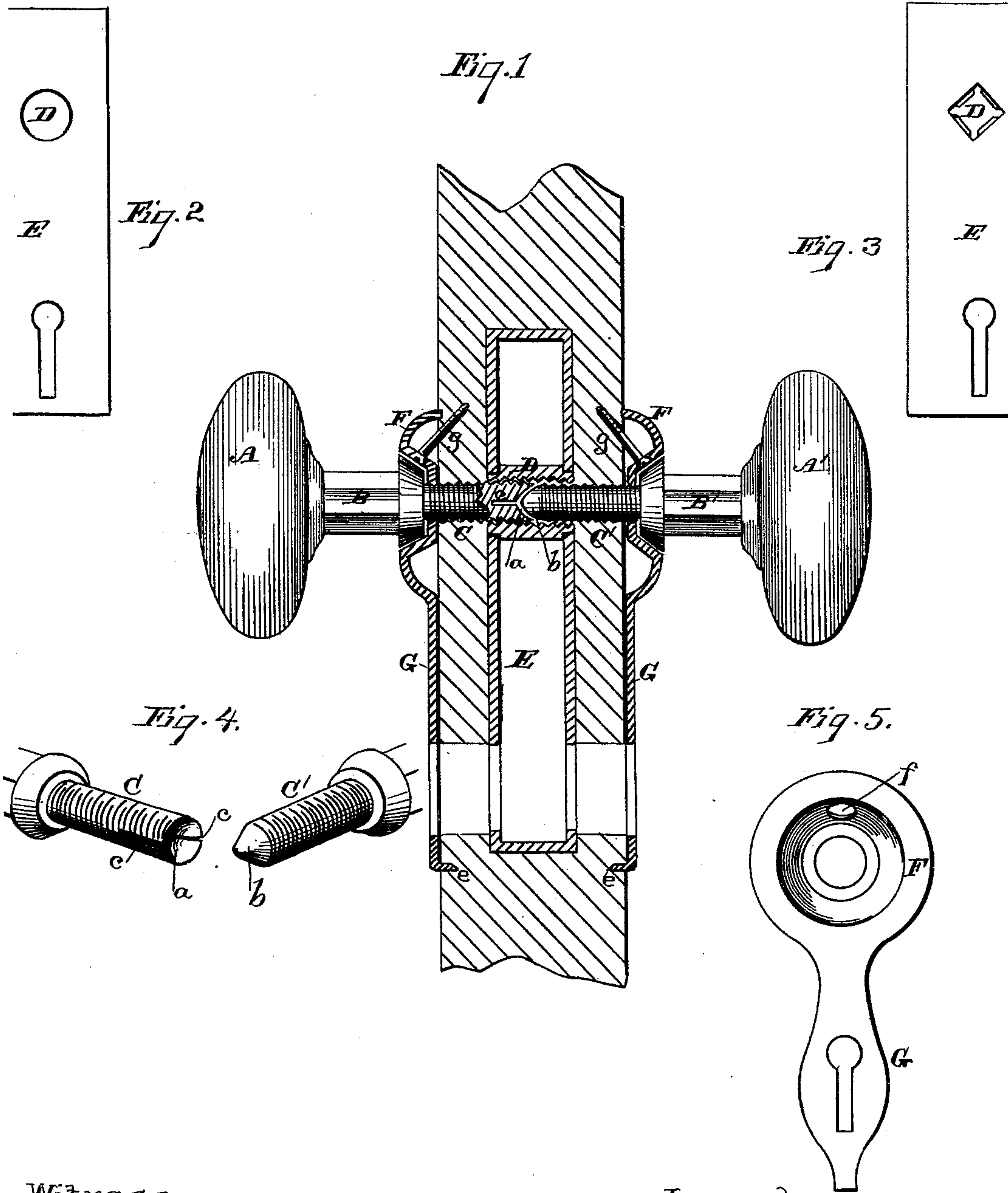


S. HARRIS.
Knob Attachment.

No. 231,223.

Patented Aug. 17, 1880.



Witnesses
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UNITED STATES PATENT OFFICE.

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KNOB ATTACHMENT.

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To all whom it may concern:

Be it known that I, SILAS HARRIS, of the city and county of San Francisco, and State of California, have invented an Improved Door-Knob; and I hereby declare the following to be a full, clear, and exact description thereof.

The object of my invention is to provide a means of securing door-knobs to ordinary locks so that they will not be loosened by any ordinary strain.

It consists in making a separate threaded spindle for each knob, these spindles being screwed into the internally-threaded socket of the lock from opposite sides of the door. The end of one spindle is recessed and split, so that when the pointed end of the other enters this recess the split spindle is spread open and holds the spindles immovably in the socket, and the pressure of the two spindles, one against the other, jams the threads against those of the socket, so that each answers as a jam-nut for the other, locking them in the socket.

