

E. M. MIX & J. E. MIX.

Improvement in Attaching Knobs to their Spindles.

No. 127,089.

Patented May 21, 1872.

Fig. 1.

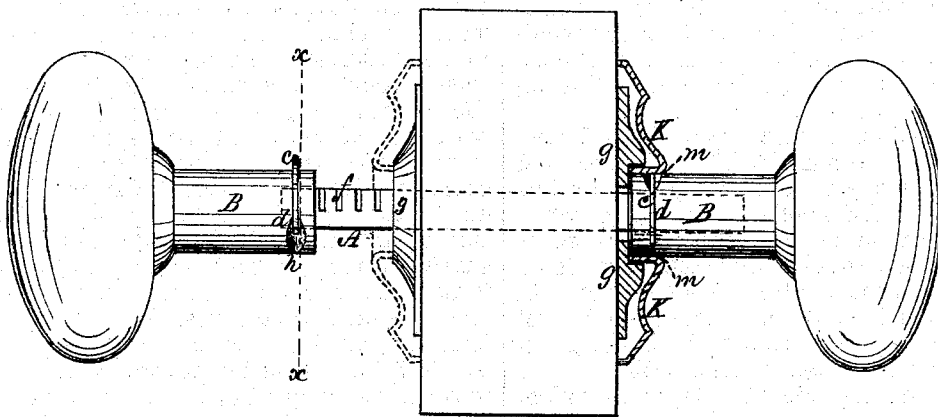


Fig. 2.

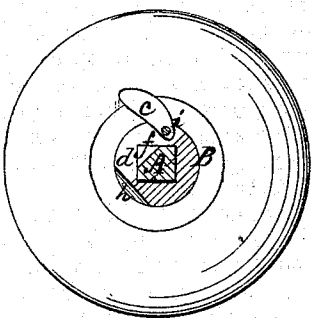
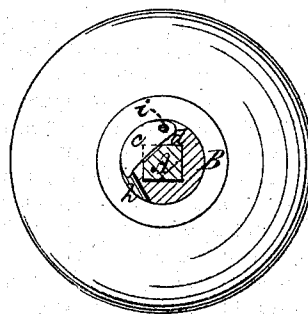


Fig. 3.



Witnesses.

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Eugene M. Mix

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UNITED STATES PATENT OFFICE.

EUGENE M. MIX AND JAMES E. MIX, OF WESTFIELD, NEW YORK.

IMPROVEMENT IN ATTACHING KNOBS TO THEIR SPINDLES.

Specification forming part of Letters Patent No. 127,089, dated May 21, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that we, EUGENE M. and JAMES E. MIX, of Westfield, in the county of Chautauqua and State of New York, have invented a new and useful Improvement in Attaching Knobs to Spindles, of which the following is a description:

Our invention relates especially to fastening the knobs to spindles of door-locks; and consists of a key or latch hinged in a transverse slot of the knob-shank, which, when closed, enters one of a series of slots or notches formed in the spindle when the latter is inserted in its socket; also, in combination with said pivoted key, of an introverted socket formed in the rose to conceal the key and prevent it from disengaging the spindle.

In the drawing, Figure 1 is an elevation, showing two knobs attached to a spindle by this device, the rose and bearing-plate being shown in section on one side of the door, and one knob partially withdrawn from the spindle, showing the series of notches with which the pivoted key engages; Fig. 2, a sectional view of the shank and spindle in plane of line *x x*, Fig. 1, showing the hinged key raised; Fig. 3, a similar view, showing the key closed.

The spindle A is of the ordinary square form of lock-spindles, its ends entering square sockets in the knob-shanks B B. At a point near the ends of each a transverse slot, *d*, is made to a depth sufficient to open into the socket, and this slot is in direction oblique to the square of the socket, so that the angle thereof projects into the slot, as seen in Figs. 2 and 3. In this slot the key or latch *c* is pivoted at one end by means of the pin *i*, or by any other suitable mode, to admit of the free end rising and falling, as shown. The spindle A is provided at both ends with series of notches, *f*, on two opposite angles, of suitable size to receive the part of the hinged key which projects into the recess of the socket, so that, the spindle being inserted with one of its notched angles contiguous to the key and moved until one of the notches coincides there-

with in position, the key falls into it and secures it and the knob-shank firmly together. The opposite series of notches on the angles of the spindle alternate with each other in position, to admit of more accurate adjustment to the thickness of the door, so that very thin washers only are required. The outer side of the key *c* is of segmental form, corresponding with that of the shank, so as to present an even surface when closed. The slot *d* is recessed at *h* for the purpose of allowing the free end of the key to be raised by inserting any suitable instrument. The ends of the knob-shanks abut against a bearing-plate, *g*, which is attached to the door in the usual manner, and concealed by the rose K. This rose is formed with an introverted neck or socket, *m*, into which the knob-shank protrudes far enough to cover the hinged key *c*, and prevent its rising and disengaging the shank, and also conceal it from view.

Our device presents the advantages over other fastenings of security and stability, as it cannot wear loose and fall out from use, like the screw-fastening; obviates vibration and shakiness of the parts; admits of close adjustment to adapt the knobs to the thickness of the doors; is inexpensive, and admits of better finish and more elegance of the shank in consequence of being concealed from sight.

What we claim as our invention is—

1. The key or latch *c*, hinged in the transverse slot *d* of the knob-shank, in combination with the notched spindle A, operating substantially as set forth.

2. In combination with the hinged key or latch, pivoted in the shank B, the introverted neck or socket *m* of the rose K, substantially as and for the purpose set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

EUGENE M. MIX.
JAMES E. MIX.

Witnesses:

RICHARD BENNETT,
CHARLES W. HALE.