

(Model.)

H. J. P. WHIPPLE.
KNOB ATTACHMENT.

No. 473,988.

Patented May 3, 1892.

FIG. 1.

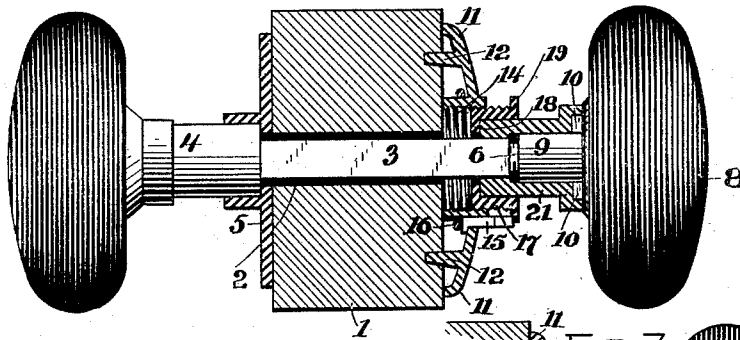


FIG. 2.

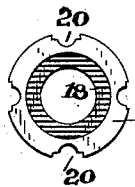


FIG. 3.

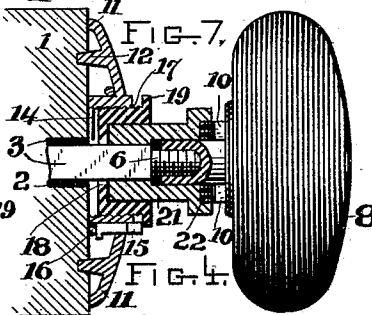
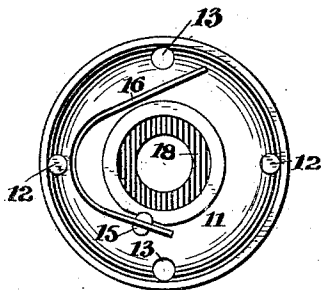


FIG. 5.

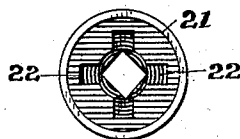
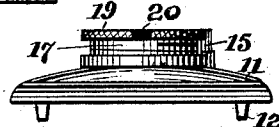


FIG. 8.

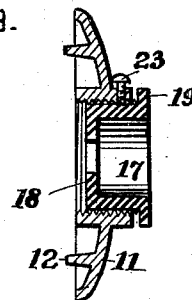


FIG. 6.

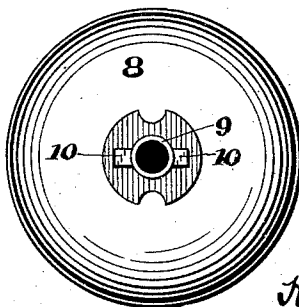
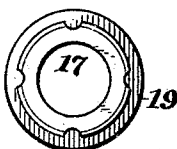


FIG. 9.



WITNESSES:

A. J. Tanner
C. M. Newman,

INVENTOR

H. J. P. Whipple
BY
O. A. Hubbard,
ATTORNEY.

UNITED STATES PATENT OFFICE.

HENRY J. P. WHIPPLE, OF NEW HAVEN, CONNECTICUT.

KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 473,988, dated May 3, 1892.

Application filed June 5, 1891. Serial No. 395,199. (Model.)

To all whom it may concern:

Be it known that I, HENRY J. P. WHIPPLE, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Knob Attachments; 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.

This invention relates to certain new and useful improvements in knob attachments, and has for its object to provide a device of this description having few and simple parts, which shall be capable of close adjustment to doors of different thickness and of ready attachment and detachment, but which shall not be subject to accidental displacement when in position; and with these ends in view my invention consists in the construction and combination of elements hereinafter fully explained, and then recited in the claims.

In order that those skilled in the art to which my invention appertains may fully understand its construction and method of operation, I will describe the same in detail, reference being had to the accompanying drawings, and the numerals marked thereon, which form a part of this specification.

Figure 1 is a longitudinal section showing a pair of knobs attached upon a door by means of my invention. Fig. 2 is an end elevation of the screw-threaded collar; Fig. 3, a plan view of the rose, looking from its inner end; Fig. 4, a side elevation showing the rose and the screw-threaded collar in assembled position; Fig. 5, a plan view of the clutch-sleeve looking from its outer end; Fig. 6, a plan view of the inner end of the removable knob; Fig. 7, a section showing the parts in process of assembly; Fig. 8, a detail of the rose, showing a modification; and Fig. 9, a detail plan view of the slightly-modified form of sleeve used in Fig. 8.

The door, which I designate by the numeral 1, is bored through from side to side, as shown at 2, and through this is introduced a squared spindle 3, bearing a knob and shank 4. The inner end of this shank has a bearing in a rose 5 of any ordinary construction, secured upon the door. The outer end of the

spindle 3 is screw-threaded, as at 6, (see Fig. 7,) and upon the knob 8 is secured a hub 9, interiorly screw-threaded and adapted to admit the threaded end of the spindle. Exteriously, as seen at Fig. 1, this hub is smooth. Projecting laterally from the base of the hub 9 are two small lugs 10, whose shape is clearly shown at Figs. 1 and 6.

