J. H. La BAU.

ATTACHING KNOBS TO THEIR SPINDLES.

No. 174,825. Patented March 14, 1876.

Fig. 1.

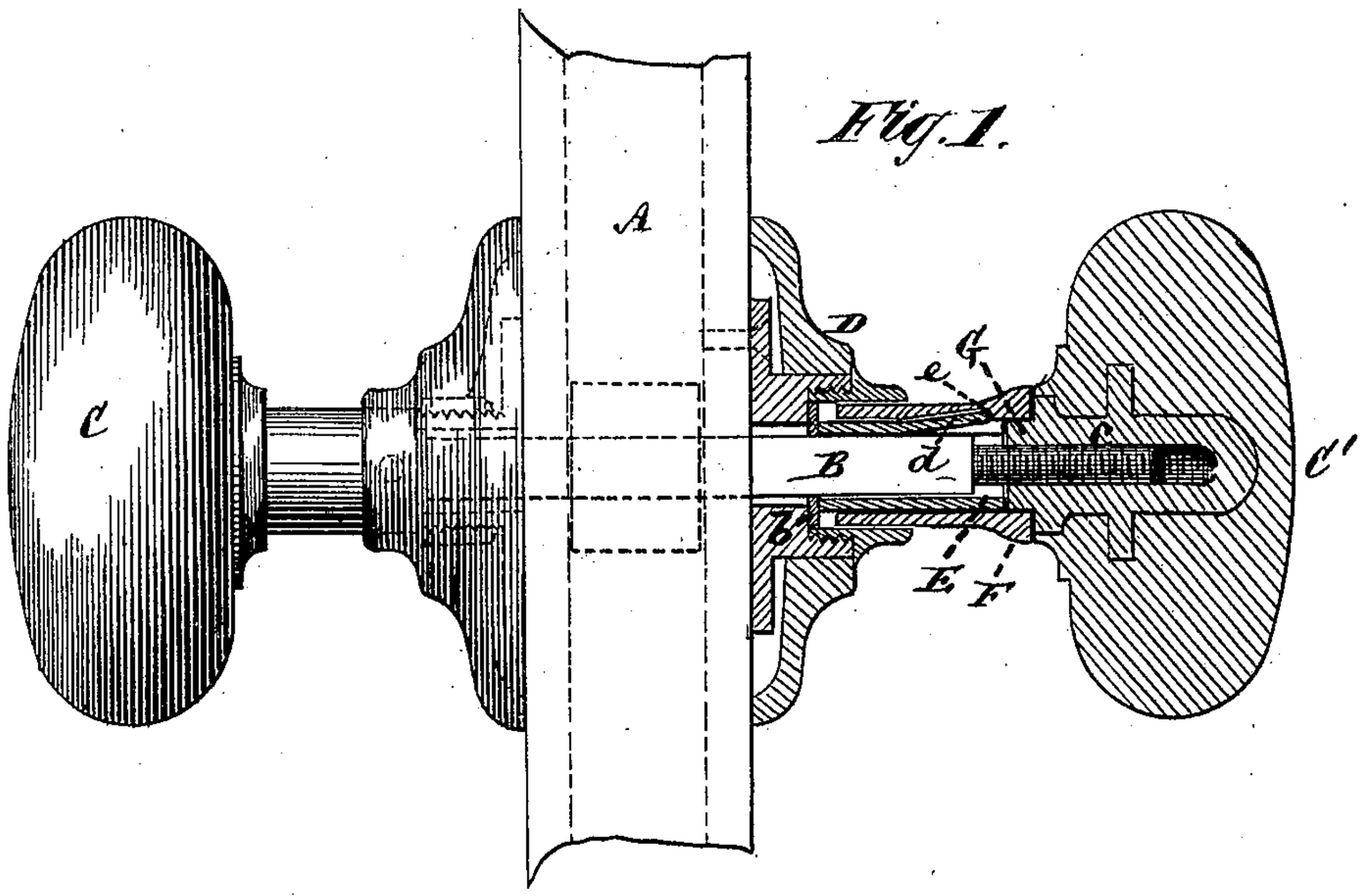


Fig. 2.

