



# UNITED STATES PATENT OFFICE.

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## KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 529,887, dated November 27, 1894.

Application filed December 26, 1893. Serial No. 494,622. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE E. WARDWELL, a citizen of the United States, residing at Stamford, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Knob Attachments; 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 has for its object to provide a simple and inexpensive knob attachment which may be used on both sides of a door, which shall be so constructed that washers are dispensed with, in which lost motion from long continued wear may be taken up by any person without the assistance of a skilled mechanic and in which the only portions visible are the escutcheon and the shank of the knob, there being no screws to get loose or to cut the finger or glove of the user.

With these ends in view I have devised the simple and novel knob attachment which I will now describe, referring by numbers to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation partly in section illustrating the construction of my novel attachment; Fig. 2, a section of the knob shank and a slightly different form of spindle, the escutcheon being removed, and Fig. 3 is a section on the line *xx* in Fig. 2.

1 denotes an angular spindle the outer end of which is screw-threaded as at 2.

3 denotes the knob shank which is provided with a central recess 4 which receives the spindle freely and at the inner end of said recess with a threaded opening 5 which is adapted to receive the threaded end of the spindle.

6 denotes the escutcheon through which the knob shank passes and which is provided with a recess 7 which receives a sleeve 8.

9 denotes a wearing plate let into the side of the door against which the inner end of the knob shank and preferably the sleeve also bears.

10 denotes set screws which pass through the knob shank and engage opposite sides of the spindle by which the shank is centered on the spindle and locked in place after adjustment.

In Figs. 2 and 3 I have shown the spindle as provided with grooves 11 adapted to receive the ends of the screws.

The operation is as follows: One knob is set in place and the spindle is passed through the door from the opposite side. The operator places the escutcheon and sleeve over the knob shank and then turns the shank inward the threaded end of the spindle engaging opening 5 until the inner end of the knob shank presses against the wearing plate sufficiently hard to prevent looseness of parts and rattling in use. The knob is then locked there by turning the set screws inward until they engage the spindle. I preferably use two set screws so as to support the spindle by engagement from opposite sides. The sleeve and escutcheon are then moved inward and the latter is secured in place by screws or in any suitable manner. The use of the sleeve prevents any binding of the screw head upon the escutcheon plate. The screw head may or may not engage the sleeve. The latter however is always free to turn in the escutcheon. It will be seen that the adjustment given by this construction is a very fine one there being four adjustments for each complete turn of the knob shank on the spindle. As the number of threads is ordinarily thirty-two to the inch it will be seen that an adjustment is provided to one one hundred and twenty-eighth of an inch.

Having thus described my invention, I claim—

In a knob attachment the combination with an angular spindle having a threaded end, and a knob shank having a central recess to receive the angular portion of the spindle freely and an opening threaded to receive the end thereof, of a wearing plate against which the knob shank bears, set screws in the shank which engage opposite sides of the angular portion of the spindle to center the knob shank and lock it in place after adjustment, a sleeve which covers the set screws and bears on the wearing plate and an escutcheon through which the knob shank passes and which covers the wearing plate and is provided with a recess to receive the sleeve so that wearing plate screws and sleeve are wholly concealed.

In testimony whereof I affix my signature in presence of two witnesses.

THEODORE E. WARDWELL.

Witnesses:

A. M. WOOSTER,  
SUSIE V. RICHARDSON.