Apr. 17, 1923. 1,451,829

W. B. HUBBARD

SPINDLE

Filed Dec. 1, 1921

Fig. 1.

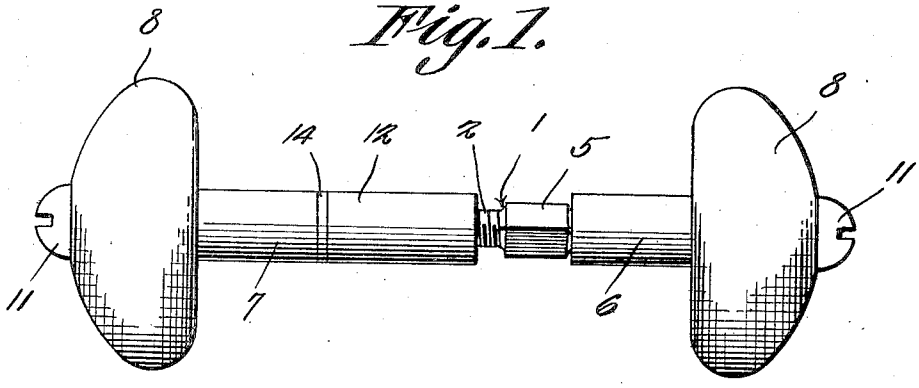


Fig. 2.

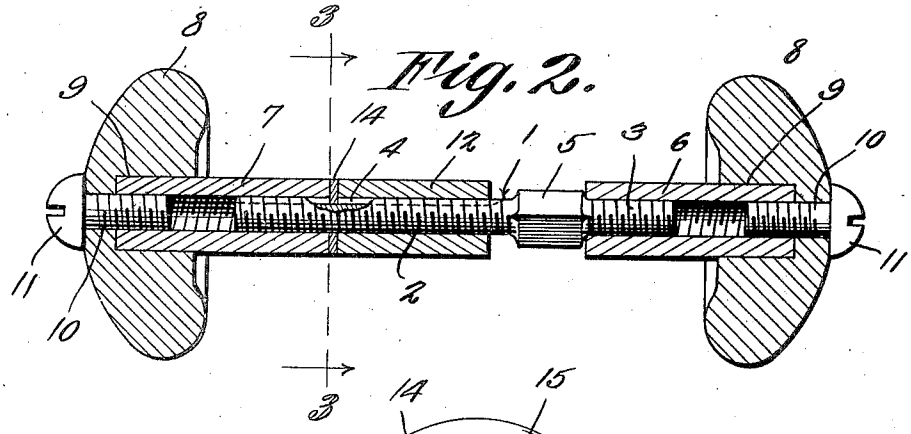
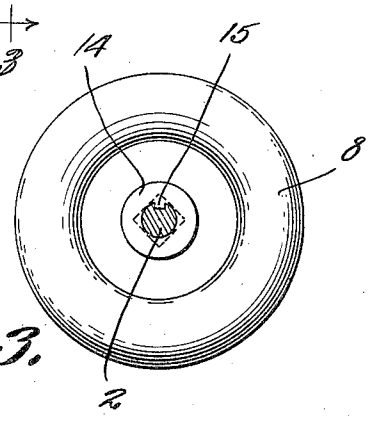


Fig. 3.



Inventor

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Patented Apr. 17, 1923. 1,451,829

UNITED STATES PATENT OFFICE.

WILLIAM B. HUBBARD, OF SMITHBORO, ILLINOIS.

SPINDLE.

Application filed December 1, 1921. Serial No. 519,184.

To all whom it may concern:

Be it known that I, WILLIAM B. HUBBARD, a citizen of the United States, residing at Smithboro, in the county of Bond and State of Illinois, have invented a new and useful Spindle, of which the following is a specification.

This invention aims to provide a door knob spindle having novel means whereby the spindle may be elongated or shortened to accommodate doors of different thicknesses, and to accomodate locks of different thicknesses, should the lock be located on the surface of the door, rather than in a mortise in the edge of the door.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in elevation, a device constructed in accordance with the invention; Figure 2 is a longitudinal section wherein parts appear in elevation; Figure 3 is a cross section on the line 3—3 of Figure 2.

The spindle forming the subject matter of this application comprises a main member 1 in the form of a rod, having a threaded end 2 and a threaded end 3, the end 2 being longer, ordinarily, than the end 3. The end 3 of the main member 1 is provided with a superficial longitudinal groove 4. The main member 1 includes an intermediate polygonal portion 5, adapted to cooperate with the working parts of the lock.

A tubular knob carrier 6 is threaded on the end 3 of the main member 1, a tubular knob carrier 7 being threaded on the end 2 of the member 1. Knobs 8 are mounted on the outer ends of the carriers 7 and 8. The knobs 8 may be secured to the carriers 6 and 7 in any desired way. If preferred, the knobs 8 may be supplied with seats 9 receiving the outer ends of the carriers 6 and 7, screws 10 passing through the knobs, the inner ends of the screws being threaded into the carriers 6 and 7, the heads 11 of the screws engaging the knobs 8. As hereinbefore stated, this detail is not insisted upon.

A sleeve 12 is threaded on the end 2 of the main member 1. A washer 14 is freely slidable on the end 2 of the main member 1, but is held against rotation thereon, since the washer is provided with a finger 15 received in the groove 4 of the member 2, the washer being interposed between the sleeve 12 and the knob carrier 7.

In practical operation, the knob carrier 6 is threaded on the end 3 of the member 1 until the knob carrier abuts against the polygonal shoulder 5 of the member 1. The sleeve 12 is adjusted longitudinally of the end 2 of the member 1, to correspond with the thickness of the door. The washer 14 is slid on the end 2 of the member 1, into abutment with the sleeve 12 and, finally, the knob carrier 7 is threaded onto the end 2 of the member 1 into abutment with the washer 14, the parts then being disposed as shown in Figure 2 of the drawings. Recalling that the washer 14 cannot rotate, because the finger 15 thereof is received in the groove 4 of the end 2 of the member 1, it will be obvious that when the knob carrier 7 is advanced until it bears against the washer 14, rotation will not be imparted to the sleeve 12, and because the sleeve 12 cannot be rotated in this way, the position of the sleeve will not be changed after the sleeve has been once set.

The general construction of the device, clearly, is such that the knob spindle may be adjusted to doors and to locks of different thicknesses, a fine adjustment being afforded, as distinguished from the common construction, wherein the knob carriers are held on the spindle by screws threaded into the knob carriers and adapted to be received in spaced openings in the member 1—this construction being well known and familiar to those skilled in the art.

Having thus described the invention, what is claimed is:

A knob spindle comprising a main member having an intermediate polygonal shoulder, and supplied with threaded ends; a sleeve threaded on one of said ends; a knob carrier threaded on said end; a washer interposed between the sleeve and the knob carrier; interengaging elements on the

washer and on said end of the main member, coacting to hold the washer in place for sliding movement longitudinally of the main member but against rotation thereon; and a knob carrier threaded on the other end of the main member and engaged with the polygonal shoulder.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM B. HUBBARD.

Witnesses:

C. E. HOILES,

J. M. DANIELS.