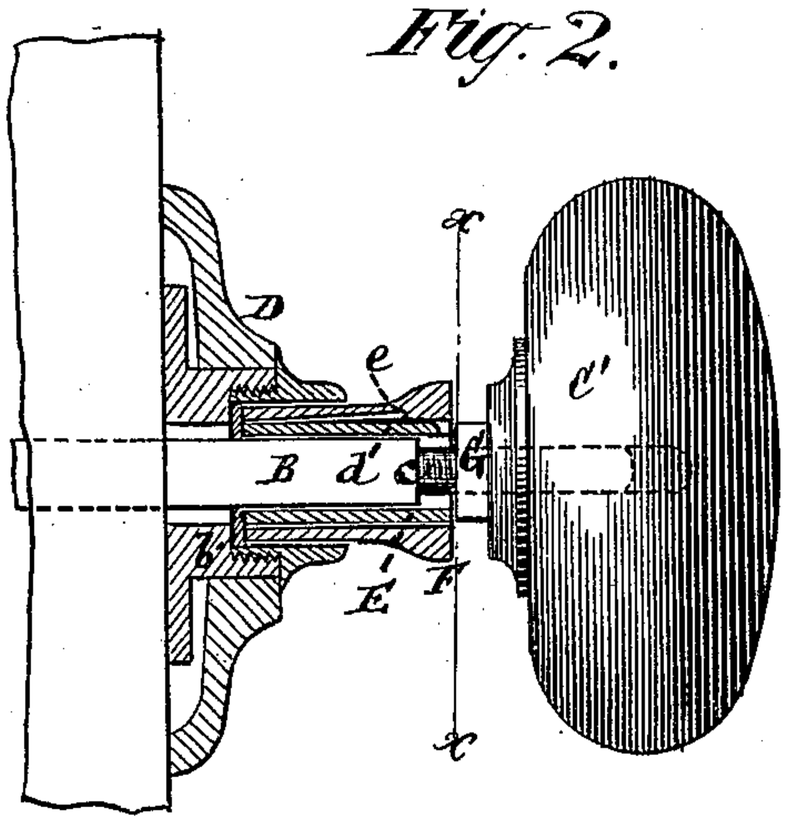


Fig. 3.

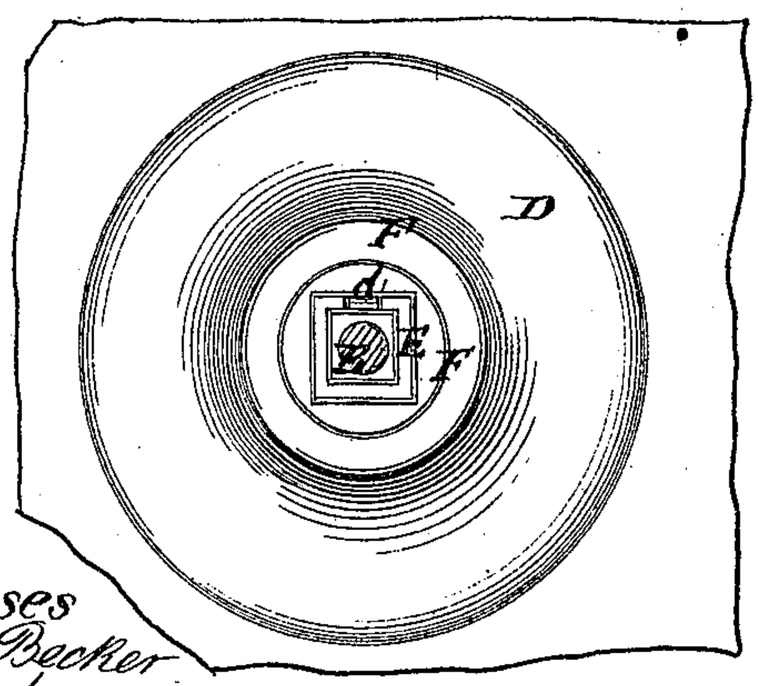
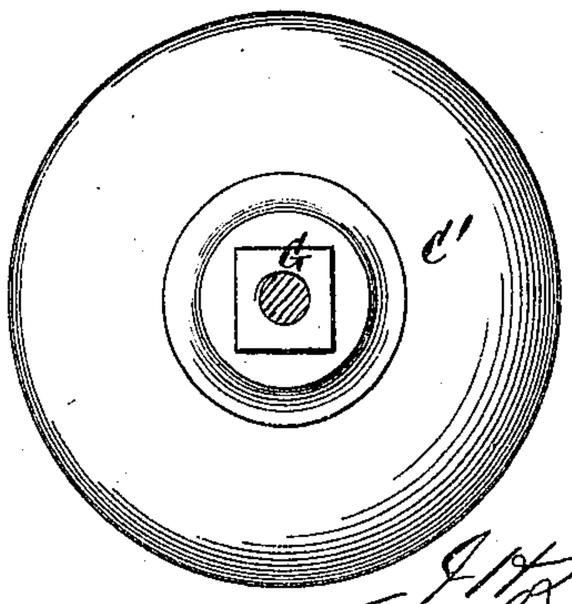


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN H. LA BAU, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN ATTACHING KNOBS TO THEIR SPINDLES.

Specification forming part of Letters Patent No. **174,825**, dated March 14, 1876; application filed October 22, 1875.

