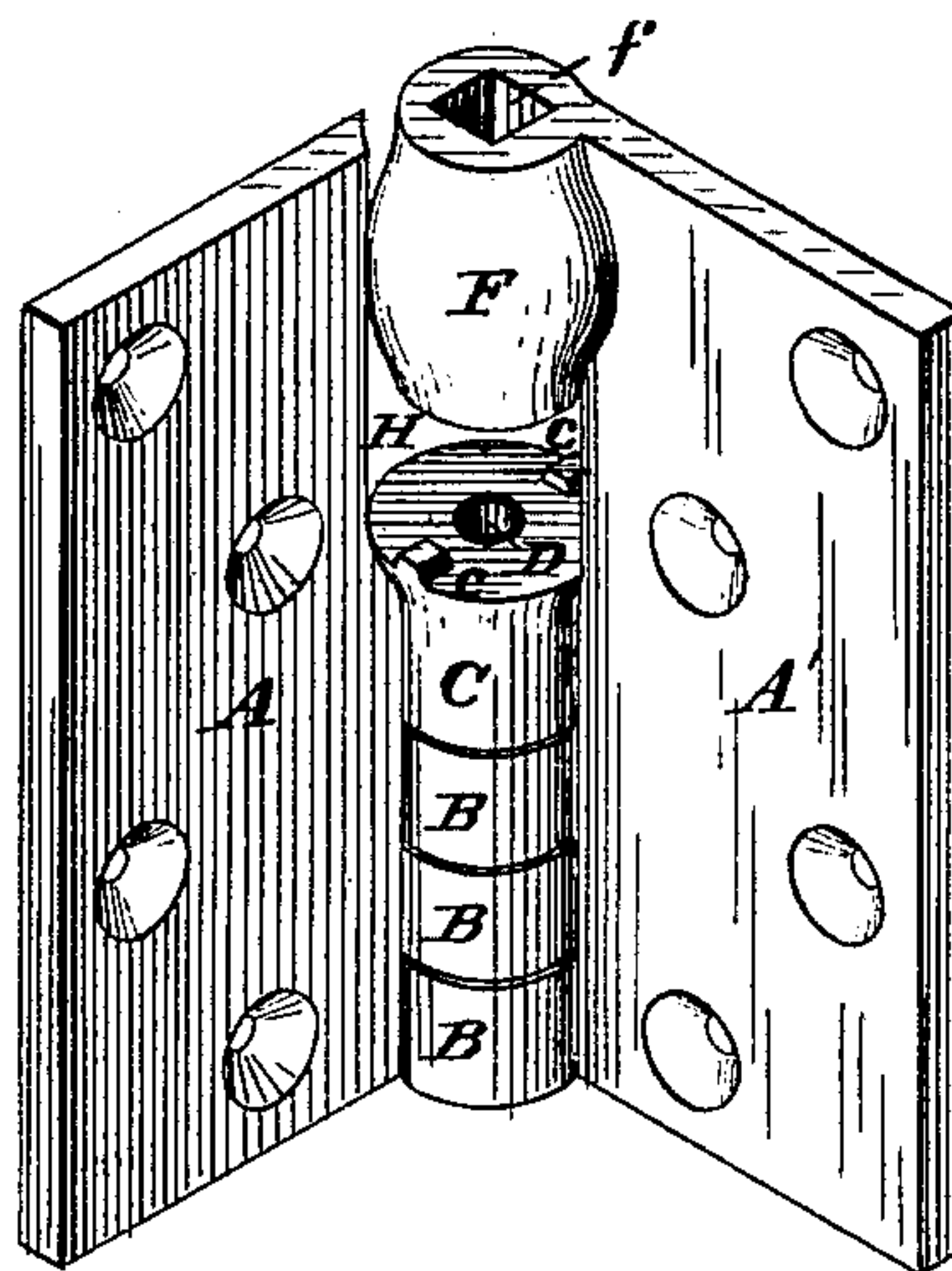
