Dec. 20, 1927. 1,653,514

W. R. SCHLAGE

GLASS KNOB MOUNTING

Filed Sept. 10. 1924

Fig. 1.

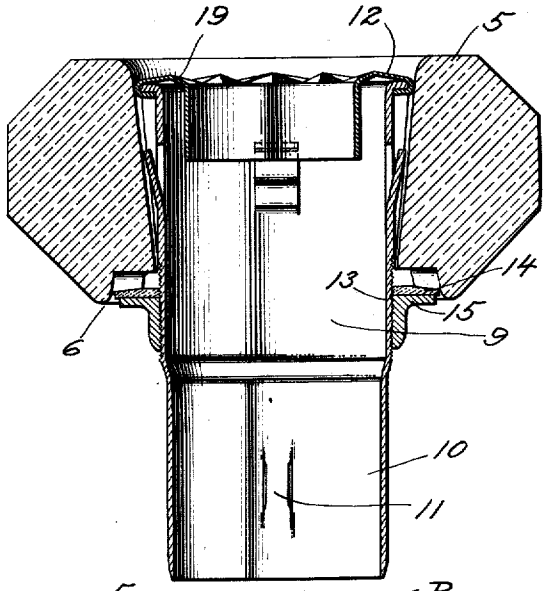


Fig. 2.

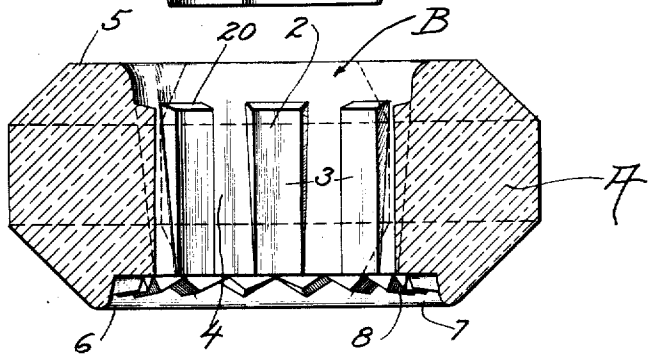
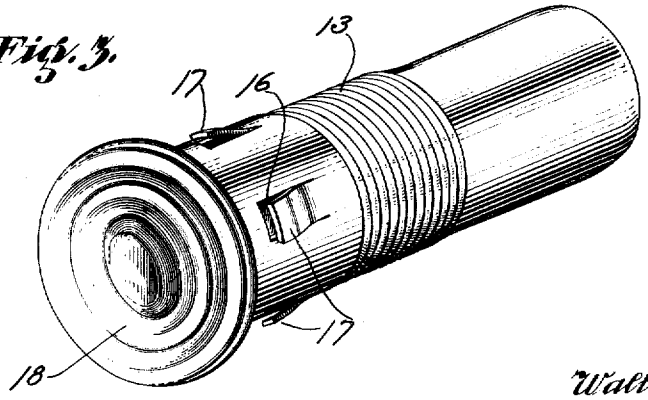


Fig. 3.



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UNITED STATES PATENT OFFICE.

WALTER R. SCHLAGE, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE SCHLAGE COMPANY, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION OF CALIFORNIA.

GLASS-KNOB MOUNTING.

Application filed September 10, 1924. Serial No. 736,946.

This invention relates to door knobs and the like, and particularly to a mounting whereby a glass knob may be substantially supported upon, and rigidly secured to, a metallic shank.

The object of the present invention is to generally improve and simplify the construction of knobs of the character described. With this end in view, the invention embodies a glass knob having a central aperture formed therein, a tubular metallic shank adapted to be inserted in said aperture and to extend substantially therethrough, interlocking means on the exterior of the shank and in the interior of the aperture, whereby the knob and shank are secured against relative turning movement, and means for securing the shank and knob against endwise movement with relation to each other.

One form which my invention may assume is exemplified in the following description and illustrated in the accompanying drawings, in which—

Fig. 1 is a central longitudinal section of the shank and knob showing the same assembled.

Fig. 2 is a cross-section of the knob.

Fig. 3 is a perspective view of the shank.

