(Model.)

J. K. CLARK.

DOOR KNOB ATTACHMENT.

No. 305,426. Patented Sept. 23, 1884.

Fig. 1.

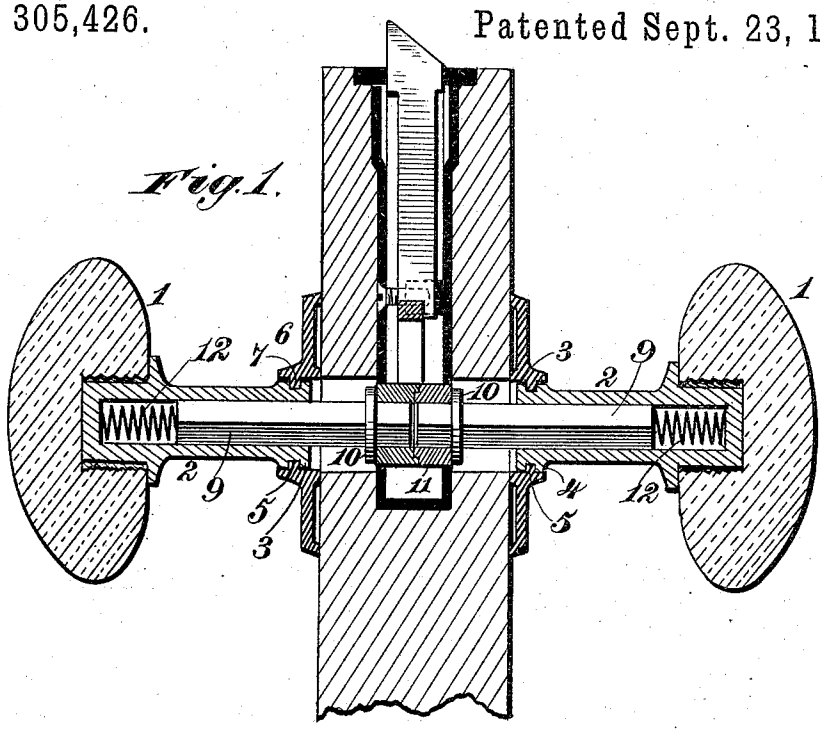


Fig. 2.

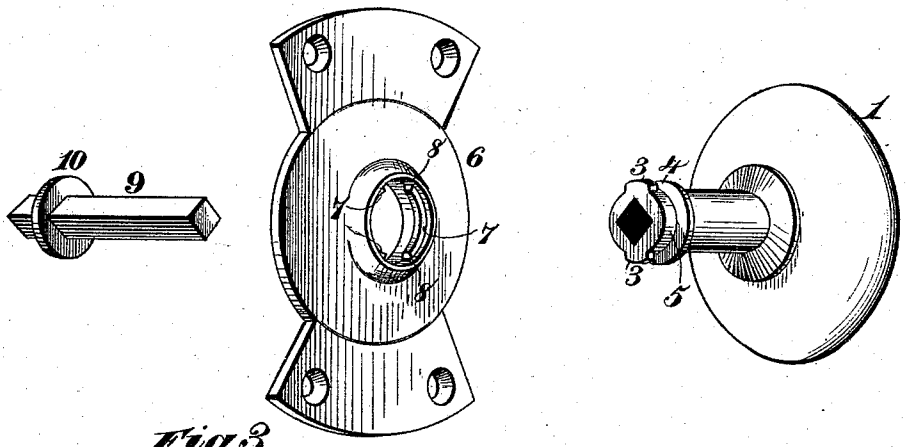
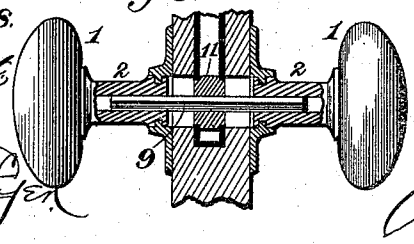


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE

JOHN K. CLARK, OF BUFFALO, NEW YORK.

DOOR-KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 305,426, dated September 23, 1884.

Application filed January 17, 1884. (Model.)

To all whom it may concern:

Be it known that I, JOHN K. CLARK, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Attaching Door-Knobs, of which the following is a specification.

This invention relates to that class of door-knob attachments composed of a rose, a knob-shank having at one end a lug adapted to be passed through a slot in the rose and then engaged with shoulders to prevent its withdrawal, and a loose spindle for operating the latch-bolt, entering a socket in the knob-shank.

