(No Model.)

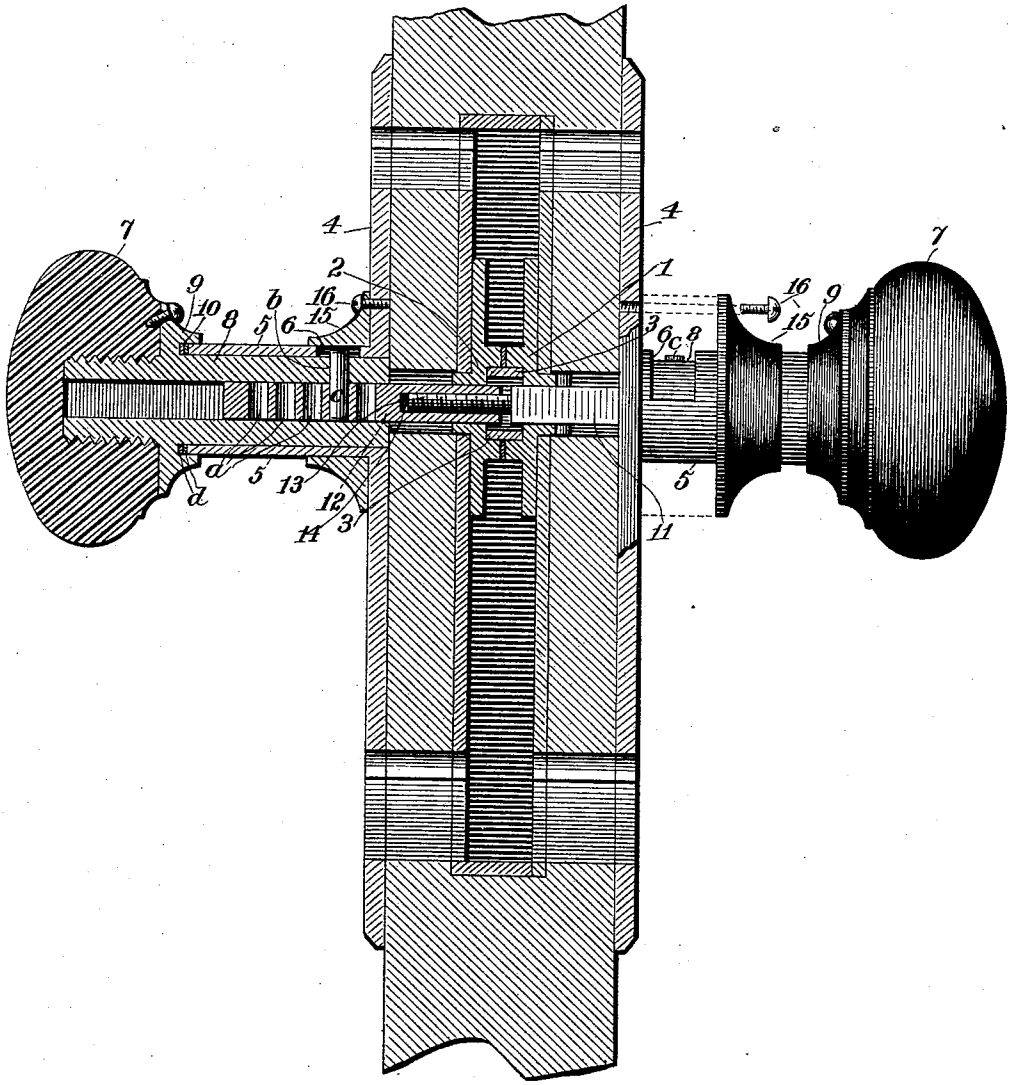
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W. R. BRIGGS.

KNOB ATTACHMENT.

No. 425,743. Patented Apr. 15, 1890.

Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

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KNOB ATTACHMENT

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Fig. 2.

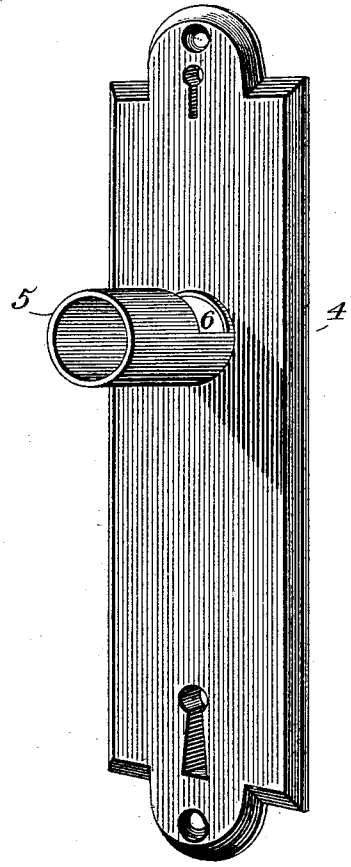
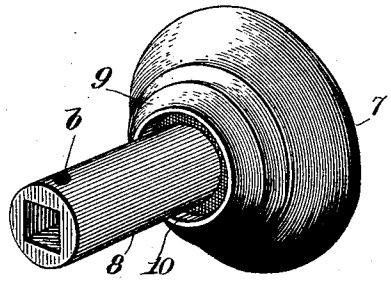


Fig. 3.



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UNITED STATES PATENT OFFICE.

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KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 425,743, dated April 15, 1890.

Application filed February 4, 1890. Serial No. 339,133. (No model.)

To all whom it may concern:

Be it known that I, WARREN R. BRIGGS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield 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.

