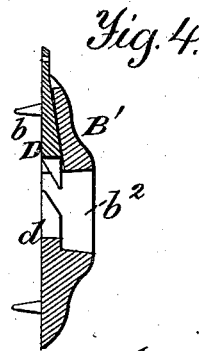
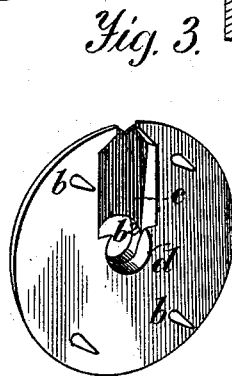
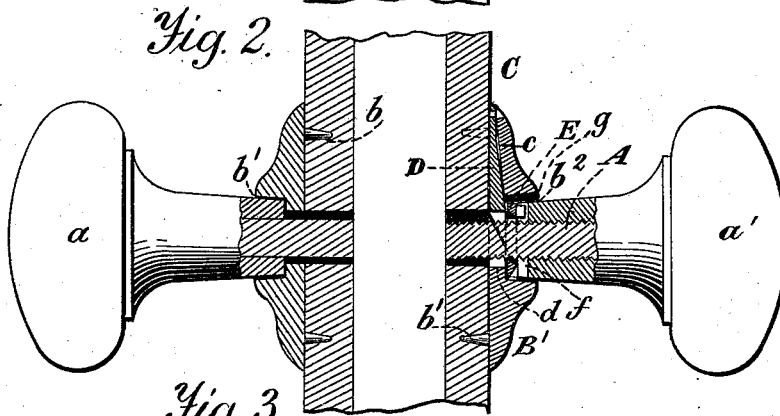
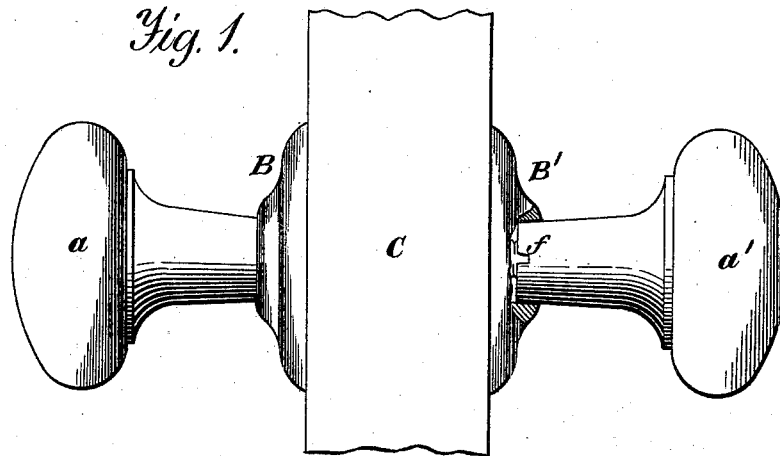


J. C. HACKER.
Knob Attachment.

No. 214,561.

Patented April 22, 1879.



Witnesses.
A. Rupert,
J. H. Lange.

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UNITED STATES PATENT OFFICE.

JOHN C. HACKER, OF DETROIT, MICHIGAN.

IMPROVEMENT IN KNOB ATTACHMENTS.

Specification forming part of Letters Patent No. **214,561**, dated April 22, 1879; application filed February 28, 1879.

To all whom it may concern:

Be it known that I, JOHN C. HACKER, of Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Knob Attachments for Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a side view of my improved knob attachment for doors, &c. Fig. 2 is a longitudinal section thereof. Fig. 3 is a detailed perspective view of one of the roses, showing the slot or recess in its rear side, within which its holding-slide is adjusted. Fig. 4 is a detailed sectional view of the said rose, with its slide moved away from the opening in it, through which the spindle passes. Fig. 5 is a toothed ring or tumbler, in perspective view, which ring or tumbler fits upon the knob-spindle.

The same part in the several figures is denoted by the same letter.

