

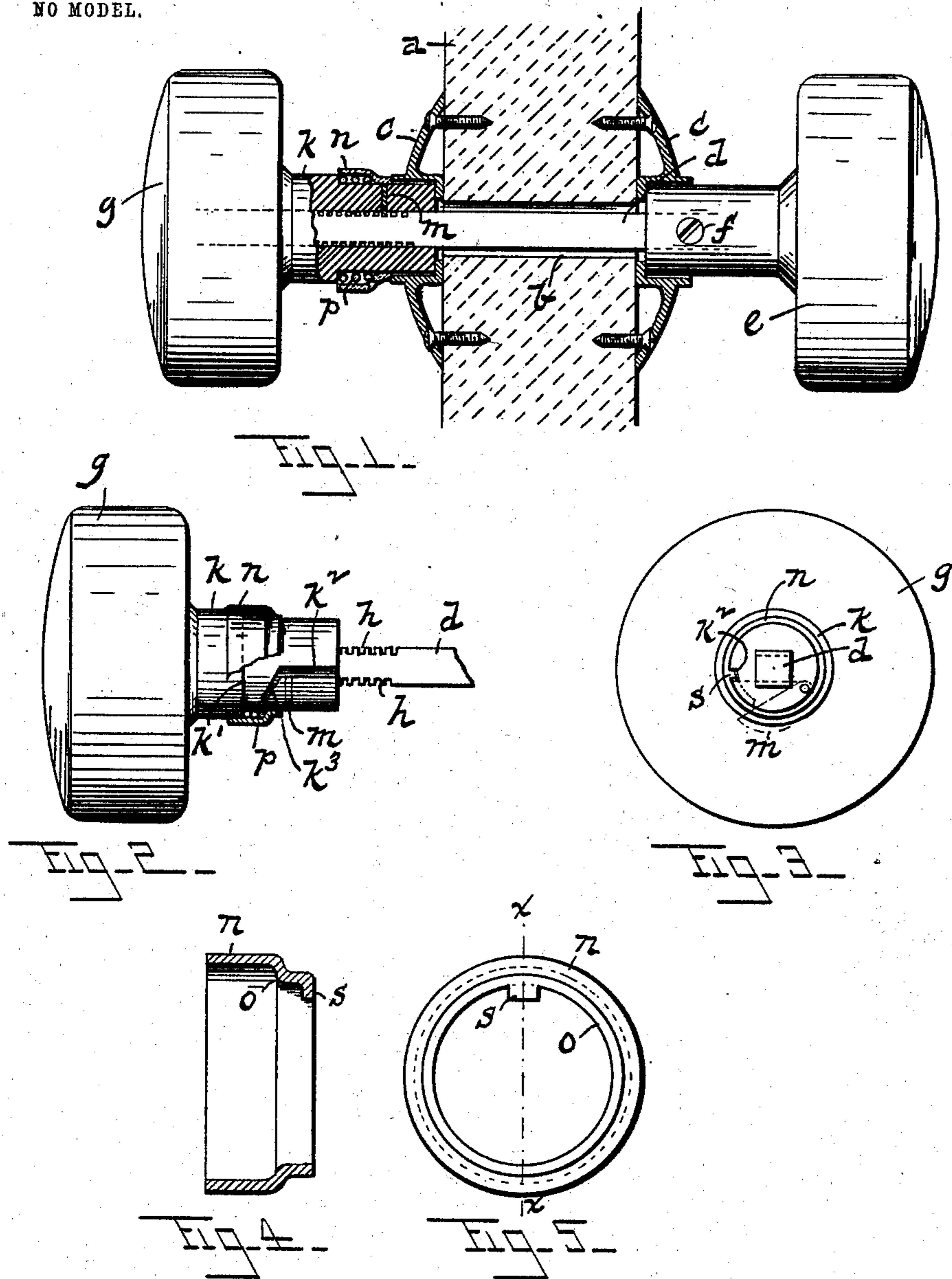
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B. W. NORTON.
KNOB ATTACHMENT.

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NO MODEL.



Witnesses.

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UNITED STATES PATENT OFFICE.

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KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 720,056, dated February 10, 1903.

Application filed March 24, 1900. Serial No. 10,102. (No model.)

To all whom it may concern:

Be it known that I, BERNARD W. NORTON, a citizen of the United States, residing at Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Knob Attachments, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in knob attachments of that class which are designed to rigidly secure the knob in any adjusted position upon the knob-shank, and has for its object to provide a novel form of such means which can be readily adjusted and which will be provided with means for covering and protecting the locking mechanism.

To these ends my invention consists of a knob attachment having certain details of construction and combination of parts, as will be hereinafter described, and more particularly pointed out in the claims.

Referring to the drawings, in which like letters designate like parts in the several figures, Figure 1 is a sectional elevation of a door-knob embodying my invention as applied to a door. Fig. 2 is an elevation of the knob and a portion of its spindle with the guard-collar in its retracted position and partly broken away. Fig. 3 is an end view looking toward the left in Fig. 2, with the latch shown in its open position by broken lines. Fig. 4 is a cross-section of the guard-collar upon line *x x* of Fig. 5, and Fig. 5 is an end view of said collar.

Referring to the drawings, the letter *a* designates the door, which is provided with the usual opening *b* to receive the knob-spindle; *c c*, the two knob-roses, secured to the door by screws, as shown, or in any other convenient manner; *d*, the knob-spindle; *e*, the fixed knob, secured to said spindle by screw *f* or otherwise, and *g* the adjustable knob.