Referring to the drawings in detail, and particularly to Figs. 2 and 3, A indicates a knob constructed of any suitable material, but preferably of glass. The knob has a central aperture formed therein, as indicated at B, which extends completely therethrough. This aperture tapers from the exterior surface to the inner surface, as shown, and a plurality of lugs are formed on the interior surface of the aperture as indicated at 2. These lugs taper from end to end, due to the taper of the aperture in which they are formed, this taper being provided for the purpose of permitting the inner faces 3 to present a substantially cylindrical surface of uniform diameter from end to end. The spaces formed between the lugs are indicated at 4 and they are provided for the reception of interlocking means hereinafter to be described. The outer face of the knob is indicated at 5, and the inner face at 6. An enlarged recess is formed in the inner face as shown at 7, and a plurality of prismatic or V-shaped lugs are formed in the bottom of the recess as indicated at 8. These prismatic lugs serve two functions, first, that of a biting frictional lock between a washer and lock-nut hereinafter to be described, and secondly, that of forming a series of refracting or reflecting surfaces, which may be silver-plated to serve as light reflecting surfaces.

The metallic shank employed is tubular in form as shown in Figs. 1 and 3. One end is slightly enlarged as indicated at 9. This end is inserted in the aperture B of the knob and is secured therein. The end of the shank which projects and which is received by the locking mechanism or the spindle of a door or the like is slightly contracted as indicated at 10, and a key or like device is pressed from the tubular extension as indicated at 11. The outer end of the tubular shank is provided with an outwardly turned annular flange 12, while the opposite end of the enlarged portion is exteriorly threaded as indicated at 13, the threaded portion being provided for the reception of a washer 14 and a lock-nut 15.

The tubular shank is cut at a suitable number of places as indicated at 16 (see Fig. 3) and the metal is bent outwardly to form a number of prongs or key-way members 17, these prongs or keys being of a width to permit them to be interposed between the lugs 2 when the knob and shank are assembled.

The annular flange 12 serves two functions, first, that of securing the knob against endwise movement on the tubular shank in one direction, and secondly, that of forming a securing means for a cap such as shown at 18, or a partial closure cap such as shown at 19. (See Fig. 1).

The device as constructed is assembled in the following manner. The tubular shank shown in Fig. 3, with the washer and lock-nut removed, is inserted in the central aperture B of the knob, the prongs or key-way members 17 being so positioned as to pass downwardly between the lugs 2 and thereby forming an interlock with the same. The lugs 2 are slightly shorter than the aperture B, as shown in Fig. 2, and shoulders or seats 20 are thus formed on their outer ends against which the annular flange, and the cap 18 or 19 secured thereto, engage. This engagement secures the knob against endwise movement in one direction, and the interlocking of the lugs 2 and the prongs 17 secures the knob against turning movement

about the shank. The resilient washer, constructed of paper, fiber, rubber or the like, is then applied over the threaded end of the shank, and next the nut 15. This nut is tightened up and the device as a whole is thus completely assembled.

Any suitable form of washer may be employed, but a resilient washer is preferable, as the mounting illustrated is preferably employed in connection with knobs that are constructed of glass, porcelain, and other similar fragile materials. Any danger of fracturing the material is thus avoided and a secure grip is obtained by the engagement of the washer with the prismatic lugs 8. These lugs, as previously stated, may be silver-plated to form reflecting and refracting faces and such plating may also be applied to the interior surface of the aperture B and the lugs 2. The side surfaces of the lugs are slightly angularly disposed and additional refracting and reflecting faces are thus obtained, which give the knob an exceedingly brilliant appearance when it is constructed of clear glass.

It should be noted that the means employed for securing the knob against endwise movement on the tubular shank are disposed on the exterior surface of the shank, and similarly that the locking means employed for securing the knob against turning movement on the shank are also formed on the exterior surface thereof. This is exceedingly important as it permits the formation of a free and unobstructed passage interiorly of the shank, and furthermore permits it to be constructed of a tubular material. Such an unobstructed central passage is a decided advantage in connection with a knob of this character, as a key mechanism is in some instances inserted therein, and in other instances other lock-actuating mechanisms may extend through the tubular shank, so as to be in a position to be actuated from the end of the knob. The insertion of such mechanism can only be obtained where a free and unobstructed central passage is formed in the shank, and it is, therefore, of considerable importance.

The inner faces 3 of the lugs form a cylindrical surface in parallelism with the exterior surface of the tubular shank. A snug fit may thus be made between the lugs and the shank, and the knob is thus well supported and reinforced interiorly. This is also important, as glass knobs are readily broken unless amply supported and secured.

The prongs 17, as previously stated, are struck out from the tubular shank and as such form a rigid connection between the knob and tube to prevent turning movement between the same. The flange 12 and the cap carried thereby engage one end of the knob, and the washer and lock-nut 15 the opposite end. Ample supporting and engaging surfaces are thus provided and further strength and rigidity are insured.

