(No Model.)

S. H. BERREY,

DOOR KNOB ATTACHMENT.

No. 422,493. Patented Mar. 4, 1890.

Fig. 1.

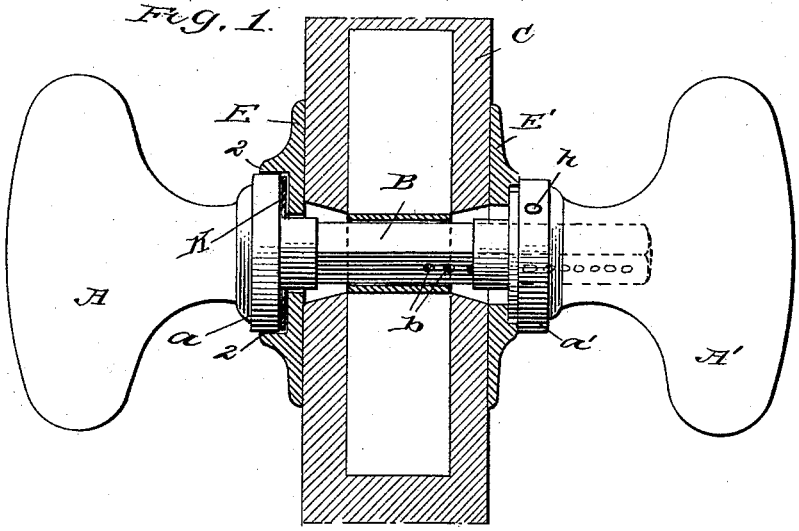


Fig. 2.

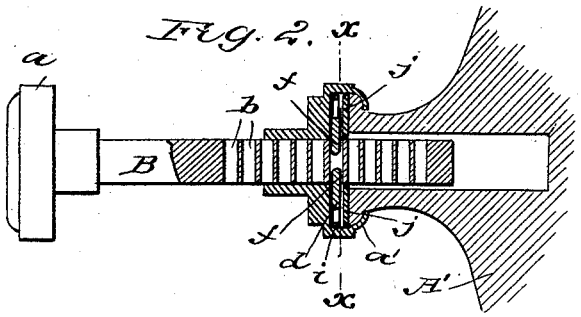


Fig. 7.

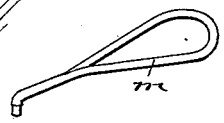


Fig. 4.

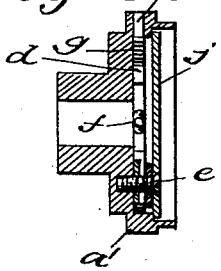


Fig. 3.

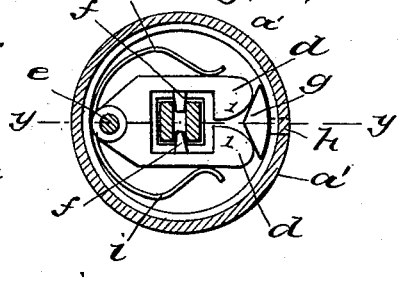


Fig. 6.

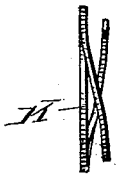
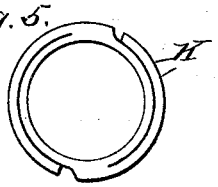


Fig. 5.



WITNESSES:

W. R. Davis

C. Sedgwick

INVENTOR:

S. H. Berrey

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

SAMUEL HIND BERREY, OF PROVIDENCE, RHODE ISLAND.

DOOR-KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 422,493, dated March 4, 1890.

Application filed November 25, 1889. Serial No. 331,449. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL HIND BERREY, of Providence, in the county of Providence and State of Rhode Island, have invented a new and Improved Door-Knob Attachment, of which the following is a full, clear, and exact description.

My invention relates to the attachment of door and other knobs to lock and bolt-spindles; and the object of my invention is to provide a simple and efficient means of attaching knobs to spindles, and to provide an attachment that will fit any lock that takes a square spindle, that can be easily adjusted to a door of any thickness, and that is suitable for any kind of knob, such as wood, metal, glass, porcelain, &c.

To this end my invention consists in providing one end of the lock-spindle with a series of holes extending through the same, and one of the shanks of the door-knobs with spring-actuated tumblers having pins thereon adapted to engage the holes of the lock-spindle, and with a suitable wedge and shank for separating the tumblers and releasing the pins from the spindle. This construction will be hereinafter fully described, and more specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the views.

Figure 1 is a vertical section of a portion of a door and a side elevation of the knobs as applied to the lock-spindle. Fig. 2 is a longitudinal section of one end of the lock-spindle and knob attached thereto and of the parts embodying my invention. Fig. 3 is a transverse section on the line $x\,x$ of Fig. 2, showing the spring-actuated tumblers and the pins thereon engaged with the holes in the lock-spindle, and also showing the wedge which is forced between the tumblers to release the pins from said holes. Fig. 4 is a section on the line $y\ y$ of Fig. 3, the lock-spindle being removed. Fig. 5 is a plan view of the spring-washer that is placed between the shank of the knob and the rose to insure a perfect fit on the door. Fig. 6 is a side elevation of the same, and Fig. 7 is a view of a hook that may be used in disengaging the locking device from the lock-spindle.