To all whom it may concern:

Be it known that I, JOHN H. LA BAU, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Means of Attaching Door-Knobs to their Spindles; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention consists in a telescopic shank-fastening for door-knobs, whereby not only general provision is made for adjusting the removable knob on the spindle to suit different thicknesses of doors, but whereby the greatest nicety of adjustment as regards said knob may be made without the aid of packing-rings or washers; likewise a transverse or protruding knob-holding screw, which mars the exterior of the shank, is dispensed with, and a perfectly reliable and simple means of holding the knob to its place, with provision for removing the same without the aid of tools, is obtained.

In the accompanying drawing, Figure 1 represents a longitudinal view, partly in section, of a knob-spindle with its knobs, as attached to a door, and having my invention applied, the same showing the removable knob in its closed and locked position on the spindle. Fig. 2 is a further longitudinal view, in part, illustrating the detachable knob ready for removal or previously to being locked in position. Fig. 3 is a transverse vertical section on the line *x x*, looking toward the door, and Fig. 4 a further transverse sectional view on the same line, looking in the reverse direction.

A represents a door, and B the knob-spindle, which may be a latch knob-spindle or not. C is the fast knob of the spindle on the one side of the door, and C′ the detachable knob of said spindle. D is the rosette on the same side of the door as the removable knob is arranged. This rosette may be made in one or more parts of the same or different materials, and be secured to the door in any suitable manner. E is a square or other shaped tube or sleeve, arranged to fit freely, or in a longitudinally-adjustable manner, over a correspondingly-shaped portion of the knob-spindle within the rosette D or a box inclosed thereby, which virtually forms part of the rosette, said tube E also projecting beyond or outside of the rosette, and by its fit on the knob-spindle turning with the latter when the knob spindle is made to turn. This tube E may rest at its inner end against a washer, *b*, to give it an end bearing and facilitate its turning in common with the spindle, but such washer does not form a packing to adapt the knob-spindle with its knobs to different thicknesses of doors. Fitting freely or in a longitudinally-sliding manner over this tube E is a loose-knob-shank, F, of an internal construction corresponding with the exterior of the tube E, so as not to turn except in common with the latter. This telescopic or sliding knob-shank F forms internally, at its outer end, the one-half of a clutch, within which a nut or projection, G, arranged on the inner face of the knob C′ and forming the other half of the clutch, fits, when said knob is home to its place on the spindle, as in Fig. 1. The knob C′ may be fastened to the spindle by being made to screw onto a screw-threaded portion, *c*, of the outer end of the spindle, for which purpose the nut or projection G may be extended to form a screw-box within the knob. In some cases, as, for instance, when the knob is of porcelain or mineral, the screw *c* may be attached to the knob and the spindle B have the nut formed in it for the screw to fit into. When it is required to put the knob C′ on the spindle B and to lock it therewith, the telescopic knob-shank F is pushed inward toward the door, as represented in Fig. 2, and, after the knob C′ has been screwed or adjusted to its proper distance on the spindle B, the telescopic knob-shank F is slid outward to fit over and lock with the other half-clutch or nut G on the knob, so that said portions F and G may both turn in common together with the knob-spindle and its knobs. Said telescopic knob-shank F, when thus adjusted into a locked position with the knob C′, may be retained there from being accidently slid inward or out of lock with the knob, by its frictional gripe or hold either on the tube E or on the other half-clutch G, or on both, but preferably by means of a spring-snap, *d*, which may be formed by a longitudinal cut in one or more sides of the tube E, so as to form an elastic tongue, which will spring up into a corre-

sponding recess, *e*, in the inside of the telescopic shank F.

A door-knob fastening, constructed as described, not only is free from any outside protruding locking-screw to mar the exterior of the knob-shank, but, by means of the telescopic or sliding knob-shank F, its inner tube E, through which the spindle B is capable of adjustment, and the screw fit of the knob C′ on the spindle, one and the same knob spindle of any given length, together with the same knob and pertaining parts, may be used for different thicknesses of doors and a perfect adjustment to the greatest nicety of the detachable knob by its screw-connection with the spindle be obtained.

To remove the knob C′, no special tools are necessary, but by simply entering the point of a knife between the outer end of the telescopic knob-shank F and the knob C′, said sliding shank may be forced in or back from the position shown in Fig. 1 to that shown for it in Fig. 2, thereby putting the parts F and G out of lock or clutch connection with each other, which admits of the knob C′ being unscrewed from the spindle.

I claim—

1. The combination of the telescopic knob-shank F, the inner tube or sleeve E carried by the knob-spindle, and the detachable knob C′, fitted to screw onto or into the end of the spindle and provided with a nut or half clutch, G, constructed to lock with the sliding knob-shank, substantially as specified.

2. The spring catch or snap *d*, in combination with the inner tube E, the telescopic knob-shank F, the detachable knob C′ with its attached nut or half clutch G, and the knob-spindle B, essentially as described.

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Witnesses:

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