

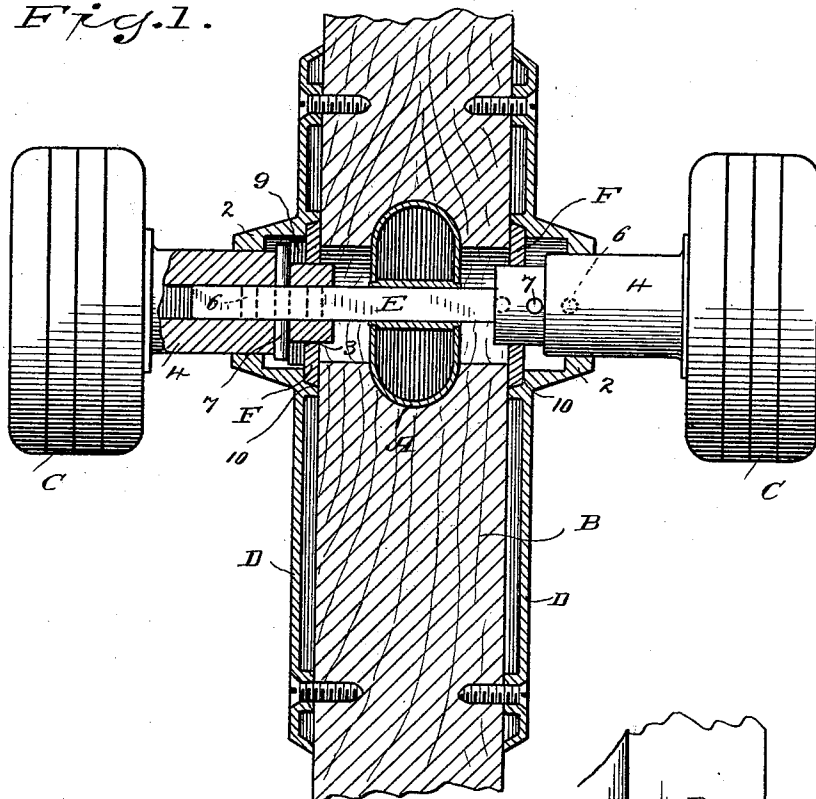
(No Model.)

T. E. WARDWELL.  
KNOB ATTACHMENT.

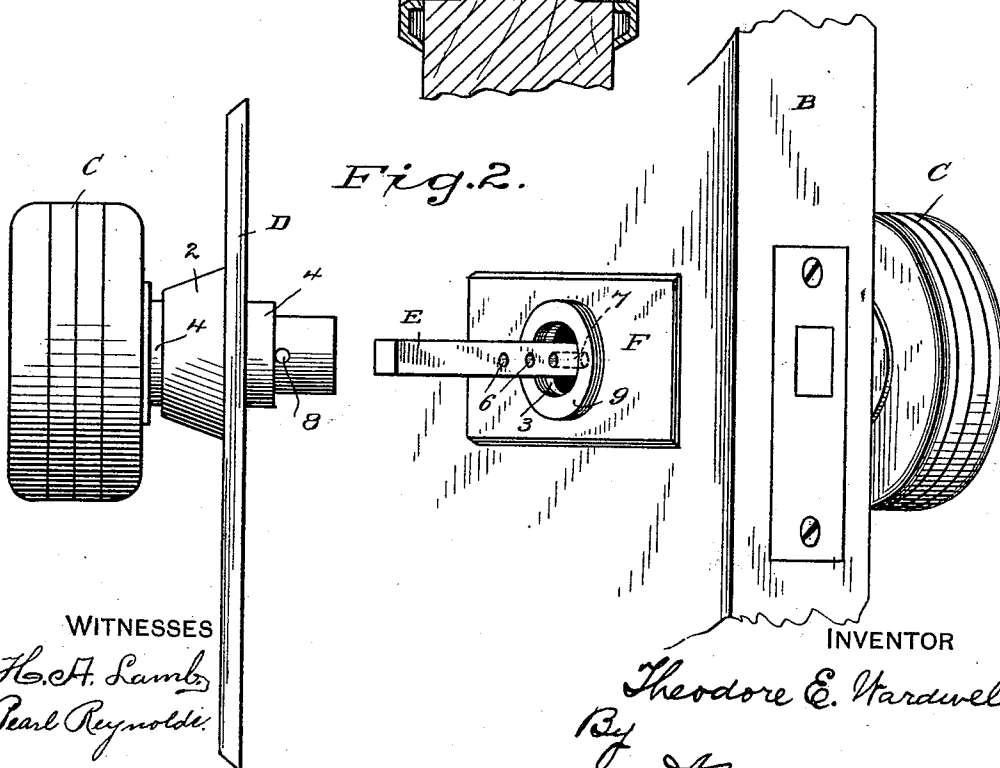
No. 520,508.

