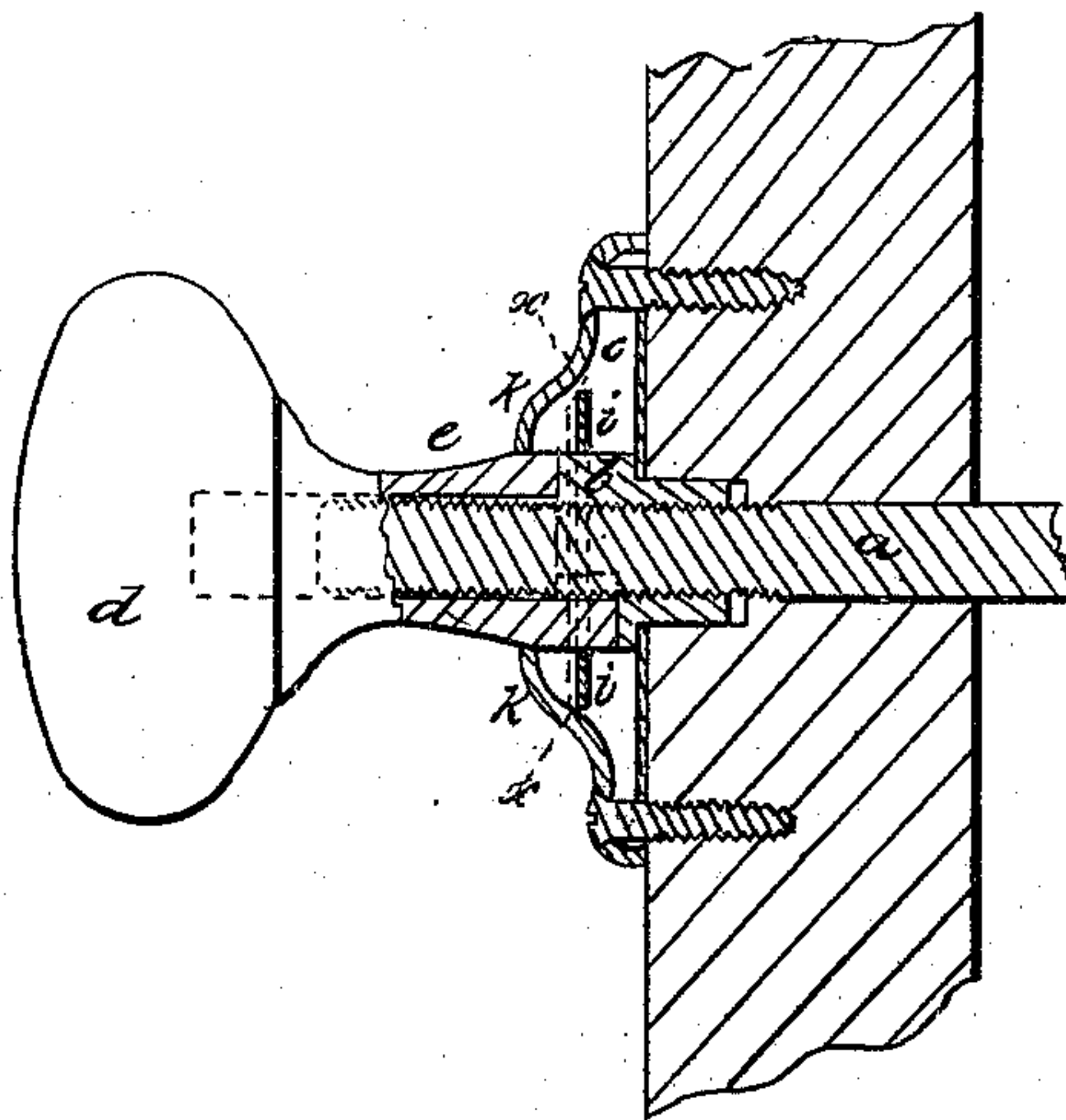


*W. T. Munger*  
*Knob Attachment*

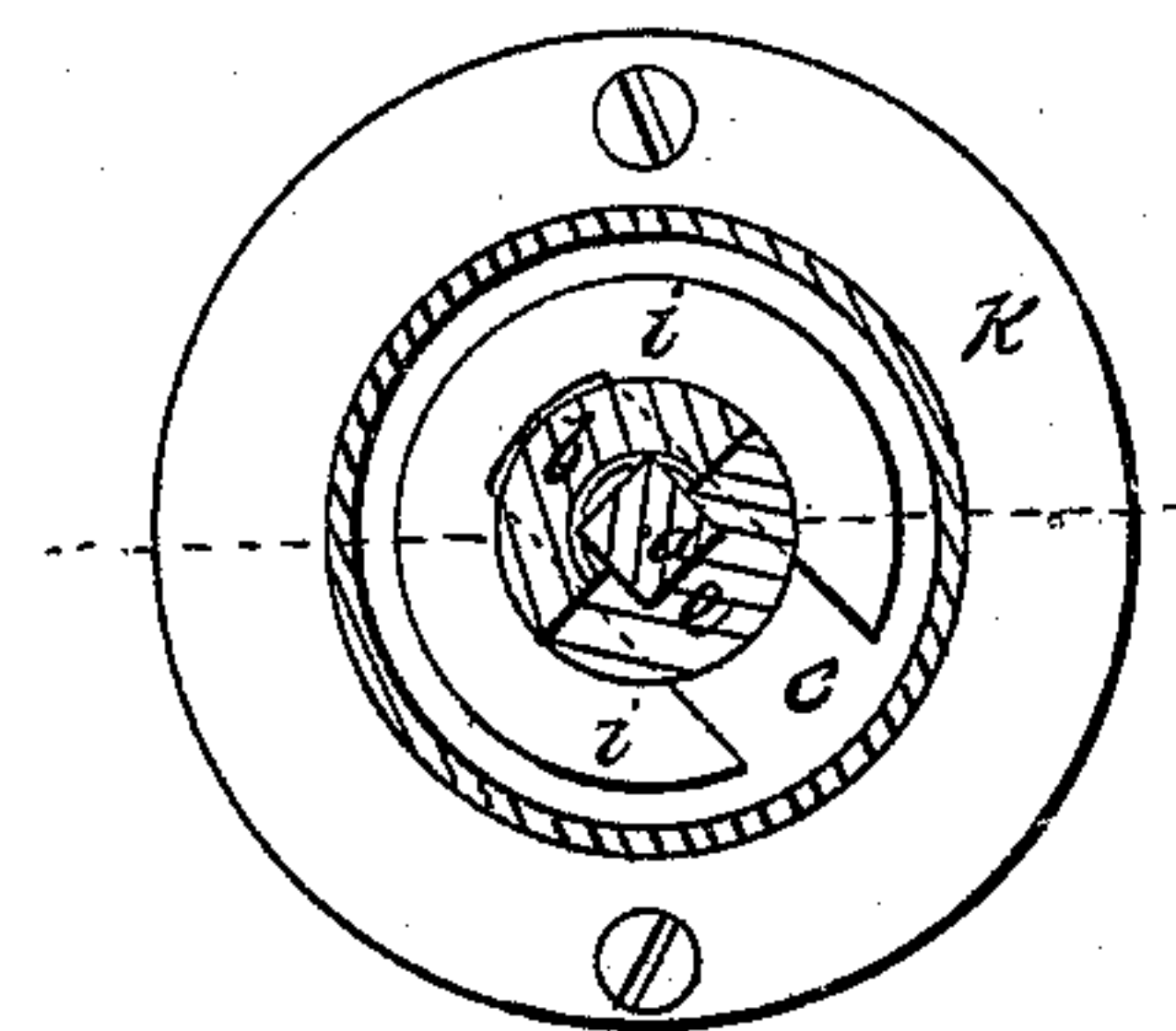
