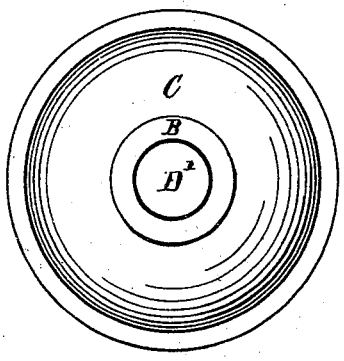
(Model.) 2 Sheets—Sheet 1.

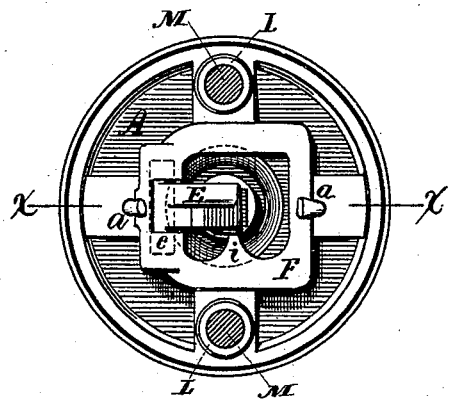
A. B. PROUTY.

LATCH.

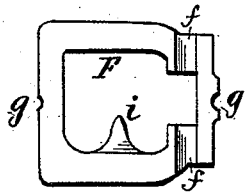
No. 266,388. Patented Oct. 24, 1882.



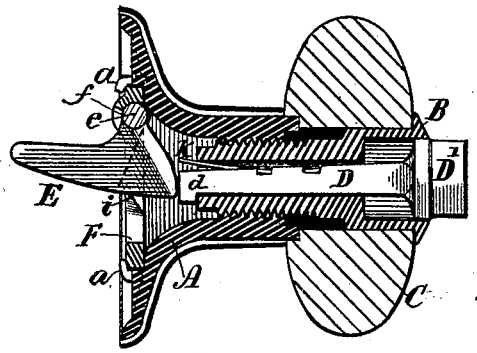
—Fig. 1—



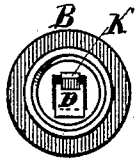
—Fig. 2—



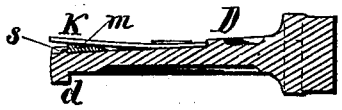
—Fig. 7—



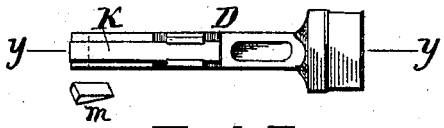
—Fig. 3—



—Fig. 4—



—Fig. 6—



—Fig. 5—

WITNESSES—

Geo. Ar. Rice 2d
D. R. Barton

INVENTOR

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By Chas. H. Dulcigh
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(Model.) 2 Sheets—Sheet 2.

A. B. PROUTY.

LATCH.

No. 266,388. Patented Oct. 24, 1882.

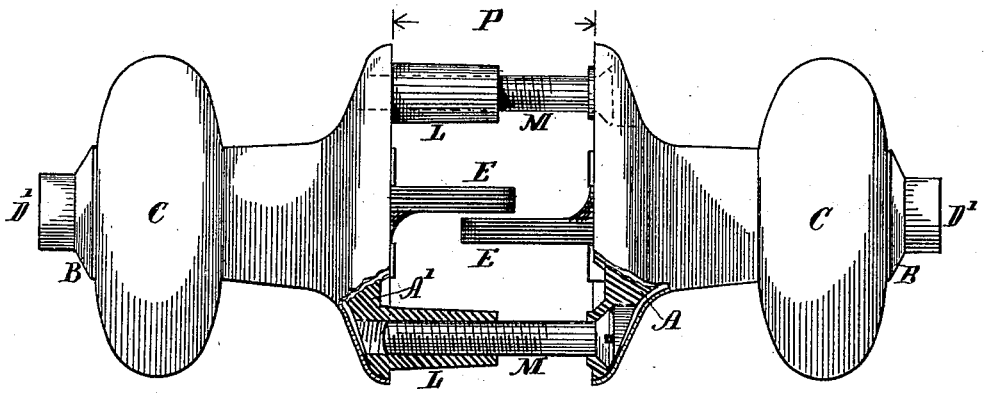

FIG. 8

WITNESSES—

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L. R. Barton

INVENTOR—

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By Chas. H. Burleigh

Atty.

UNITED STATES PATENT OFFICE.

AUGUSTUS B. PROUTY, OF WORCESTER, MASSACHUSETTS.

LATCH.

SPECIFICATION forming part of Letters Patent No. 266,388, dated October 24, 1882.

Application filed December 17, 1881. (Model.)

To all whom it may concern:

Be it known that I, AUGUSTUS B. PROUTY, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Latch-Knob Mechanism; and I declare the following to be a description of my said invention sufficiently full, clear, and exact to enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My present invention relates to that class of latches wherein the latching mechanism is operated by pressure upon a reciprocating push bar or stud arranged through the knob or handle; and it consists in certain improvements in the construction and adaptation of the devices, as hereinafter described, with a view to facilitating the ready manufacture of the knob mechanism and the convenient application thereof to use, the particular features claimed being hereinafter specifically designated.