The object of my invention is to improve and simplify the construction of the parts, which I accomplish in the manner and by the means hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a transverse sectional view of the knob attachment constructed in accordance with my invention; Fig. 2, detached perspective views of the rose, the knob and its shank, and one of the independent short spindles; and Fig. 3, a transverse sectional view of a modification.

Referring to the drawings, the number 1 indicates the knob, having a rigidly-attached metallic shank, 2, provided at its extreme end with two oppositely-arranged lateral lugs, 3, of segmental shape, said shank being also constructed adjacent to said lugs with an annular collar, 4, to create a narrow cylindrical bearing, 5, between the lugs and collar.

The rose 6 may be of circular or other desired shape in outline, having at its center the orifice to receive the knob-shank, and around the edges of the orifice are formed two segmental-shaped flanges, 7, leaving recesses 8 between their adjacent ends, and around the orifice on the face of the rose is formed an annular rib projecting outward beyond the plane of the segmental flanges to form an annular socket, into which the collar on the knob-shank is fitted and adapted to turn, said collar resting directly against the flanges. These flanges are of a less thickness than the metal around the orifice, so that the lugs on the knob-shank have a free space to turn in when the rose is secured directly to the door.

The short loose spindle 9 is provided with a collar or shoulder, 10, adjacent to one end, to limit the entrance of that end into one half or section of the divided hub 11, the other end of the spindle being loosely arranged in the socket of the knob-shank, and between the inner wall of the socket and the end of the loose spindle is arranged a small coiled spring, 12, the object of which is to press the spindle toward the hub of the latch and prevent the spindle from disengaging itself from the section of the hub. This spring likewise permits the adjustment of the spindle and knob-shank to doors varying in thickness, say, from one and three-eighths to one and three-quarters inch. In attaching the knob the end of the short spindle is entered into one section of the rotating hub which actuates the latch-bolt, as usual. The rose is then passed over the projecting end of the spindle, and the knob-shank passed upon the latter to cause the lugs 3 to enter the recesses 8, the rose being first partially rotated to bring the recesses into coincidence with the lugs. The rose is then turned back to the position it is to occupy, which causes the segmental flanges to pass in front of the lugs, after which the rose is attached to the door by wood-screws, as usual. This securely attaches all the parts, and while the knob can be rotated to such extent as to turn the spindle and operate the hub, it cannot turn to such distance as to bring the lugs into coincidence with the recesses; therefore the knob-shank is held against displacement both in its turning movements as well as when drawn upon to open the door. The cylindrical bearing 5 at the extremity of the knob-shank is just sufficient to receive the segmental flanges of the rose, and in connection with the collar 4, resting in the annular socket on the face of the rose, provides a perfect bearing for the end of the knob-shank, and also presents a nice and symmetrical appearance.

In Fig. 1 the invention is applied to that class of latches having two short independent spindles acting, respectively, on the sections of the divided hub, so that the latch-bolt can be operated by turning one knob without such movement being transmitted to the other knob; but in Fig. 3 I have shown the attachment of the knob, as above specifically described, to a latch having a through-spindle loosely arranged in each knob-shank, and the

loose arrangement of both knob-shanks on the spindle or spindles is important for the useful and practical application of the invention to doors varying in thickness.

It will be obvious that by the construction and arrangement described knobs and spindles can be very conveniently and expeditiously applied to doors of varying thickness without the employment of washers or screws for securing one of the knob-shanks to one end of the spindle. The attachment is simple, but strong and durable, and each knob-shank can freely rotate in its bearing of the rose, while the pressure in opening or closing the door is resisted and the parts prevented from accidental displacement.

I am aware that a knob has been rigidly secured to one end of a spinldle, and the other knob provided with a shank having projections engaging flanges about the orifice of the rose, so that one knob is loosely secured to the rose, and such, therefore, I disclaim.

I am also aware that a through-spindle has been loosely arranged in both knob-shanks, each of the latter having an end lug passed along a groove in a hollow shank on the rose, and engaged in rear of a shoulder at the end of the groove, so that each knob is thus interlocked with the rose, but is free to turn therein, the rose being screwed into a nut in the door or on the latch-case, and such, therefore, I also disclaim.

It will be obvious that the short spindle can be used with a single latch-operating hub—that is, a hub made in one piece instead of in sections.

Having thus described my invention, what I claim is—

The combination of the short spindle, having the collar to limit its entrance into the latch-hub, with the rose having an orifice constructed with two segmental flanges, leaving opposite recesses, the knob-shank having the segmental lugs at its extremity, and a collar adjacent to such lugs, to create an intervening space only sufficient to receive the flanges, and the spring, located in the knob-shank and bearing against the end of the spindle, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN K. CLARK.

Witnesses:

HARLOW C. CURTISS,

THOMAS MURPHY.