The door-knob A is attached to the shank a, and that to the lock-spindle B, in the usual well-known manner. The lock-spindle B passes through the lock and door C, the lock not being shown in the drawings, and the other end is provided with a series of holes b, which pass entirely through it, but which may be made on opposite sides of the spindle and not extend through the same.

The knob A′ is attached to the shank a' in the usual manner, and the shank a' is adjustably attached to the lock-spindle B, upon which it may be made to slide, as will be hereinafter described. The knob A′ is recessed, as shown in Fig. 2, so as to allow it to be adjusted upon the lock-spindle B. The shank a' of the knob A′ is provided with an annular chamber, to one side of which are pivoted the two tumblers $d\ d$ by the screw e, which passes through eyes in one end of the tumblers. The tumblers $d\ d$ are cut away in their central portion, so that they may fit closely around the lock-spindle B, and each is provided with a pin f, which fits into the holes b of the lock-spindle B, and thus holds the tumblers, the shank a', to which they are attached, and the knob A′, which is attached to the shank a' in position. The free ends of the tumblers $d\ d$ are rounded at the point 1, as shown in Fig. 3, and opposite the rounded ends is a wedge g, with its point toward the tumblers and its outer face provided with a shank h, which projects through to the outside of the shank a', so that by pressing on the shank h the wedge g will be forced between the rounded ends of the tumblers $d\ d$, thus throwing them apart, drawing the pins f from the holes b, and leaving the shank a' free to slide on the lock-spindle B. For depressing the shank h and actuating the wedge g, a hook m, having a bent end, as shown in Fig. 7, is used, the bent end being of about the same size as the shank h, so that it will follow the shank into the hole in knob-shank a' and be easily retained in place. The tumblers $d\ d$ and pins f are retained in locked position by the spring i, which passes between the pivoted part of the tumblers and the wall of the chamber in which they are held,

and the ends of which press against the sides of the tumblers, thus forcing them together and keeping the pins *f* in the holes *b*. The tumblers *d d*, spring *i*, and wedge *g* are protected and prevented from getting out of place by a washer *j*, which fits into the chamber of the shank *a'*, is provided with a central opening for the passage of the lock-spindle B, and is retained in position by the screw *e*, which passes through the washer *j*, through the eyes of the tumblers *d d*, and into the shank *a'*. Between each shank *a* and *a'* and the door C is a rose E E', which ornaments and gives finish to the parts. The rose E is provided with a shoulder 2, which projects over the knob-shank *a*, and between the rose and the shank is interposed a spring-washer K, which encircles the smaller part of the shank *a*, and is provided with two spring-arms extending spirally from the body portion of the washer, so that there is a constant pressure between the rose E and shank *a*, which takes up any slack there may be in the parts and insures a perfect fit on the door C.

From the foregoing description it will be seen that knobs attached to the lock-spindle in this manner can be quickly adjusted to fit a door of any thickness. By pressing with the hook *m* or any hard small object upon the shank *h* the tumblers *d d* and pins *f* will be released from engagement with the lock-spindle, as described, leaving the knob A' and shank *a'* free to slide on the lock-spindle, and when the knobs are pressed against the door and the pressure removed from the shank *h* the tumblers *d d* and pins *f* immediately spring into engagement with the lock-spindle, thus firmly attaching the knob A' to the same, and the spring-washers K will take up any lateral motion of the spindle in the door, thus making a perfect fit.

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

1. A door-knob attachment consisting of a perforated lock-spindle and a knob and shank adapted to slide on said spindle, the shank of the knob being provided with oppositely-arranged spring-actuated tumblers transverse to the lock-spindle, having pins thereon adapted to engage the holes on the lock-spindle and hold the door-knob and shank in position thereon, substantially as described.

2. A door-knob attachment consisting of a perforated lock-spindle and a knob and shank adapted to slide thereon, the shank of the knob being provided with spring-actuated tumblers having pins thereon adapted to engage the perforations of the lock-spindles and hold the knob and shank thereon, and a sliding wedge opposite the free ends of the tumblers adapted to force said tumblers apart and release them from engagement with the lock-spindle, substantially as described.

3. The combination, with a door-knob, of spring-actuated tumblers provided with pins adapted to engage the lock-spindle, and means for separating said tumblers to disengage the pin, substantially as described.

4. In a door-knob attachment, the combination, with the knob-shank *a'* and lock-spindle B, having perforations *b*, of the tumblers *d d*, pivoted to said knob-shank transversely to the lock-spindle and to one side of the case and provided with pins *f* to engage the perforations of the lock-spindle and having a spring formed of a single piece *i* to hold said tumblers and pins in engagement with the lock-spindle, substantially as described.

SAMUEL HIND BERREY.

Witnesses:
JOHN H. BROADHEAD,
CHARLES H. SHIRLEY.