While certain features of the present invention are more or less specifically illustrated, I wish it understood that various changes in form and proportion may be resorted to within the scope of the appended claims. I similarly wish it understood that the materials and finish of the several parts employed may be such as the experience and judgment of the manufacturer may dictate or various uses may demand.

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

1. A knob mounting of the character described, comprising a shank, a knob having a central aperture formed therein and extending therethrough adapted to be placed on the shank, said shank having a central passage formed therein forming an interior longitudinally unobstructed passage through the shank and knob, means on the exterior of the shank for securing the knob against endwise movement on the shank, and other means exterior of the shank for securing the knob against turning movement on the shank.

2. A knob mounting of the character described, comprising a knob having a central aperture formed therein, a tubular shank insertible in said aperture and adapted to extend substantially therethrough, means on the exterior of the shank and engageable with the knob to secure it against endwise movement on the shank, and other means on the exterior of the shank and engageable with the knob to secure the knob against turning movement on the shank.

3. A knob mounting of the character described, comprising a knob having a central aperture formed therein, a plurality of interspaced lugs integral with the knob and disposed in the central aperture, a tubular shank insertible in the aperture, prongs formed on the exterior surface of the shank and extending outwardly between the lugs to lock the knob against turning movement on the shank, and means on the exterior of the shank for securing the knob against endwise movement on the shank.

4. A knob mounting of the character described, comprising a knob having a central aperture formed therein, a plurality of interspaced lugs integral with the knob and disposed in the central aperture, a tubular shank insertible in the aperture, prongs formed on the exterior surface of the shank and extending outwardly between the lugs to lock the knob against turning movement on the shank, an exterior annular flange on one end of the shank engageable with the lugs and securing the knob against endwise movement in one direction, a threaded section on the exterior of the shank and a nut

thereon adapted to engage the opposite side of the knob to secure the knob against endwise movement in the other direction.

5. A knob mounting of the character described, comprising a knob having a central aperture formed therein, a plurality of interspaced lugs integral with the knob and disposed in the central aperture, a tubular shank insertible in the aperture, prongs formed on the exterior surface of the shank and extending outwardly between the lugs to lock the knob against turning movement on the shank, a flange on one end of the shank and engageable with one end of the knob to secure the knob against endwise movement in one direction, a partial closure cap carried by said flange, and means carried by the shank and engageable with the opposite end of the knob to secure the knob against endwise movement in the other direction.

6. A knob mounting of the character described, comprising a knob having a central aperture formed therein, a tubular shank insertable in said aperture and adapted to extend substantially therethrough, an annular flange on one end of the shank, means adjacent one face of the knob engageable with said flange to secure the knob against endwise movement in one direction, means on the other end of the shank engageable with the opposite face of the knob to secure it against endwise movement in the other direction, and a closure cap carried by the flanged end of the shank.

WALTER R. SCHLAGE.

thereon adapted to engage the opposite side of the knob to secure the knob against endwise movement in the other direction.

5. A knob mounting of the character described, comprising a knob having a central aperture formed therein, a plurality of interspaced lugs integral with the knob and disposed in the central aperture, a tubular shank insertible in the aperture, prongs formed on the exterior surface of the shank and extending outwardly between the lugs to lock the knob against turning movement on the shank, a flange on one end of the shank and engageable with one end of the knob to secure the knob against endwise movement in one direction, a partial closure cap carried by said flange, and means carried by the shank and engageable with the opposite end of the knob to secure the knob against endwise movement in the other direction.

6. A knob mounting of the character described, comprising a knob having a central aperture formed therein, a tubular shank insertable in said aperture and adapted to extend substantially therethrough, an annular flange on one end of the shank, means adjacent one face of the knob engageable with said flange to secure the knob against endwise movement in one direction, means on the other end of the shank engageable with the opposite face of the knob to secure it against endwise movement in the other direction, and a closure cap carried by the flanged end of the shank.

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DISCLAIMER

1,653,514.—*Walter R. Schlage*, San Francisco, Calif. GLASS-KNOB MOUNTING. Patent dated December 20, 1927. Disclaimer filed January 19, 1931, by the assignee, *Schlage Lock Company*.

Enters this disclaimer and disclaims claims 1, 2, and 6 of said patent and specifications and disclaims by way of limitation from claims 3, 4, and 5 thereof any knob or construction except where the knob is of glass, porcelain or similar fragile material, as specified in lines 10 to 12, inclusive, page 2 of said specification.

[*Official Gazette February 10, 1931.*]

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