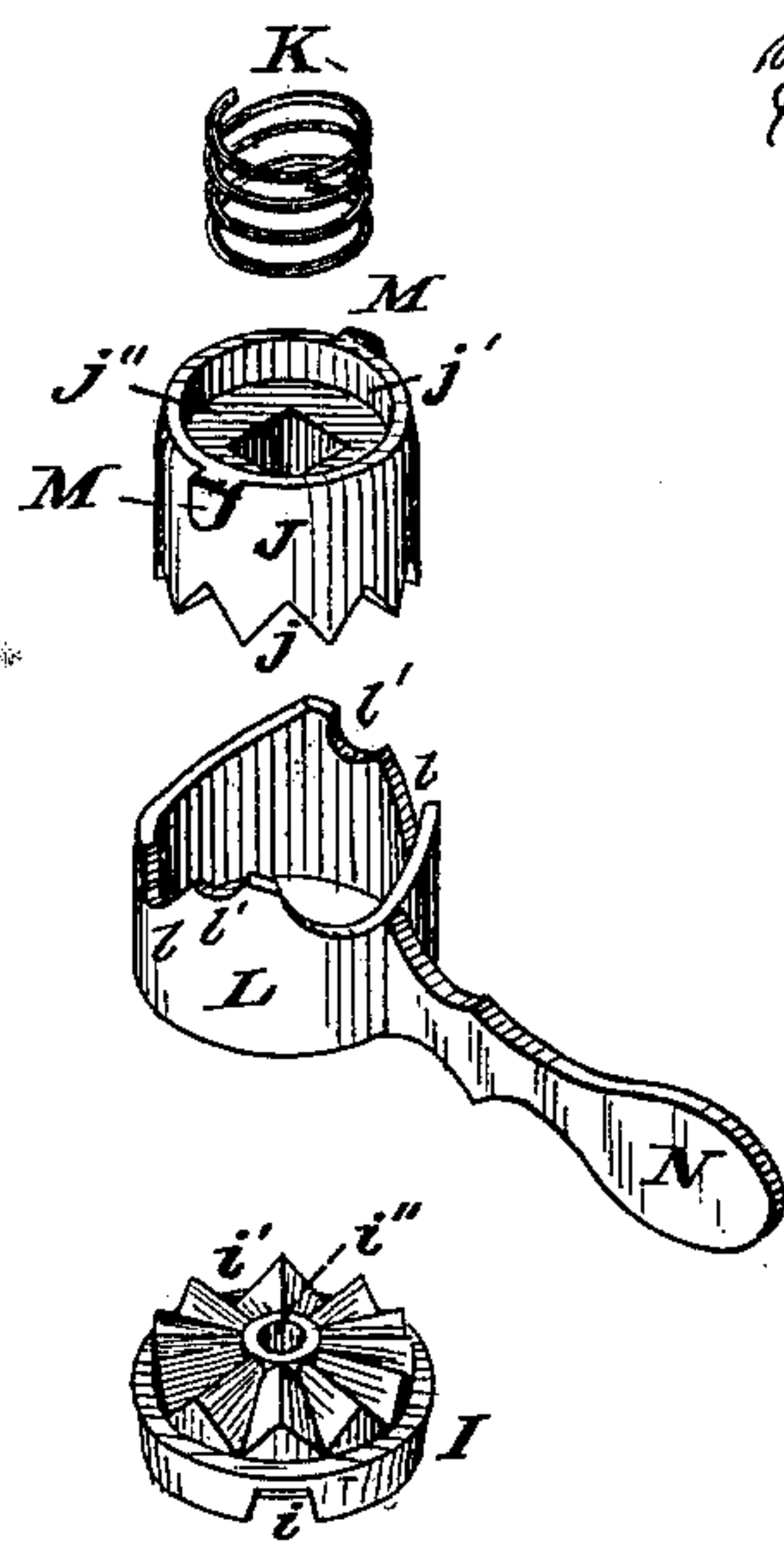