My invention relates to knob attachments, and especially that class of such attachments in which the action of the knobs in operating the latch is independent.

The object of my invention is primarily to prevent any strain or pull upon the lock-casing or the outer escutcheon-plate, and secondarily to afford a very simple and ready attachment of the knobs.

Prior to my invention various ways have been contrived for attaching knobs in such manner that the action of the latter in operating the latch shall be independent; but in all of these contrivances any pull or strain on the knob is sustained by the lock-casing or by some special plate within said casing, or by the latch-hubs, or by the outside escutcheon-plate, and in all of these instances the continued straining and pulling on the knob has invariably caused the eventual springing of that part of the lock or escutcheon-plate which sustains said straining, thereby causing the knob to sag and rattle. Again, where the knob-shank is provided with a hook which is inserted through the side of the door within the lock-casing and engaged with the latter or with any internal plate, as is exemplified in what is well known as the "Niles lock," a slight variation in the thickness of the doors will necessitate the use of knobs having shanks of different lengths. For instance, suppose a knob-shank is of a length sufficient to extend through the door, so that the hook end may engage with the lock-casing without any appreciable play between said hook and casing, such knob-shank cannot be used on a thinner door, because there will be so much play between the hook and the casing as to cause the knob to sag and rattle; while, on the other hand, if the door is thicker the shank will not be long enough to permit the hook to engage with the casing.

My improvement contemplates the attachment of all knobs to doors of any thickness, relieve the lock-casing and escutcheon-plate of any strain whatsoever, and will be best understood from the detailed description which I will hereinafter give, supplemented by the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a sectional elevation showing a pair of knobs secured to a door in accordance with my improvement; Fig. 2, a detail perspective of the escutcheon-plate, and Fig. 3 a detail perspective of the knob and knob-shank.

Similar letters and figures denote like parts in the several figures of the drawings.

In connection with this invention it is not deemed necessary to show or describe the latch-spindle, since it is of the usual construction and is operated by the latch-hubs in the manner common to most every door-latch.

The latch-hubs are denoted by 1 2, are independent of each other, and are preferably separated by a metal ring-washer 3, so as to prevent unnecessary friction.

The escutcheon-plate 4 has rigid therewith an outwardly-extending sleeve 5, which is slotted at 6 for the reason presently set forth.

The knob 7 is secured to the knob-shank 8 in any suitable manner, and in the present instance I have shown the outer end of the shank threaded and the knob screwed thereon. Within the head 9 of the shank is an annular recess 10, which surrounds the shank, as clearly shown at Fig. 1. The diameter is such that it will snugly fit within the sleeve 5 and at the same time be capable of turning freely therein, while the length of said shank from its extremity to the bottom of the recess 10 is substantially equal to the length of the sleeve from its outer end to the inner face of the escutcheon-plate.

The latch-spindles 11 12 are provided, one with a screw 13 and the other with a threaded socket 14, whereby said spindles are joined together, as clearly shown at Fig. 1. The spindle 12 extends through the hub 2, but has no connection whatever with the hub 1, while

the spindle 11 extends only through the hub 1, so that it will be readily understood that the action of said spindles will independently operate the latch. Each spindle is provided with perforations *a* near its outer end, and the knob-shank 8 is perforated at *b* immediately below the slot 6 in the sleeve.

In assembling my improvement the joined spindles are thrust through the lock into the position, as shown, the knob-shanks inserted within the sleeves until the perforations *b* register with a suitable perforation *a*, and a pin *c* dropped within said registered perforations, whereby said spindles and shanks are locked together. A rose 15, which slides freely over said sleeve, is now moved up against the escutcheon-plate and secured thereto, as by a screw 16, thereby completely covering the slot 6 and presenting a neat and finished appearance.

In locking the spindles and knob-shanks together, if the perforations *a b* do not register without a slight play between the outer end of the sleeve and the bottom of the recess 10, washers *d* may be used to take up this play. It will be observed that all pull and strain come directly on the spindles and that the knobs are detached from the spindles by simply sliding back the rose 15 and withdrawing the pin *c;* also, the manner of attaching the spindles is such that not only is a swivel-connection afforded, but they may be lengthened or shortened to effect the registration of the perforations *a b* without any inward or outward adjustment of the knob-shanks.

When my improvement is used in instances where independently-operating knobs are not desired, the usual single straight spindle may be used with a solid hub.

The great difficulty in using independent knobs in connection with a swiveled spindle has been to attach the knobs in such manner that there shall be no play of the knobs or spindle and to secure the knob as against such play where the thickness of the doors varies.

My improvement affords an adjustment of the knob-shank by means of washers and an adjustment of the spindles by reason of their screw-connection, both of which adjustments are jointly and severally sufficient to insure the registration of the perforations *a b* without a particle of play. Of course my improved way of attaching the knobs may be used in connection with a swiveled spindle or with a spindle which is formed with a hook like the Niles knob-shank. In fact, my knob attachment can be used in connection with any sort of a spindle for operating the latch.

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

The combination of the escutcheon-plates having projecting outwardly therefrom the slotted sleeves, the latch-hub-operating spindles extending within said sleeves and perforated, as shown, the knob-shanks fitting snugly within said sleeves and around said spindles and provided with perforations adapted to register with the perforations in said spindles, the pins inserted within the registered perforations, whereby the said shanks and spindles are locked together, and the roses on said sleeves, adapted to be slid over the recesses in the sleeves and secured to the escutcheon-plate, substantially as set forth.

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

WARREN R. BRIGGS.

Witnesses:
F. W. SMITH, Jr.,
J. P. FINCH.