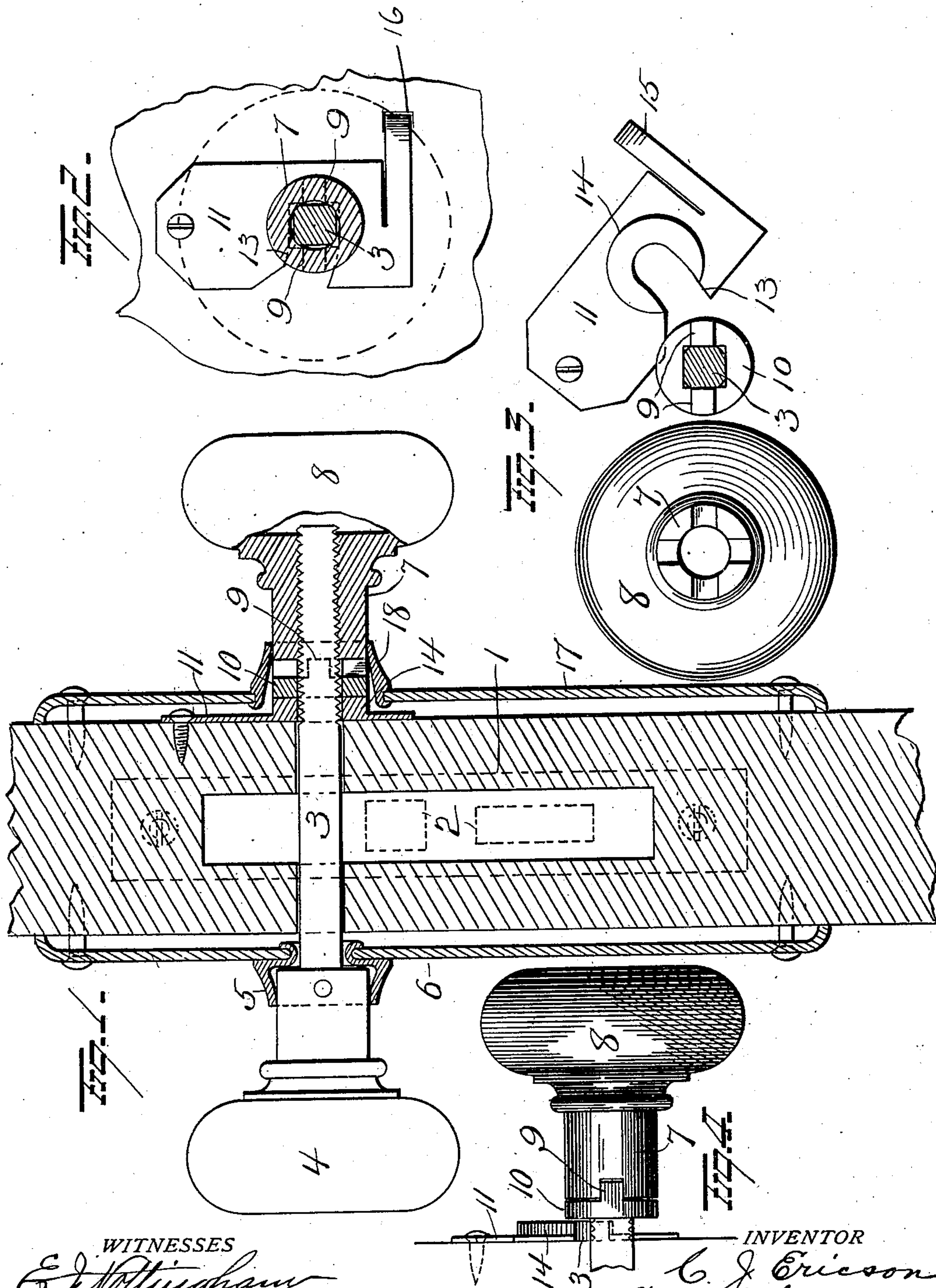


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C. J. ERICSON.
KNOB ATTACHING MECHANISM.
APPLICATION FILED SEPT. 30, 1902.

NO MODEL.



WITNESSES
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CHARLES JOSEPH ERICSON, OF SALT LAKE CITY, UTAH.

KNOB-ATTACHING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 724,454, dated April 7, 1903.

Application filed September 30, 1902. Serial No. 125,394. (No model.)

To all whom it may concern:

Be it known that I, CHARLES JOSEPH ERICSON, a resident of Salt Lake City, in the county of Salt Lake and State of Utah, have invented certain new and useful Improvements in Knob-Attaching Mechanism; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved knob-attaching mechanism, the object of the invention being to provide an improved pivoted or hinged clutch-retainer which will operate to hold a clutch in engagement with the knob and lock it to the spindle, said retainer being held in its clutch-retaining position, but which can be readily moved out of the way to free the clutch when it is desired to remove the knob, and, further, to provide improvements of this character which will be extremely simple in construction, easy to operate, and which will cushion the mechanism to prevent rattling of the knobs.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in cross-section, illustrating my improvements applied to a door. Fig. 2 is a front view with the escutcheon removed, and Figs. 3 and 4 are views of details of construction.