The spindle *d* is provided with a series of transverse notches or grooves *h* on opposite sides thereof, with the notches of one series staggered with respect to those of the opposite series, as is common in the art. The knob *g* has its shank *k* provided with a portion of reduced diameter extending from its

outer end to the shoulder *k'*, and at a point substantially midway between the ends of said reduced portion it is provided with a transverse slot, within which is pivotally mounted a latch *m*. The engagement of the latch *m* with any one of the notches or grooves *h* (see Fig. 1) locks the knob *g* upon the spindle, and when in its locked position its outer edge is substantially flush with the surface of the reduced portion of the shank *k*. To normally cover said latch and retain it in engagement with the notch in the spindle, I have provided a guard-collar *n*, which is adapted to have a free sliding movement upon the knob-shank *k*, it having two diameters corresponding to the two diameters of said shank, with an intermediate annular shoulder *o*, as shown in Figs. 4 and 5.

A coil-spring *p*, embracing the reduced portion of the shank *k* and bearing at one end against the shoulder *k'* and at its opposite end against the shoulder *o* on the collar, normally retains the latter in its operative position, covering the latch *m*, as shown in Fig. 1. By sliding the guard-collar outwardly against the stress of the spring *p* the latch *m* is exposed, so that it can be raised out of engagement with the spindle to remove the knob *g*, and to temporarily retain said collar in such retracted position I provide the knob-shank *k* with the groove *k²*, which extends for a distance from the free end of said shank parallel with the axis thereof, terminating in an extension-groove *k³*, which stands at an angle to the said axis, as shown in Fig. 2, into which groove projects a lip or stud *s* on the guard-collar. (See Figs. 3, 4, and 5.) Such construction enables the collar to be locked in its retracted position by imparting a partial rotation thereto after sliding it to its outermost position, causing the lip *s* to enter the extension-groove *k³*, and it can be as readily released by giving it a partial rotary movement in the opposite direction.

It is apparent that by the use of a guard-collar either of the specific construction herein described or of any other preferred construction within my invention the locking means for securing the knob to the spindle is covered and protected against accidental disen-

gagement, while at the same time none of the parts of the locking mechanism are exposed to be tampered with or to be lost.

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

1. In a knob attachment, the combination with a knob-spindle; of a knob, the shank of which is slidably mounted upon said spindle and provided with means whereby the said knob can be rigidly secured to said spindle, and a sliding guard-collar upon said shank movable between the knob and the knob-rose when the same is in its operative position and adapted to cover and uncover the said locking means, substantially as shown and described.

2. In a knob attachment, the combination with a knob-spindle, of a knob having its shank provided with a pivotally-secured latch adapted to have an engagement with the said spindle so as to lock the said knob thereon, and a guard-collar independent of the knob-rose movable upon the said shank and adapted, in its movement, to cover and uncover the said latch, substantially as described.

3. In a knob attachment, the combination with the knob-spindle; of a knob, the shank of which is slidable upon said spindle and having means attached to and projecting therethrough, whereby the said knob can be secured to said spindle; and a sliding guard-collar, independent of the rose, upon said knob-shank and movable thereon toward and away from the said knob and adapted to cover and uncover the said knob-securing means, substantially as described.

4. In a knob attachment, the combination with a knob-spindle, of a knob having means attached thereto for locking the said knob upon the said spindle, and a sliding guard-collar movable upon the shank of said knob and adapted to cover and uncover the said locking means, and means for retaining the said guard-collar in its retracted position, substantially as described.

5. In a knob attachment, the combination with a knob-spindle, of a knob having its shank provided with a detent to engage said spindle to lock the knob in any desired position of adjustment thereon, a guard-collar loosely embracing the shank of said knob and adapted to be moved longitudinally thereon to a position in which it covers said detent to hold the latter in engagement with the spindle, and a coil-spring located upon said

shank and engaging said collar to normally retain it in its working position, arranged and operating substantially as described.

6. In a knob attachment, the combination with a knob-spindle, provided with a series of transverse notches or depressions, of a knob having its shank provided with a pivotally-secured latch movable in a plane at substantially a right angle to the axis of the said knob, and adapted to engage said notches to lock the knob upon the spindle, and a sliding guard-collar independent of the knob-rose longitudinally movable upon said shank to cover and uncover said latch, substantially as described.

7. In a knob attachment, the combination with a knob-spindle, provided with a series of transverse notches or depressions, of a knob having its shank provided with a pivoted latch to engage said notches to lock the knob upon the spindle, a guard-collar longitudinally movable upon said shank to cover and uncover said latch, a spring engaging said collar to normally retain it in a position in which it covers said latch, and means for locking said collar in a retracted position in which it uncovers said latch, substantially as described.

8. In a knob attachment, the combination with a knob-spindle, of a knob having its shank provided with a detent to engage said spindle to lock the knob upon the latter and having in the outer surface of said shank a groove which extends for a distance from its free end in a plane parallel with the axis of said shank and terminates in an extension which is angular to said axis, and a guard-collar loosely mounted upon said shank and having an internal lip or stud which enters the groove in the latter, substantially as and for the purpose described.

9. The combination with the knob-spindle *d* provided with the series of notches *h*, of the knob *g* having its shank *k* provided with the pivoted latch *m* and groove *k*² *k*³, guard-collar *n* having the internal lip *s* entering said groove in said shank, and spring *p*, arranged and operating substantially as described.

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

BERNARD W. NORTON.

Witnesses:

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