It also consists in a peculiar arrangement of the rose and key-hole escutcheon, which are made in one piece, and so formed that a single screw, hidden by the flange of the knob-shank, holds them in place, as is more fully described in the accompanying drawings, in which—

Figure 1 is a section through a door, showing my invention. Figs. 2 and 3 show a lock with square or round socket, in which my invention can be used. Fig. 4 shows the threaded spindles with their hollow and pointed ends. Fig. 5 is the rose and key-hole escutcheon in one piece.

The ordinary method of attaching knobs to door-locks is to have one knob secured on a spindle, this spindle extending through the socket of the lock and protruding on the other side, fitting into the shank of the other knob. A screw goes through the side of this loose knob and secures it to the spindle by screwing into a slot or hole in said spindle. These fastening-screws get loose and the knob falls off or gets shaky on its spindle. Various other devices have been arranged to overcome this difficulty. Knobs with an eccentric shank have been used; but these are expensive to make and are apt to get jammed. A threaded spindle has been used and made to screw into

a threaded shank; but in this a sudden violent turn is apt to loosen the knob by unscrewing it.

I make a separate threaded spindle for the shank of each knob, firmly fitted to it, and by screwing these spindles from opposite sides against each other, so that one is spread or enlarged at the center of the socket, and each one jams the other on the threads of the socket, the spindles and knobs are securely attached to the lock on the door. There are then no screws to get loose, and the knobs cannot become loose in the spindles.

Let A A' represent the knobs, B B' the shanks, and C C' the spindles by means of which the knobs are attached to the doors. These spindles are threaded, so as to screw into the socket D of the lock E from opposite sides, the socket being threaded for the purpose.

The end of one of the spindles, C, has a conical recess, *a*, in its end, and is split, as shown at *c*. The end of the other spindle, C', is pointed and of suitable shape, as shown at *b*, to fit into the recess *a* of the spindle C.

One knob is put on each side of the door in the usual way, the spindles entering from opposite sides of the door. As the ends of the spindles come together the point of one enters the recess in the other, and the recessed end, being split, is spread against the sides of the socket D. This action also tends to jam the threads of the opposite spindles against the threads of the socket, so that one spindle acts as a jam-nut to the other, and vice versa. The knobs are thus prevented from turning unless they turn the socket with them, thus operating the latch of the lock. They cannot come loose on the spindles, since the spindles are cast on with the shanks—that is, the shanks are cast around the threaded spindles. The shanks themselves are secured to the knob in the usual way.

As the pointed spindle enters the split end of the other this split end is spread against the socket, and also pinches the pointed end, so the said spindle cannot readily be turned, and the tighter this pressure is made the more the threads of the spindles are jammed against the threads of the socket.

I have shown an ordinary square socket, threaded to receive a round spindle, so that

this appliance may be put onto locks of ordinary construction. Usually, however, in making the locks the sockets would be round.

The rose F, which fits around the spindle 5 between the door and shank, to cover the unsightly mortise through the door, has formed with it, in one piece, the key-hole escutcheon G, the lower edge of the rose being continued down to form said escutcheon, as shown. The 10 lower inner end of the escutcheon is turned at right angles, so as to form a tip, which answers as a dog, *e*, which is driven into the door below the key-hole. A small hole, *f*, is made in the rose, near its center hole, and a screw, *g*, 15 is put into this hole into the door, the screw-head then coming under the flange of the knob-shank, so as to be hidden by said flange. This screw is put on at an angle, as shown, and it is impossible for it to become loosened 20 or drop out, since it is behind the flange and cannot be removed unless the knob is taken off. The rose and key-hole escutcheon then require only one screw, and that is so placed as to be out of sight, and where it is impos- 25 sible for it to become loose or drop out. The rose and escutcheon, therefore, cannot become loose, and are readily and quickly put in place. The forms of rose and escutcheon made separately require several screws and fre- 30 quently become loose. The screws, moreover, are in sight, and their heads collect dust and dirt.

The shank of each knob is made non-circular in construction, as shown, so that by applying a wrench to either and screwing the 35 spindle back the spindle and knobs may be removed. When once screwed up, however, no ordinary turn will loosen them.

Having thus described my invention, what I claim as new, and desire to secure by Letters 40 Patent, is—

1. The knobs A A', provided with independent threaded spindles C C', adapted to be 45 screwed from opposite sides of the door until the meeting ends jam, in combination with an internally-threaded lock-hub, D, whereby the threads of said spindle jam against those of the internally-threaded lock-socket and the spindles and knobs are secured to the locks, 50 substantially as herein described.

2. In combination with the knobs A A', the independent threaded spindles C C', secured to 55 or forming part of the shanks B B', one of said spindles having a recess, *a*, and split *c*, to receive the point *b* of the other, whereby the spindle is spread and locked in the square or round socket D, substantially as and for the purpose herein described.

In witness whereof I have hereunto set my hand.

SILAS HARRIS.

Witnesses:

CHAS. G. YALE,
S. H. NOURSE.