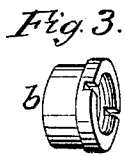
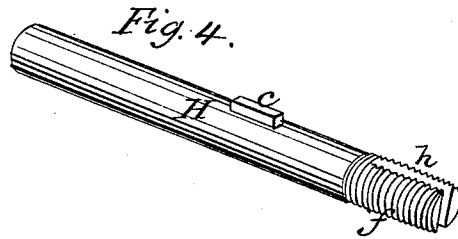
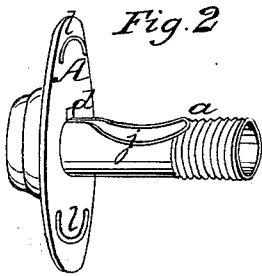
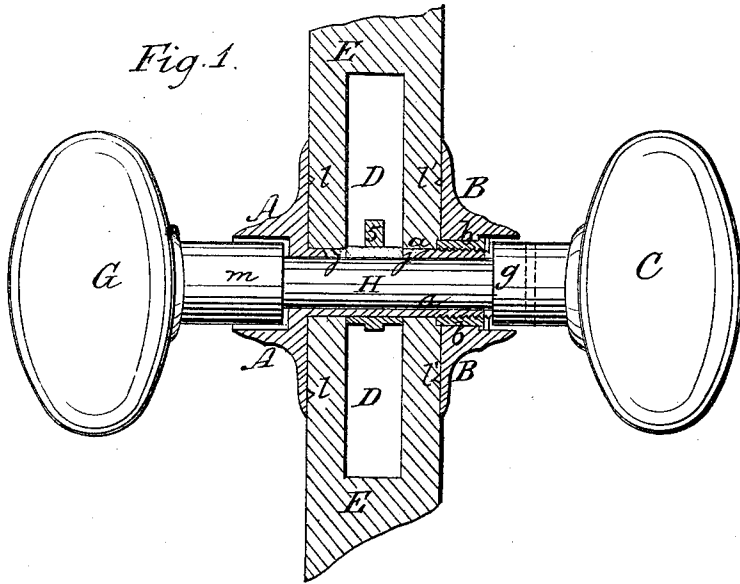


Waterman & Porter.

Door Knob.

N^o 99,209.

Patented May 18, 1869.



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LORENZO P. WATERMAN AND CHARLES H. PORTER, OF BRIDGEPORT, CONNECTICUT,
ASSIGNORS TO THEMSELVES AND JAMES M. HUNT, OF SAME PLACE.

Letters Patent No. 90,209, dated May 18, 1869.

IMPROVEMENT IN ATTACHING ROSES FOR KNOBS TO DOORS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, LORENZO P. WATERMAN and CHARLES H. PORTER, both of the city of Bridgeport, in the county of Fairfield, and State of Connecticut, have invented a new and useful Improvement in the Manner of Attaching the Roses or Escutcheons of Latch-Spindles to Doors, &c.; and we do hereby declare that the following is a full, clear, and exact description of the construction, character, and operation of the same, reference being had to the accompanying drawings, which make part of this specification, in which—

Figure 1 is a section of the parts, cut in the longitudinal direction of the spindle, showing the methods of securing the roses or escutcheons to the door by means of tubular male and female screws.

Figure 2 is a perspective view of one of the roses or escutcheons, with the tubular male screw attached.

Figure 3 is a perspective view of the female screw.

Figure 4 is a perspective view of a cylindrical spindle, with a male screw and longitudinal slot at one end, and a feather, or spline projecting from the central portion.

Figure 5 is a perspective view of a tumbler, or spindle-socket for a cylindrical spindle.

Our improvement consists in fitting the two roses or escutcheons to the door by means of tubular male and female screws. While one of the knobs may be permanently secured to the spindle, by a pin, in the usual way, the other may be secured by being screwed on to the spindle, and with a small screw, tapped into the neck, and passing through a slot in the spindle, to prevent the knob from unscrewing.

We make the roses or escutcheons of malleable cast-iron or any other suitable material, in the common shape, as represented at A, fig. 2, and indicated at A A and B B, fig. 1.

We make the tubular male screw of malleable cast-iron or any other suitable material, substantially in the form shown at *a*, fig. 2, and indicated at *a a*, fig. 1, and we may either cast it in one piece with the rose A, or shrink the rose A on to the tube, so that the whole will appear as represented in fig. 2, and indicated, in section, at A A, fig. 1, so that it may receive the female screw *b*, fig. 3, on its outer end, as indicated, in section, at *b b*, fig. 1.

And we make a slot or an open space in the side of this tube, as represented at *j*, fig. 2, of sufficient size to enable the tumbler (fig. 5) to work freely with any kind of a spindle, as indicated, in section, at *j j*, fig. 1.

We make the cylindrical spindle H, fig. 4, with a feather, or spline projecting on one side, as represented at *c*, fig. 4, to fit the slot *d* in the rose A, fig. 2, and the slot *e* in the tumbler, (fig. 5;) and at the end we cut a male screw, as represented at *f*, fig. 4, on to which we screw the neck *g* of the knob C; and in the

same end we cut a longitudinal slot, shown at *h*, fig. 4, through which we pass the screw, which binds the knob C in its place, and prevents it unscrewing, or we use any other kind of spindle, and the tumbler formed in the lock.

We make the tumbler, or spindle-socket of malleable cast-iron or any other suitable material, substantially in the form shown in fig. 5, with a slot, like *e*, to receive the spline *c* on the spindle, which form is necessary when we use a cylindrical spindle like fig. 4.

Having constructed the several parts, as before described, with the tubular male-screw shank firmly attached to the rose or escutcheon A, as in fig. 2, and having placed the lock and latch, with the proper tumbler in the mortise, as at D D, in the door, as E E, we insert the tubular male screw *a* through the door, tumbler, &c., slip on the other rose, (on the opposite side of the door,) and turn on the female screw *b*, fig. 3, when the tubular male and female screws will appear as represented, in section, at *b b*, fig. 1, with the two roses or escutcheons pressed firmly against the door, as represented, in section, at A A and B B, where they may be steadied by suitable spurs, as *l l* and *l' l'*, fig. 1, slightly penetrating the wood.

We then secure the neck *m* of the knob G on to the plain end of the spindle H, figs. 4 and 1, by a pin or otherwise, and pass the spindle H through the tubular screw *a*, the feather *c* passing through the slot *d*, fig. 2, and into the slot *e*, fig. 5.

We then screw on the knob C until the necks *g* and *m* of the knobs C and G are sufficiently close in the roses A A and B B, when we insert a binding-screw through the neck *g* of the knob C and slot *h*, fig. 4, which will prevent the knob C from being unscrewed, all as represented, in section, in fig. 1, when the whole will be ready for use.

Among the advantages of our improvement, we name, securing the roses or escutcheons for the knob-spindle with absolute certainty and firmness by the use of the internal tubular male and female screws, thereby obviating the necessity of using external screws, which so much deface the roses or escutcheons, and which are so liable to work loose.

What we claim as our invention, and desire to secure by Letters Patent, is—

Securing the two roses by means of the tubular screws, (fig. 2,) passing through the door and the two roses, A and B, and the end secured in the rose B by the nut *b*, fig. 3, substantially as herein described, and set forth in fig. 1.

L. P. WATERMAN.
C. H. PORTER.

Witnesses:

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