

976,328.

E. WINNE.
DOOR KNOB.
APPLICATION FILED JUNE 13, 1910.

Patented Nov. 22, 1910.

Fig. 1.

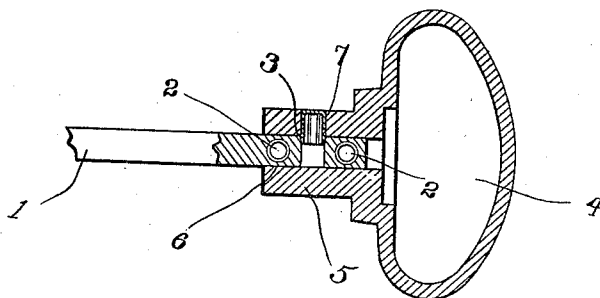


Fig. 2.

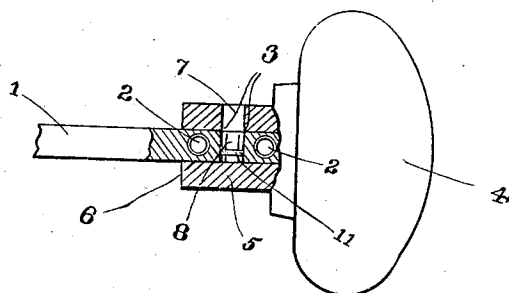


Fig. 3.

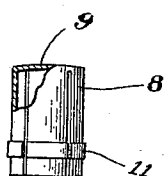
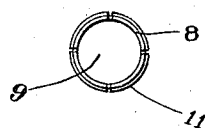


Fig. 4.



Attest:

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UNITED STATES PATENT OFFICE.

ERNEST WINNE, OF NEW YORK, N. Y.

DOOR-KNOB.

976,328.

Specification of Letters Patent.

Patented Nov. 22, 1910.

Application filed June 13, 1910. Serial No. 566,487.

To all whom it may concern:

Be it known that I, ERNEST WINNE, a citizen of the United States, and a resident of New York city, borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Door-Knobs, of which the following is a specification.

This invention relates to improvements in door knobs, and the object of my invention is to provide a new and improved locking device for holding and securing the knob on the spindle, which device is simple in construction, strong and durable, can easily be applied or removed and permits of securing the knob on the spindle or removing the knob in the least possible time, yet most certainly insures against accidental unlocking.

In the accompanying drawings like letters or figures of reference indicate like parts in all the figures as follows:—

Figure 1 is a vertical longitudinal sectional view through the knob part of the spindle and locking device. Fig. 2 is a similar view showing the locking device forced into the spindle to permit withdrawing the knob. Fig. 3 is an enlarged detail side view of the locking device. Fig. 4 is a view of the same from the under side.

The spindle 1 is provided at its end with holes 2 for receiving the locking device, which holes 2 are located the same as the usual screw holes. These holes 2 are each enlarged at the end, as with a countersink or counterbore (preferably at both ends for convenience), forming the shoulder 3. The knob 4 is provided with the usual neck 5 having the squared hole 6 for receiving the end of the spindle 1, and this neck is also provided with a hole 7 extending from the surface to the squared hole 6. The locking device consists of a tubular spring metal pin open at one end and closed at the other end, as at 9, and provided with a series of slits extending from the open end to or near the closed end. The tubular spring pin 8 is provided, a short distance above the open end, with an exterior rib 11, or other raised point, preferably struck up. This tubular pin is preferably struck up from spring sheet metal. The knob is placed upon the spindle in such a manner that the hole 7 in the neck 5 registers with one of the holes 2 in the spindle, as shown in the middle one, and then the spring locking device is inserted into the hole 7 and pushed down until

its outer closed end is flush with the outer surface of the neck as shown in Fig. 1. The inner open end of this locking pin passes for a short distance into the hole 2 and thus holds the knob on the spindle.

In case it is desired to remove the knob, it may be done by means of a nail, an awl or any like implement small enough to enter the hole, by pressing it against the outer closed end of the locking pin 8, thus forcing the pin inward, when, as the projections 11 of the pin encounter the shoulder 3 of the hole 2 in the spindle, the lower open end of the locking pin is contracted and the pin is forced into the hole 2 until its closed outer end is flush with the surface of the spindle as shown in Fig. 2. As the length of the pin 8 does not exceed the thickness of the spindle, the pin is now contained entirely within the hole in the spindle and the knob can be pulled off the spindle, thus leaving the pin resting in the spindle. To remove the locking pin from the spindle it is merely pushed through the hole by means of a nail etc. until it is entirely out of the spindle.

As the locking pin is made of spring metal and slitted, it is always held securely in place and cannot become loose or drop out as is frequently the case with the ordinary screw, neither can it be forced out by use of the knob or by any other means than an implement small enough at the end to enter the hole occupied by the pin.

No implement other than a nail or like device is required for unlocking the knob from the spindle, and they are on the other hand locked together simply by pressing the pin into place with the finger.

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

1. The combination with a door knob shank having a hole of uniform diameter extending from its outer surface to its bore and a spindle insertible into the bore of the shank and having a hole extending transversely through it and registerable with the hole of the shank, of a spring locking pin having a length greater than the depth of the hole in the shank and no greater than the depth of the hole in the spindle and provided with laterally expanding engaging means, substantially as set forth.

2. The combination with a door knob shank having a hole extending from its outer surface to its bore and a spindle insertible

into the bore of the shank and having a hole
extending transversely through it, which
hole has an enlargement at one or both ends,
of a tubular single piece spring metal pin
5 slitted lengthwise so as to form a laterally
springing tongue having an exterior pro-
jection near the free end, the pin having a
length greater than the depth of the hole in
the shank and not greater than the depth of
10 the hole in the spindle in order that the un-
locking of the shank from the spindle may
be accomplished by pushing the pin entirely
into the spindle, and from which the pin
may be removed by being pushed entirely
15 through the spindle, substantially as set
forth.

3. The combination with a door knob
shank having a hole extending from its outer
surface to its bore, of a spindle insertible
20 into the bore of the shank and having a hole
extending transversely through it, which
hole has an enlargement at one or both ends,

of a tubular single piece spring metal pin
closed at one end and open at the other, hav-
ing slits and intervening tongues extending 25
back from the open end, one or more of the
tongues having an outwardly extending pro-
jection adjacent to the free end, all of these
elements being so related that the pin may
be retained in its normal position by reason 30
of its exterior projections being held within
a countersunk space in the end of the hole
of the spindle, between the inner edge of the
transverse hole of the shank and the shoul-
der formed by the countersink in the hole 35
of the spindle, substantially as set forth.

Signed at New York city in the county of
New York and State of New York this 2d
day of June A. D. 1910.

ERNEST WINNE.

Witnesses:

OSCAR F. GUNZ,
ROSE G. BREEN.