1 represents the door, and 2 the latch therein, through which the angular spindle 3 passes, and has one knob 4 fixed thereon and having its shank inclosed in a thimble or collar 5 on an ordinary escutcheon 6. The opposite end of the spindle projects through the door, is screw-threaded to receive the internally-threaded shank 7 of knob 8, and this shank 7 is notched, as shown, to receive lugs 9 on a clutch 10, having an angular bore to key the clutch to the spindle and prevent turning of the knob independent of the spindle when locked thereto by the clutch.

11 represents my improved clutch-retainer, which comprises a plate having a hole near

its upper end for the reception of a screw pivotally supporting the plate, which latter is provided with a slot 13, extending from one edge thereof to a point near its center, curved concentric with its pivotal support and of a width sufficient to receive the spindle, and the plate is made with a raised flange or collar 14 around the inner end of the slot to hold the clutch in engagement with the knob-shank, as will more fully hereinafter appear. The lower end of the plate is provided with an inwardly-pressing spring-tongue 15, preferably integral with the plate and adapted when the plate is in its clutch-retaining position to cushion the mechanism, as will hereinafter appear, and a notch 16 may be provided in which the tongue springs to hold the retainer in its operative position until the tongue is removed from the notch.

An escutcheon 17 covers the retainer 11 when secured to the door by screws passed through its ends and into the door and is provided with a thimble or collar 18, which surrounds the knob-shank, clutch, and collar 14, holding the latter against movement and securing the retainer in its operative position to lock the clutch and knob-shank together.

When it is desired to remove the knob, escutcheon 17 is first detached by removing its screws and thimble 18 moved out upon the knob-shank 7 far enough to permit access to retainer 11. If a notch 16 is provided for spring-tongue 15, the latter must be raised out of the notch and the retainer swung on its pivot from behind the clutch 10, which latter can then be moved back to disengage its lugs 9 from the notches or recesses in knob-shank 7. The knob can then be unscrewed from the spindle.

To replace the knob, the retainer being in its inoperative position, knob-shank 7 is screwed down on spindle 3 until it engages lugs 9 of the clutch, forcing the latter against the door. The shank is then turned to aline its notches with the lugs 9, and retainer 11 is swung into position between the clutch and door, thus moving lugs 9 into the notches in knob-shank, when spring-tongue 15 will spring into its notch 16, if such be provided, to lock the retainer against accidental move-

ment. The escutcheon 17 is now secured in place by its screws, the thimble 18, surrounding collar 14 on retainer 11, holding the latter against accidental movement, and the connection will be made.

By making the lugs 9 the same length as the width of retainer 11 with its raised flange or collar 14 the knob-shank can be screwed down against the lugs, and when the retainer 11 is moved between the clutch and door the connection will be a comparatively close fit and spring 15 will serve to compensate for any space which may be left, preventing movement of the parts, and thereby preventing rattling of the knobs and spindle. It will thus be seen that no skill is required to make a perfect connection, which is an improvement over anything of this character heretofore known.

While I have shown and described the door provided with a notch 16 to receive spring-tongue 15 and lock the retainer against accidental movement, it will be seen that this notch is not necessary where the thimble 18 surrounds the collar 14, as the thimble will prevent displacement of the retainer. However, where the escutcheon employed is spaced some distance from the door-surface and its thimble will not surround collar 14 it is desirable to provide the notch, although the frictional engagement of the spring-tongue against the door may be all sufficient to hold the retainer in position.

Various slight changes might be made in the general form and arrangement of the several parts described without departing from my invention, and hence I do not limit myself to the precise construction set forth, but consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. In a knob-attaching mechanism, the combination with a spindle, a knob thereon, and a clutch keyed to the spindle, of a pivoted or hinged retainer adapted to be moved between the clutch and door to hold the clutch in locking engagement with the knob.

2. In a knob-attaching mechanism, the combination with a spindle, a knob thereon, and a clutch keyed to the spindle, of a pivoted or hinged retainer adapted to be moved behind the clutch and hold it in locking engagement with the knob, and positive means for holding the retainer in such position.

3. In a knob-attaching mechanism, the combination with a screw-threaded spindle, a knob screwed thereon, and a clutch keyed to the spindle, of a pivoted or hinged retainer-plate having a slot therein curved concentric with its pivot and adapted to receive the spindle, a collar or flange around the slotted portion of the retainer to hold the clutch in locking engagement with the knob, and an escutcheon, having a thimble or collar to surround the clutch and collar on the retainer, to hold the latter against movement.

4. In a knob-attaching mechanism, the combination with a spindle, a knob thereon, and a clutch keyed to the spindle, of a retainer to move behind the clutch and hold it in engagement with the knob and lock it to the spindle, and a spring, cushioning the retainer and preventing rattling of the knobs and spindle.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES JOSEPH ERICSON.

Witnesses:

J. W. SHIPLER,

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