

(No Model.)

T. E. WARDWELL.
KNOB ATTACHMENT.

No. 499,900.

Patented June 20, 1893.

Fig. 1.

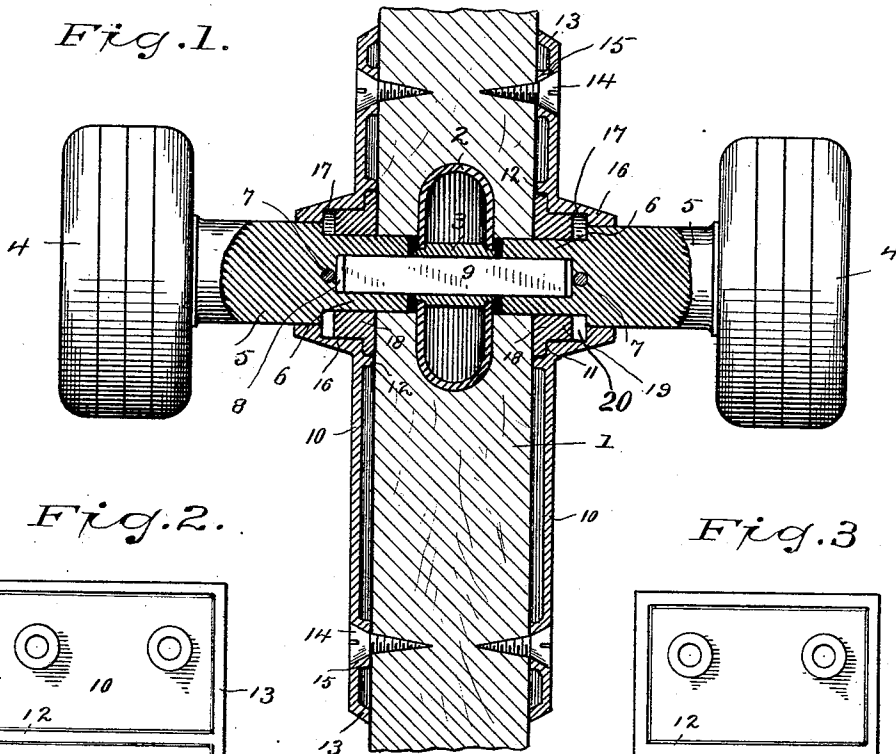


Fig. 2.

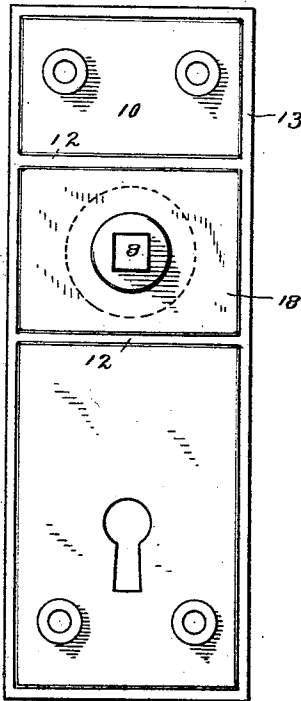


Fig. 3.

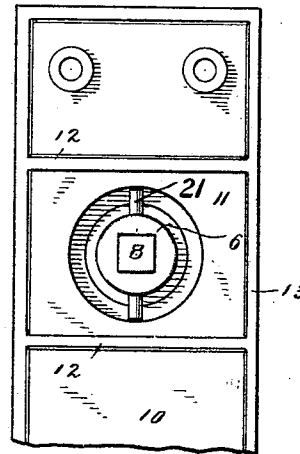


Fig. 5.

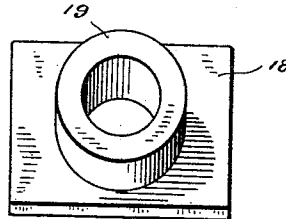


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

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KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 499,900, dated June 20, 1893.

Application filed March 18, 1893. Serial No. 466,615. (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 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 has for its object to simplify, cheapen and to generally improve the construction of knobs, the distinctive features of improvement being that the knob shank is firmly held against lateral or wobbling motion, endwise motion of the shank is wholly prevented without the use of washers or any supplemental devices, and external fastening devices, for example set screws, are wholly done away with so that the knob and shank are both left perfectly smooth, and danger of the knob becoming detached is wholly avoided, the knob shank being in fact locked to the face plate and not to the spindle, the latter serving merely to connect the knob to the latch mechanism, and if extended through the latch and into the opposite knob shank as shown in the drawings, to connect the two knobs to each other as well as to the latch mechanism.

In the accompanying drawings forming part of this specification Figure 1 is a vertical section of a door illustrating the application thereto of my improved knob; Fig. 2 an inner view of the face plate showing the inner end of the knob shank and the back of the supporting plate; Fig. 3 an inner view of the face plate showing the inner end of the knob shank and the locking pin the supporting plate being removed; Fig. 4 a view of the spindle detached, and Fig. 5 is a perspective of the supporting plate detached.

1 denotes the door, 2 a latch case mortised therein, 3 the hub of the latch, 4 the knobs, 5 the knob shanks each of which is provided with a reduced portion 6, a transverse hole 7 and an angular socket 8 to receive the spindle 9.

10 denotes the face plates each of which is provided on its inner side with a recess 11 which in the present instance I have shown as formed by cross pieces 12 and a flange 13.

The face plates are held in position by screws 14 which pass through bosses 15 on the inner side of the plate. Extending outward from each face plate is a sleeve 16 having on its inner side a shoulder 17.

18 denotes a supporting plate adapted to engage recess 11 in the inner side of the face plate and having extending inward therefrom a circular flange 19 adapted to fit closely within sleeve 16, a space 20 being left between shoulder 17 on the inner side of the sleeve and the inner end of the flange. This space is of just the necessary size to receive a cross pin 21 which lies loosely in transverse hole 7 in the knob shank. In assembling, the knob shank is passed through sleeve 16 far enough to permit the cross pin to be placed in the transverse hole. The knob shank is then drawn outward again until the cross pin rests upon shoulder 17, in which position it is retained by the supporting plate as shown in Figs. 1 and 2 and locks the knob to the face plate there being just space enough between the end of flange 19 and shoulder 17 to permit the cross pin to roll or travel freely. The inner end of the knob shank rests within the circular flange which holds it against any lateral or wobbling motion.

In attaching the parts in place the supporting plate is of course held in position by the door, the end of the spindle passing into the angular socket in the knob shank in the usual manner, there being however no connection between the spindle and the knob shank, the spindle serving merely to connect the knob shank with the hub of the latch and if extended through into the opposite knob shank to connect both knobs with the latch mechanism.

Having thus described my invention, I claim—

1. The combination with a face plate having an outwardly extending sleeve with a shoulder 17 on its inner side, of a knob shank having a cross pin passing loosely through a transverse hole in the shank and engaging said shoulder, and a supporting plate having a circular flange adapted to pass within the sleeve, the space between the end of said flange and said shoulder being just sufficient to receive the cross pin.

2. The combination with the face plate having a recess 11 on its inner side and a sleeve 16 on its outer side having an internal shoulder 17, of a knob shank having a cross pin
5 passing loosely through the shank and engaging said shoulder, and a supporting plate adapted to lie in recess 11 and having a circular flange 19 adapted to pass within said sleeve, the space between the end of said

flange and said shoulder being just sufficient to permit the cross pin to travel freely.

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

THEODORE E. WARDWELL.

Witnesses:

A. M. WOOSTER,
PEARL REYNOLDS.