(No Model.)

T. M. DILS.

KNOB ATTACHMENT.

No. 591,111. Patented Oct. 5, 1897.

Fig. 1.

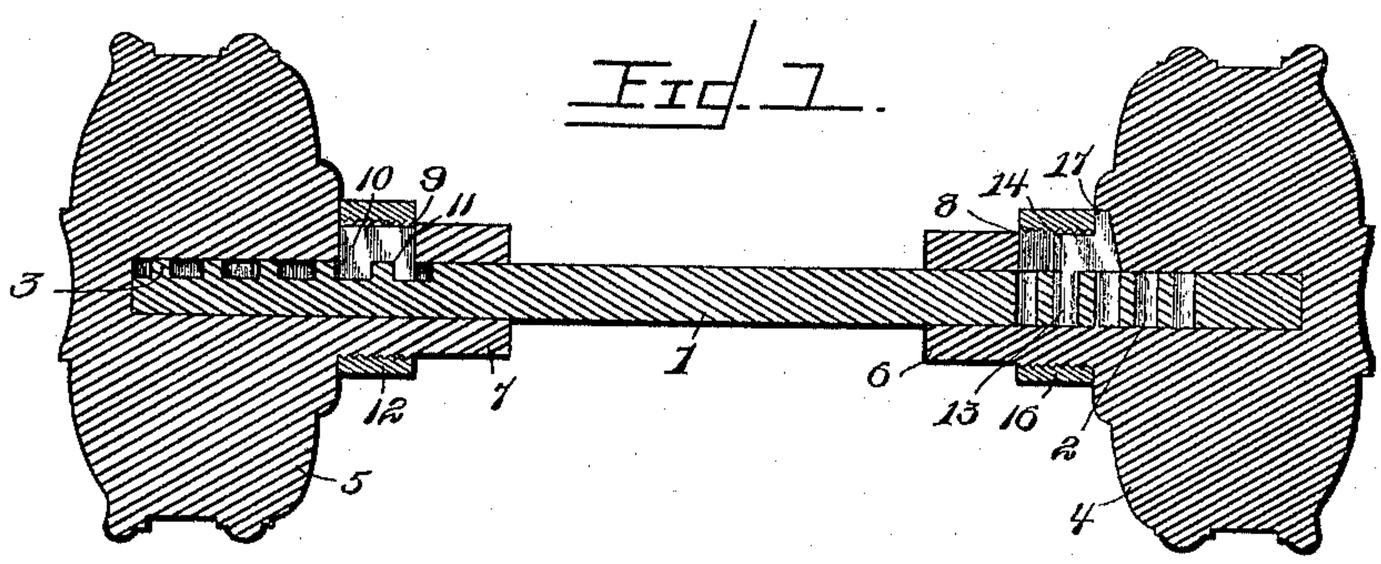


Fig. 2.

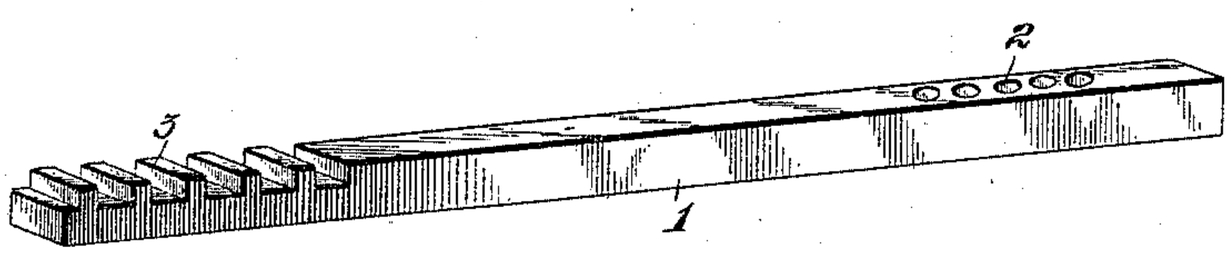


Fig. 3.