*N<sup>o</sup> 86,683.*

*Patented Feb. 9, 1869.*

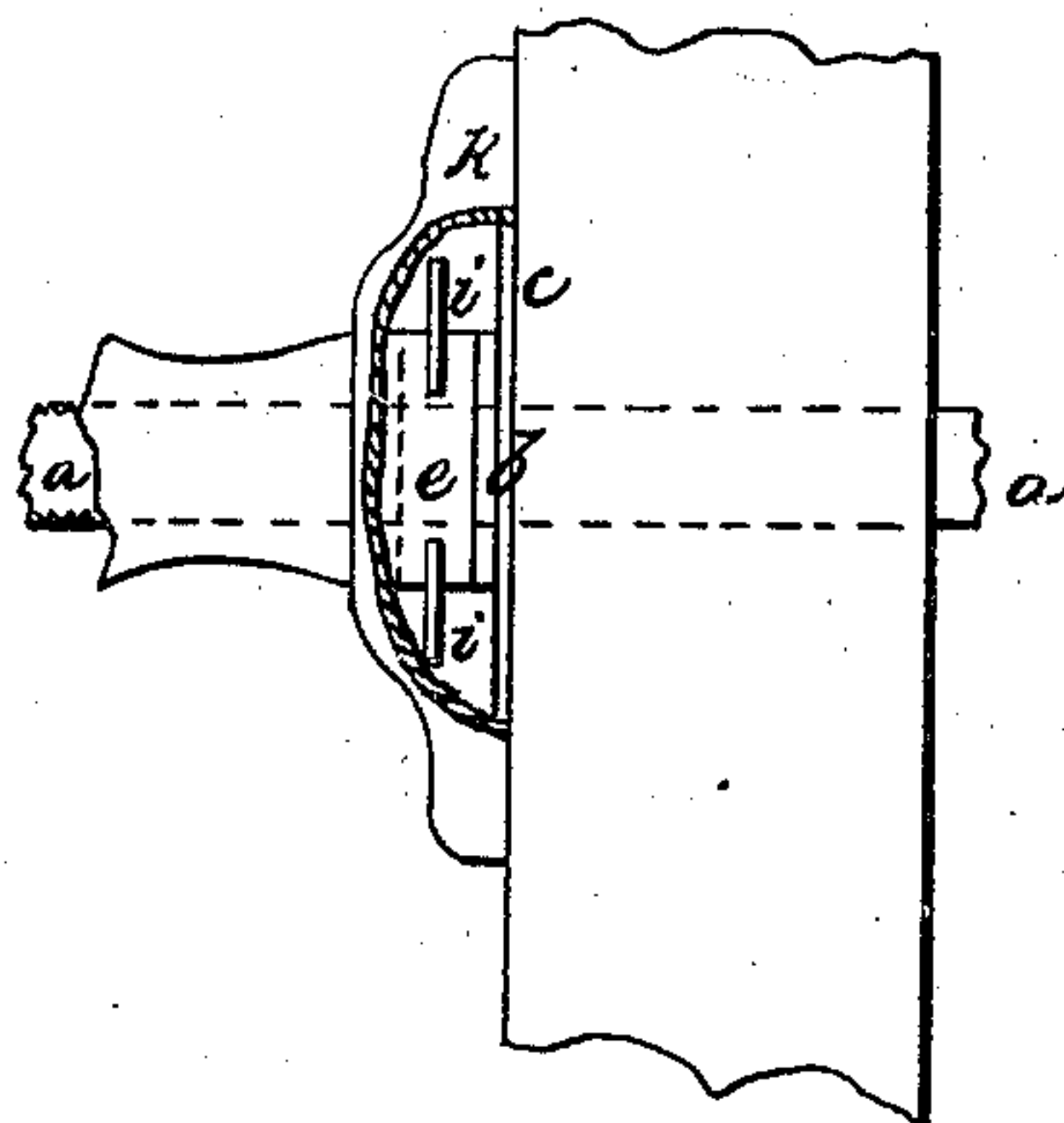
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*  
*Chas H Smith*  
*Geo A Waerker*

