



# UNITED STATES PATENT OFFICE.

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## DOOR-KNOB.

SPECIFICATION forming part of Letters Patent No. 682,000, dated September 3, 1901.

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*To all whom it may concern:*

Be it known that I, WARREN H. TAYLOR, a resident of Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Door-Knobs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in door-knobs, and particularly to means for securing the knobs to spindles, the object being to provide a cheap and simple device that will positively and effectually clamp the knob to the spindle at any point on the latter.

With this object in view my invention consists in the parts and combinations of parts, as will be more fully explained, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in elevation, partly in section, of my improvement. Fig. 2 is a similar view, enlarged, showing a section of the spindle locked to the knob. Fig. 3 is a similar view showing the spindle in place within the knob, but not locked thereto. Fig. 4 is a sectional view on the line  $x x$  of Fig. 3, and Fig. 5 is a view in perspective of the clamping-plates and their springs.

A represents the spindle, provided at one end with a series of holes for the reception of a pin  $a$ , which secures the fixed knob B to the spindle. If sufficient adjustment is not obtainable at the adjustable-knob end of the spindle, as hereinafter described, additional adjustment can be secured at the fixed-knob end by simply removing the pin  $a$  and adjusting the fixed knob so that the pin-hole therein will aline with the proper hole in the shank and then replacing the pin.

My invention, however, relates particularly to the adjustable knob C and spindle A, and comprises a knob the shank of which is recessed, as at  $b$ , to receive the clamping-plates D. This recess  $b$  extends transversely through the shank of the knob or partly through from one side for the ready insertion and removal of the clamping-plates D. The clamping-plates D are provided each with an opening corresponding in shape with the

cross-section of the spindle A, but slightly larger than said spindle, so as to permit of the ready entrance of the spindle into the openings in the plates. The plates are arranged with their faces abutting and are so held by the U-shaped springs E, which latter rest within grooves  $e$ , formed in the outer faces and lower edge of said plates. Each plate is formed on its edge adjacent to the free ends of the springs with a recess  $f$ , the two recesses when the disks are abutting forming a conical cavity which receives the conical ends of the screw F, carried by the adjustable knob C. With this construction it will be apparent that by forcing in the screw F the plates D will be separated at their edges engaged by the screw, while their opposite edges, which rest within a groove  $g$ , formed in the wall of the recess diametrically opposite the screw, are prevented from spreading or separating. When the clamping-plates are thus separated by the screw, the biting edges of both plates are brought into contact with the surface of the spindle and solidly and securely clamp it against any movement whatsoever independent of the knob. As the springs are always exerting a yielding pressure against the plates, tending to close them, it is evident that upon the withdrawal of the screw from contact with the plates the springs will cause the plates to approach and assume parallel positions, thus releasing the grip upon the spindle and permitting the adjustable knob to be withdrawn or readjusted. In Figs. 1, 2, and 3 I have shown in section a sheet-metal sleeve encircling the shank of the knob and closing the openings through which the clamping-plates are introduced. This sleeve is held in place by the screw F, which, as before stated, is for locking the clamping-plates to the spindle.

It is evident that many slight changes might be made in the relative arrangement of parts shown and described without departing from the spirit and scope of my invention. Hence I would have it understood that I do not wish to confine myself to the exact construction of parts herein shown and described; but,

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

1. The combination with a spindle, of a knob, clamping-plates located within a recess in the shank of the knob and provided each with an opening for the passage of the spindle, means for separating said plates at one edge whereby they are caused to bind against and clamp the spindle, and means tending to yieldingly force the clamping-plates together.
2. The combination with a spindle, of a knob, clamping-plates carried by said knob and provided with a hole for the passage of the spindle, springs for yieldingly holding said plates in contact and a screw for separating said plates at one edge.
3. As a new article of manufacture a knob

having a recessed shank the latter being provided with a groove in one wall of the recess, clamping-plates located within said recess with one edge of each in the groove, springs embracing the plates and tending to hold them in contact, and a screw carried by the shank of the knob and adapted to engage the plates, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses

WARREN H. TAYLOR.

Witnesses:

SCHUYLER MERRITT,  
TIMOTHY HUSHION.