11 is a knob-rose having lugs 12, adapted to hold it upon the door as against rotation, and may have further provision for attachment—as, for instance, the screw-holes 13. This rose is interiorly screw-threaded, as seen at 14, and in a small tubular bearing formed just outside the periphery of the central hole is a pin 15, normally projected outward by means of a spring 16, secured in the hollow rear side of the rose.

17 is a collar having an internal abutment-shoulder 18 and an annular flange 19, the latter being provided with a series of notches 20, which form seats with which the spring-actuated pin 15 may engage.

21 is a sleeve. (Shown in section and plan at Figs. 1 and 5.) Toward its diminished end it is square as to its interior, so as to closely fit the squared portion of the spindle 3. At its outer end it has recesses 22, four in number, adapted, as will hereinafter appear, to co-operate with the lugs 10 upon the knob. This construction may also be used in connection with other methods of attaching knobs, as with the side screw in the ordinary knob for the purpose of obtaining close adjustment.

In the operation of my invention the door to be fitted is first suitably bored from side to side, as shown in the drawings. The rose 5 is then placed against the door and held in position by the spurs underneath, or may be secured by screws or other suitable means. The spindle 3, with the knob 4 attached to it, is then inserted through the hole, the shoulder upon the knob-shank seating in the rose. The other rose 11 is then affixed in proper position over the hole upon the other side of the door and the screw-threaded collar 17 screwed into it as far as it will go, the pin 15 being meanwhile pressed inward by the finger or some small instrument, so that it will not engage with either of the notches 20, and thus hold the collar as against rotation. The sleeve 21 is then seated in the collar 17 and the screw-

threaded hub of the knob 8 screwed inwardly until the inner faces of the lugs 10 are substantially flush with the surface of the sleeve 21, in which the recesses 22 are cut, and in line with two of such recesses. When the parts are in this position, the pin 15 is held out of engagement with the flange of the screw-threaded collar, and the latter is backed off in its screw-threaded seat until the lugs 10 engage the recesses 22 to their full depth, and the collar can be turned outwardly no farther. The pin is then permitted to engage with one of the notches 20, and thereby any accidental rotation of the collar and release or loosening the parts is prevented.

The method of assembling just described will be fully understood by a comparison of Fig. 1, wherein the parts are shown with the assembling operation completed, and Fig. 7, wherein they are shown with the screw-threaded collar not yet backed outward to take up the lost motion and engage the lugs with the recess.

In Figs. 8 and 9 I have shown, instead of the spring-actuated pin, a locking device, which consists of a screw 23, threaded through the rose 11 and adapted to abut against and bind the sleeve. I show this simply as one alternative means of fastening.

I do not deem it essential that the collar 17 shall be provided with such notches as are shown, since holes through the flange may be substituted, and, furthermore, without departing from the spirit of my invention any other locking device for the screw-threaded collar, such as shown at Fig. 8, which will hold said collar as against displacement, may be substituted for the spring-actuated pin.

The outwardly-movable screw-threaded collar seated in the rose and having means for firmly securing it as against rotation may be used for taking up lost motion in knob attachments differing in construction from that shown at Figs. 1 and 2. This forms a secondary feature of my invention and is recited in claim 4.

I claim—

1. The combination, with the externally-threaded knob-spindle, of the internally-screw-

threaded rose, the externally-screw-threaded collar, the tubular sleeve seated in said collar and provided with locking-recesses, the knob having a hub to engage the spindle and one or more locking-lugs, and means for engaging and holding the screw-threaded collar as against rotation.

2. The combination, with the knob-spindle having a knob attached to one end and screw-threaded as to the other end, of an internally-screw-threaded rose, an externally-screw-threaded collar provided with an abutment-shoulder and adapted to enter said rose, the tubular sleeve seated in the collar and fitting the squared portion of the knob-spindle and provided with locking-recesses in its outer face, the loose knob having a screw-threaded hub and locking-lugs to engage the recesses in the sleeve, and a spring-actuated locking device mounted in the rose and adapted to engage and hold the screw-threaded collar as against rotation, substantially as and for the purpose specified.

3. In a knob attachment, the combination, with the spindle, of a sleeve sliding thereon and provided with locking-recesses, the knob provided with projecting lugs adapted to fit the recesses, and a screw-threaded collar interposed between and engaging the sleeve and rose and adapted to operate the sleeve outward into engagement with the knob, substantially as described.

4. In a knob attachment, the combination, with the knob and its shank, of the internally-screw-threaded knob-rose, the externally-screw-threaded collar 17, seated in and movable relative to said rose and engaging the inner end of the knob-shank, and means carried by the rose and engaging the collar, whereby the latter may be firmly held as against movement when in adjusted position, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

HENRY J. P. WHIPPLE.

Witnesses:

SHERMAN H. HUBBARD,
M. C. HINCHCLIFFE.