Patented May 29, 1894.

*Fig. 1.*



*Fig. 2.*



WITNESSES

*H. H. Lamb*  
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INVENTOR

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# UNITED STATES PATENT OFFICE.

THEODORE E. WARDWELL, OF STAMFORD, CONNECTICUT.

## KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 520,508, dated May 29, 1894.

Application filed June 14, 1893. Serial No. 477,578. (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 device of this class in which the cost of construction shall be reduced to the minimum, which shall be strong and durable, and in which the strain or as it is commonly termed the "pull" shall be taken up on the opposite side of the door thereby avoiding all strain upon the face plates.

With these ends in view I have devised the simple and novel construction of which the following description in connection with the accompanying drawings is a specification, letters and numbers being used to designate the several parts.

Figure 1 is a vertical section of a door and latch case illustrating my novel improvement, and Fig. 2 is a perspective of a door with one face plate and knob removed illustrating the manner in which the parts are assembled.

A denotes the latch case, B the door, C the knobs, D the face plates and E the spindle. I have shown a common style of face plate having sleeves 2, although either plain round or fancy roses may be used if preferred. The inner side of the face plate or rose is provided with a socket 10 to receive and hold an angular washer F having a central opening 3 through which the inner end of the knob shank 4 passes.

6 denotes the usual holes through the spindle and 7 a pin by which each knob is locked to the spindle. This pin passes through a hole 8 in the knob shank and through one of the holes 9 in the spindle. In order to have the knob tight on the spindle so as to prevent lost motion and wobbling it is necessary that the pin should lie closely in contact with the angular washer, against which all the

strain comes in use, or else closely in contact with a supplemental washer.

At the right in Fig. 1 I have shown pin 7 as resting against the angular washer. Should the thickness of the door be such however that when the second knob is attached there is space left between the pin and the angular washer this space is filled by ordinary metallic washers 9, the pin in this instance resting against a washer 9 instead of against angular washer F as is clearly shown at the left in Fig. 1.

The mode of assembling will be clearly understood from Fig. 2. Suppose the right knob to be attached to the spindle and the face plate, angular washer, &c., to have been placed in position. The opposite knob and face plate will be placed as indicated in Fig. 2. The spindle is drawn through as far as possible and angular washer F is placed in position. In case one of the holes 6 in the spindle to receive pin 7 is not close to the outer face of the angular washer, the next hole toward the outer end of the spindle will be used and the space on the spindle will be filled by placing as many washers 9 thereon as may be necessary, it being required that when the parts are assembled pin 7 shall rest either upon angular washer F or upon a washer 9. Having placed the washers 9 in position the face plate, or rose, should the latter be used, is slipped over the knob shank and close to the knob as shown at the left in Fig. 2, then the knob shank is passed over the spindle, through washers 9 and F until hole 8 in the shank registers with the hole 6 in the spindle, lying just outside of the washers, after which pin 7 is passed through holes 6 and 8 in the knob shank and spindle, the position of the pin after attachment being clearly indicated by dotted lines in Fig. 2. The face plate is moved inward over the knob shank and is attached to the door by screws, the angular washer F passing into the socket 10 on the inner side of the face plate or rose, as will be clearly understood from Fig. 1 in connection with Fig. 2.

Having thus described my invention, I claim—

In combination a face plate having a socket

on its inner side, an angular washer adapted  
to lie in said socket, a knob spindle a knob  
shank adapted to receive the spindle and a  
concealed pin, lying in contact with the wash-  
5 er, which passes through holes in the knob  
shank and spindle to lock said parts together  
and turns freely in the face plate with the  
knob shank.

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

THEODORE E. WARDWELL.

Witnesses:

A. M. WOOSTER,  
PEARL REYNOLDS.