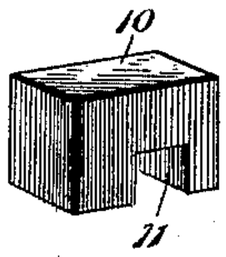
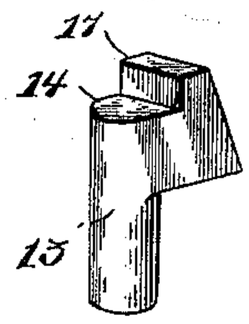


Fig. 4.



Witnesses
H. J. LaVarre.
C. E. Hoyle

Inventor
Thomas M. Dils.

By his Attorneys,
C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

THOMAS MOORE DILS, OF DAVENPORT, IOWA.

KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 591,111, dated October 5, 1897.

Application filed March 25, 1896. Serial No. 584,859. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MOORE DILS, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented a new and useful Door-Knob, of which the following is a specification.

My invention relates to door-knobs, and particularly to the means for securing the same to the knob-spindle, the object in view being to provide simple and efficient means for adjusting the length of the portion of the spindle between the knobs to suit the thickness of the door or other closure in connection with which the knobs are used, and, furthermore, to provide adjustable means for drawing the knobs toward each other after the initial adjustment to take up looseness and prevent rattling in the socket.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a longitudinal central section of a pair of knobs and a connecting-spindle constructed in accordance with my invention. Fig. 2 is a detail view in perspective of the knob-spindle detached. Fig. 3 is a similar view of the clutch-block. Fig. 4 is a similar view of the adjustable knob-securing pin.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a knob-spindle of preferably cross-sectionally angular construction provided at one end with a series of perforations 2 and at the other end with a toothed or serrated portion 3, and 4 5 designate knobs fitted upon the extremities of said spindle and provided with thimbles 6 7, having their bores constructed to fit the spindle. These thimbles are permanently secured to and practically form parts of the knobs by which they are carried, and they are provided, respectively, with longitudinal slots 8 and 9, through which access is given to the perforations 2 and the rack 3.

10 represents a clutch-block fitted in the slot 9 and provided with a toothed or serrated inner surface 11 to engage the rack 3, a retaining-sleeve 12 being threaded upon the exterior of the thimble 7 to extend over said clutch-block and hold the same in engagement with the rack. This or an equivalent form of clutch is preferably arranged at one end of the spindle, while the other end is fitted with a clutch embodying my invention.

The slot 8 in the thimble of the other knob is employed to allow engagement with the perforations 2 of a locking-pin 13, which is provided with a shoulder 14, flush with the outer surface of the thimble 6, for engagement by a sleeve 16, threaded upon said thimble in a manner similar to the sleeve 12. Said locking-pin is also provided with an extension 17, arranged in the path of the upper end of the sleeve, whereby as the sleeve is adjusted outwardly upon the thimble subsequent to engaging the pin with the desired perforation 2 said extension 17 is engaged to cause a relative inward movement of the knob and outward movement of the spindle. This operation insures an accurate adjustment of the device to a door. The slot 8 is of greater length than the locking-pin in order to allow movement of the latter with relation to the thimble, the extent of said movement being approximately equal to the interval between two contiguous perforations 2. Hence if the relative movement of the thimble and locking-pin at a given adjustment is insufficient to secure the necessary tightness the sleeve may be removed and the pin engaged with the next perforation.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. The combination with a knob-spindle, and a knob fitted for axial movement thereon, of connections between the knob and spindle including a sleeve threaded upon the thimble of the knob, and a pin adjustably engaged with the spindle and arranged in the path of the sleeve for movement independently of the knob, whereby adjustment of the sleeve causes relative opposite movement of the knob and spindle substantially as specified.

2. The combination with a knob-spindle

having perforations, of a knob fitted for axial movement upon said spindle and having a thimble provided with an elongated opening or slot arranged parallel with the spindle, a pin arranged in said opening or slot in the thimble and engaged with one of the perforations in the spindle, the length of said slot being approximately equal to the interval between contiguous perforations in the spindle, and a sleeve adjustably fitted as by threads upon the thimble to engage the outer extremity of the pin and cause relative axial movement of the spindle and knob, substantially as specified.

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

THOMAS MOORE DILS.

Witnesses:
L. M. FISHER,
JOHN HEINZ.