In the drawings, Figure 1 is a view of the front of the knob. Fig. 2 is a view of the inner side of the rose-plate and parts connected therewith. Fig. 3 is a sectional view in the direction of line *x x*, Fig. 2. Fig. 4 shows the inner end of the push-bar and hollow stem. Fig. 5 is a view of the push-bar separate from the knob devices. Fig. 6 is a longitudinal section of the push-bar at line *y y*, Fig. 5. Fig. 7 is a face view of the guard-plate for retaining the angle-lever on the rose; and Fig. 8 is a part side and part sectional view, showing the telescoping bosses and screw-bolts for the attachment of the knobs to doors of different thicknesses.

In reference to the several parts, A denotes the rose or base plate for securing the hand-knob to the door. B indicates the hollow stem or bolt for connecting the knob or handle C to the rose-casting and forming the guide for the reciprocating push-bar D, which works in connection with the bell-crank lever or angle-piece E for actuating the latch mechanism. The general arrangement and operation of the mechanism, being substantially similar to that described in my Letters Patent No. 224,040, will be understood without more particular description herein, except the present improvements.

The bell-crank or angle lever E, I form with trunnions *e* and secure it in connection with the rose-casting by means of an open plate or guard-piece, F, which is provided with bearings or depressions *f* for supporting the trunnions *e*, and is secured to the inner part of the rose-plate by means of wire pins or lugs *a*, fixed in or cast upon the rose A, and bent or riveted down upon the plate F at either side in the manner illustrated, (see Figs. 2 and 3,) suitable depressions or openings, *g*, being formed in the plate for the reception of the pins *a* and to indicate the proper position when placing the parts together. The plate F is provided with a guard finger or projection, *i*, which engages with a shoulder or lug formed on the angle-lever, and serves as a stop to support said lever at the proper and convenient position for inserting its end into the latch-opening when attaching the rose-casting to the door, (the push-bar being at such time removed,) and thus avoiding inconvenience by the swinging forward of said angle-lever. This method of constructing, attaching, and securing the angle-lever and retaining-plate is simple, convenient, and inexpensive, and greatly facilitates the manufacture of the knob mechanism. The peculiar construction and arrangement of the parts are features of my invention.

The push-bar D, I make with an offset or hook, *d*, on one side, at its inner end, while on its opposite side I attach a small spring, K. When the push-bar is inserted within the hollow bolt or stem B the offset *d* locks over the corner at the inner end and retains the parts securely in connection, as illustrated in Fig. 3. The push-bar D can be readily disconnected and removed from the stem B by properly applying a side strain with the thumb and fingers to the side of the head D′, so as to depress the spring K and unlock or release the offset from its hold on the inner end of the stem. When the bar D is removed the bolt or stem B can be screwed out or in for releasing or attaching the knob C by means of a suitable wrench or instrument inserted within the rectangular opening through the center of said bolt. The construction and method of attaching the push-bar are features

of my invention. By this method of attachment the knobs can be quickly and conveniently secured to or detached from the rose-castings when mounting the latch mechanism without danger of marring or injuring the external finish or polished surfaces, and when on the door the knobs show clean and perfect, as no screws, nuts, or other attaching devices are visible.

When it is desired that the bar D should be positively secured within the stem, (as for an outside knob, or for purposes wherein it is not essential to have the bar removable,) I insert a small wedge, *m*, beneath the spring K′ and just past the small flange or lug *s*, as illustrated in Fig. 6. This wedge prevents depression of the spring to a degree sufficient to release the catch *d*, and the flange *s* prevents the wedge from working out of place. When thus arranged the bar can be removed only by first removing the wedge at the inner end and before the knob is attached to the door. This method of securing the push-bar so that it cannot be withdrawn from the outer knob is a feature of my invention.

To adapt the knobs for ready attachment to doors of different thicknesses without requiring screws of different length in each case, the rose-plate casting A′ of the outer knob may be provided with long projecting bosses or tubes L, screw-threaded throughout their length for the reception of the connecting-screws M, which latter telescope with or screw into said bosses L to a greater or less distance, as required, to bring the rose-plates up to a firm bearing, whether the door is thick or thin, the distance P (see Fig. 8) between the plates A A′ being variable within the limit of the length of the threaded openings of the bosses.

What I claim as of my invention, and desire to secure by Letters Patent, is—

1. In a latch-knob mechanism, the combination, with the knob and latch actuating devices, of a reciprocating push-bar provided with an offset or projection adapted to hook upon an inner shoulder or end of the hollow stem or guide-sleeve, and a spring for supporting said bar with its offset in contact with said shoulder, whereby said push-bar can be readily removed and replaced by depression of said spring, substantially as set forth.

2. The push-bar D, having the offset *d*, and provided with a spring, K, in combination with the hollow bolt or knob-stem B, knob C, and rose-casting A, substantially as and for the purpose set forth.

3. The retaining-plate F, provided with bearing-depressions *f*, in combination with the angle-lever E, having trunnions *e*, and the rose-casting provided with pins or lugs *a*, substantially as and for the purposes set forth.

4. The combination, with the rose-casting A, of the retaining-plate F, provided with the guard-finger *i*, and the angle-lever E, having a lug or shoulder for engaging said finger, as and for the purpose set forth.

5. The combination, with the stem B, the push-bar D, having flange or lug *s*, and the spring K, of the wedge or dog-piece *m*, inserted beneath said spring and past said flange, substantially as and for the purpose set forth.

Witness my hand this 18th day of January, A. D. 1881.

AUGUSTUS B. PROUTY.

Witnesses:
CHAS. H. BURLEIGH,
S. E. KING.