*Inventor:*  
*W. T. Munger*  
*per Lemuel W. Serrell*  
*Att'y*

# United States Patent Office.

W. T. MUNGER, OF BRANFORD, ASSIGNOR TO P. AND F. CORBIN, OF  
NEW BRITAIN, CONNECTICUT.

*Letters Patent No. 86,683, dated February 9, 1869.*

## IMPROVEMENT IN ATTACHING KNOBS TO THEIR SPINDLES.

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

*To all whom it may concern:*

Be it known that I, W. T. MUNGER, of Branford, in the county of New Haven, and State of Connecticut, have invented, made, and applied to use a certain new and useful Improvement in Connecting Knobs to the Spindles of Locks, &c.; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a section of the spindle and parts that attach the knob;

Figure 2 is a section transversely of the spindle at the line *x x*; and

Figure 3 represents part of the knob and spindle endwise of the connecting-key, the rose being broken open to show the parts.

Similar marks of reference denote the same parts.

In connecting knobs to lock-spindles, it has heretofore been usual to slip the square socket of the knob upon the spindle, and introduce a screw transversely into or through the shank of the knob and spindle. This construction renders it necessary to have several holes in the spindle, to accommodate different thicknesses of doors, and generally washers or wire rings are provided in addition, to prevent end-play or looseness in the spindle and knobs. The screw frequently works loose, falls out, is lost, or injures the hand of the person grasping the knob, and is a frequent source of annoyance and difficulty.

The nature of my said invention consists in a retaining-nut, screwed upon the angles of the polygonal spindle, that can be adjusted to the thickness of the door, in combination with the knob that has a polygonal socket to slip upon the spindle, and a transverse key, that connects the nut and shank of the knob.

By the aforesaid construction, the nut becomes the primary means for holding on the knob, and the transverse key, the secondary means, and the squared socket of the knob insures the proper turning of the spindle by the knob, and prevents the nut being turned by ordinary use. There is no projecting pin or screw to work loose, and the rose and shank of the knob can be of a much more convenient shape than heretofore.

In the drawing—

*a* is the squared or polygonal lock-spindle, of any desired character.

*b* is the nut, that is screwed upon a thread cut in the angles of the spindle.

*c* represents the plate, or disk, fastened to the surface of the door, and in which the smaller portion of the nut *b* turns freely. The shoulder or larger portion of the nut taking the face of *c*, prevents end-motion to the spindle.

The knob *d* is formed with a shank, *e*, of any desired size or shape, but having a socket to set over the polygonal spindle *a*, and fit the same.

The shank and nut are halved on the parts that come together, so as to lap past each other, as seen by dotted lines in fig. 1, and at this point grooves are formed in the sides of the spindle and nut, into which the forked key *i* is introduced, so as to connect the shank and nut together.

The rose *k* is formed of a shape to set around the shank of the knob and cover the key *i*, the exterior edge of which key *i* should be made circular, and then the rose, when screwed to place, will prevent said key becoming loose.

It will be understood that the rose is to be slipped over the shank of the knob, and then the knob slid upon the spindle, so that its projecting lap will pass down at the side of the projecting lap of the nut, and then the key is to be entered into place, after which the rose is to be screwed to the door.

This construction of nut and knob forms a very strong and reliable connection to the spindle, so that the parts are not liable to become loose, detached, or injured in use.

What I claim, and desire to secure by Letters Patent, is—

The transverse key *i*, in combination with the nut *b* and shank *e* of the knob, to unite the said nut and shank at the part where they lap upon each other, substantially as and for the purposes set forth.

In witness whereof, I have hereunto set my signature, this 5th day of November, A. D. 1868.

Witnesses:

W. T. MUNGER.

CHAS. PECK,

EW'D L. PRIOR.