This invention relates to certain improvements in knob attachments for doors, &c.; and it consists in providing one of the roses with a flange, a slide forming a continuation of said flange, and projections or teeth entering apertures in the door or gate, the knob-spindle with a toothed ring, and the shank of the knob with one or more notches, all adapted for coaction, substantially as hereinafter more fully set forth.

In the accompanying drawings, A refers to the spindle, with the knobs *a a'*, which spindle is preferably made rectangular its entire length, with its corners simply threaded for the detachability of one of the knobs. B B' refer to the roses, which are provided upon their inner or rear surfaces with projections or teeth *b b'*, in addition to having the spindle-openings *b¹ b²*. These teeth or projections enter apertures in the door or gate C, which, in connection with other means, presently set forth, permit securing roses to the door without the use of screws or other like fastenings. In the rear or inner side of the rose B' is a slot or

recess, *c*, opening into the spindle-opening *b²* in said rose, at the open end of which slot terminate the ends of a flange, *d*, upon the inner end of the said spindle-opening *b²*. The said ends of flange *d* are beveled or provided with inclined surfaces, as clearly shown in sectional views. D is a slide let into the slot *c* in the rose B', with its inner end rounded out to coincide with the spindle-opening, and beveled thereat, to enable it to pass up and rest upon the inclined surfaces of the flange *d*, for the purpose hereinafter set forth, the other end of said slide being adapted to permit of its being acted upon by the hand of the operator, so that the slide may be moved back and forth. E is a ring fitting upon the knob-spindle A, with one side resting upon the flange *d* within the spindle opening or passage of the rose B', and its other side provided with a tooth, *e*, and beveled at *e'*, opposite the tooth *e*, the object of which will be explained or appear hereinafter.

I do not confine myself to the particular construction of the ring E, as in lieu of the bevel *e* equivalent means will readily suggest themselves.

The shank of the knob *a'* is provided around the spindle A with one or more notches, *f f'*, adapted to receive the tooth *e* on the ring E when brought together.

The parts are adjusted together as follows: The spindle, with one of its knobs and roses removed, is passed through the lock or latch and the door, with the teeth of the unremoved rose B entering the apertures in that side of the door. The other rose, B', having the flange *d* and slide D, is now placed upon the spindle, with its teeth entering the apertures in the opposite side of the door. The ring E is next placed upon the spindle and seated against the flange *d*, with its tooth projecting toward the operator. The other knob is now screwed upon the spindle, the slide D previously having been moved outwardly, which will allow the toothed end of the ring E to yield and remove its tooth *e* sufficiently to prevent its engagement with the coincident notch in the end of the shank of that knob, while the beveled surface *e'* of the ring E, reducing the thickness of the opposite end of the said ring

and presenting a flush surface to the end of the knob-shank when the ring is in the above-mentioned position, will provide for such inclining of the ring.

When the knob has been screwed home the slide D is moved inwardly, which will force or project the tooth *e* into the coincident notch of the knob-shank, and thus securely lock the spindle, with the roses and knobs, in position upon the door.

To remove the spindle, &c., insert a wire or other suitable instrument through an aperture, *g*, in the rose B', into contact with the tooth *e* of the ring E, and withdraw the slide D, when the toothed end of the ring E will yield and permit of the retracting of the said tooth from its notch in the knob-shank, and the removal of the knob, &c., with the result above named.

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

1. The combination, with a knob-spindle, its roses and knobs, of the slide adapted to

form a continuation of a flange upon the spindle-passage through one of said roses, and the toothed ring, with its tooth fitting into a notch in one of the knob-shanks, substantially as and for the purpose set forth.

2. The combination, with a knob-spindle, of the rose B', having a slide, D, and a flange, *d*, constructed as set forth, notched knob-shank, and ring E, having a tooth, *e*, substantially as and for the purpose specified.

3. The combination, with a knob-spindle, A, of the roses B B', provided with teeth or projections *b b* and the flange *d*, slide D, and ring E, having the tooth *e*, with the beveled surface *e'*, substantially as and for the purpose set forth.

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

JOHN C. HACKER.

Witnesses:

O. A. STARCK,

NICHOLAS TISLER.