Fig. 2.



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# UNITED STATES PATENT OFFICE.

FERDINAND MUSSER, OF CINCINNATI, OHIO.

## IMPROVEMENT IN LOCK-HINGES.

Specification forming part of Letters Patent No. **220,303**, dated October 7, 1879; application filed July 29, 1879.

*To all whom it may concern:*

Be it known that I, FERDINAND MUSSER, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Self-Locking Door and Shutter Hinge, of which the following is a specification.

My invention relates to improvements in the class of devices for enabling a door or shutter to automatically retain the position at which it may be placed, whether that position be partly or wholly open or shut.

In the accompanying drawings, Figure 1 represents, in elevation, a hinge embodying my invention, portions of the uppermost knuckle and of the upper serrated thimble being broken away. Fig. 2 shows the same hinge partly folded, and having the pintle and the self-locking and the lock-releasing devices detached.

The plates or leaves A A' and the lower knuckles, B, may have the represented ordinary construction. The uppermost knuckle, C, of leaf A, and all below it, have the customary circular orifice D for the pintle, which, accordingly, for that part of it which occupies these knuckles, has the usual cylindrical form, as seen at E. The uppermost knuckle, F, of the leaf A' has, on the contrary, a square orifice, *f*, for the square head E' of the pintle. Consequently the pintle E E' turns or remains at rest with the leaf A', but remains unaffected by any movement of leaf A.

A vacancy or interval, H, between the upper two knuckles permits the introduction of my self-locking and lock-releasing devices, which I now proceed to describe.

Stumps *c* on knuckle C occupy notches *i* in a thimble, I, whose top has the represented radial serrations or corrugations *i'*, and which has an axial orifice, *i''*, similar to that of knuckle C. The thimble I, it will be seen, is thus practically attached to the leaf A.

A second thimble, J, whose bottom *j* is radially serrated in correspondence with the top of thimble I, is counterbored at *j'*, at top, to receive a helical spring, K, which operates to press said thimble J down upon the thimble I, and has a square axial orifice, *j''*, for the head of the pintle.

Supposing leaf A to be attached to the door-frame or window-frame, and leaf A' to the door

or shutter. An operator can by grasping the door or shutter, as the case may be, open or close the same, the leverage afforded by such door or shutter sufficing to overcome the resistance offered by the serrations of the opposing thimbles, but such door or shutter, on being left by the operator, remaining in the position at which it has been placed against any disturbance by wind.

My device, in its most complete form, possesses, in addition to the above members, a notched sleeve, L, that surrounds the thimbles, and which engages under lugs M or projections from the thimble J.

The sleeve L has a handle, N, which enables the operator to impart to the sleeve a slight rotation, and by so doing to cause the lugs M to ascend the inclines *l*, and to engage in the notches *l'*. This operates to elevate the thimble J sufficiently to disengage its serrations from those of the thimble I, and to thus liberate the door or shutter, for being opened or closed in the usual manner.

The door or shutter, having been thus brought to the desired position, may be locked to such position by a reverse movement of the handle N.

The thimble J may be so applied to the thimble I as for any of its serrations to engage with any others of the latter, and in this way the lever N, co-acting with either leaf, may be made effective to automatically restore or release the locking action at any desired part of the sweep of the door or shutter.

I claim as new and of my invention—

1. The described combination, with the normal or customary members, A A' B, of a door or shutter hinge, of the pintle E E', knuckles C c D F *f*, serrated thimbles I *i i' i''*, J *j j' j''*, and spring K, for the purpose designated.

2. In combination with hinge A A' B C and the self-acting clutch or friction thimbles I *i i' i''*, and J *j j' j''* M, the lock-releasing device L *l l' N*, substantially as set forth.

In testimony of which invention I hereunto set my hand.

FERDINAND MUSSER.

Attest:

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