

G. M. Wood,

Latch,

N^o 57,423.

Patented Aug. 21, 1866.

Fig 1

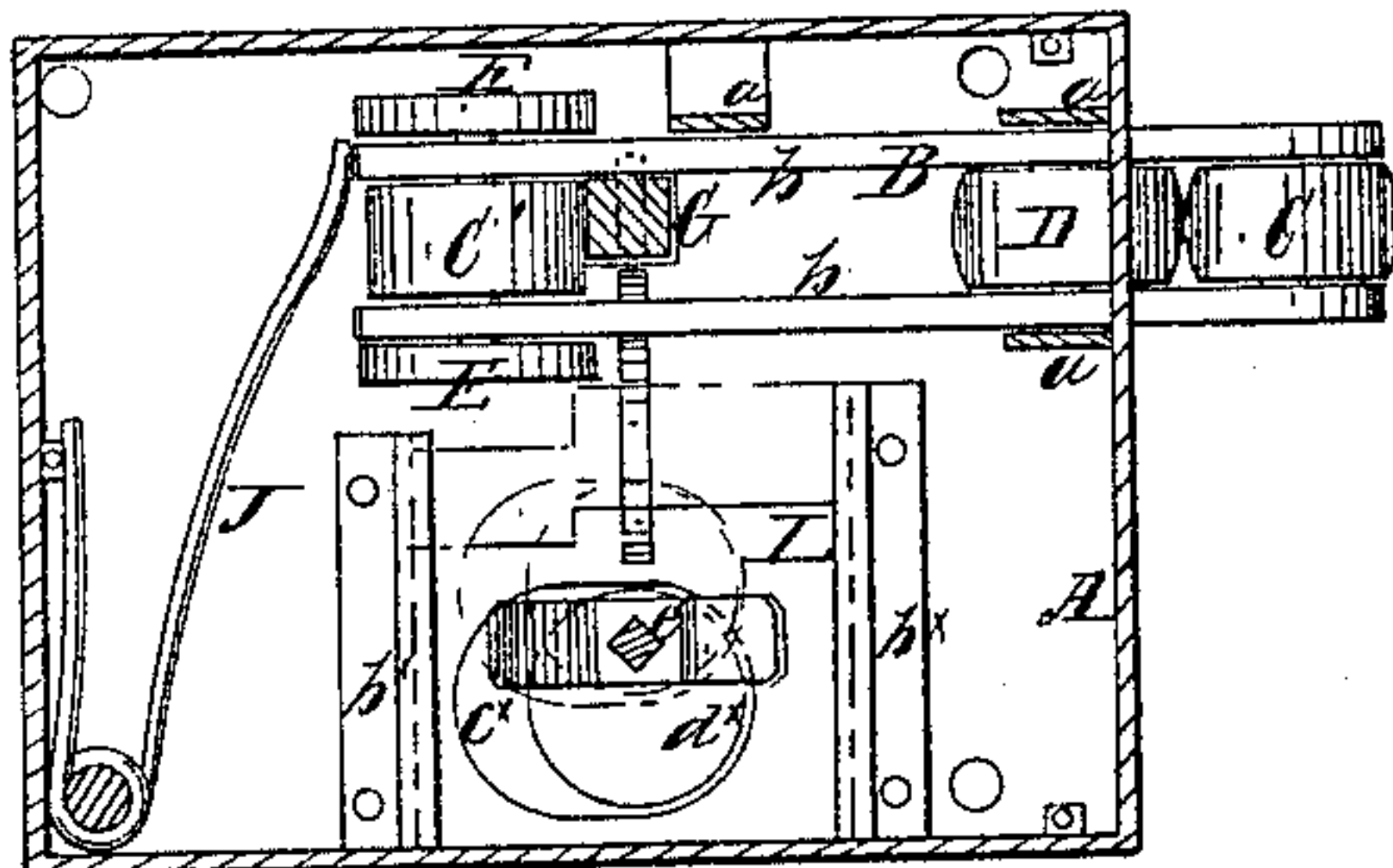


Fig 2

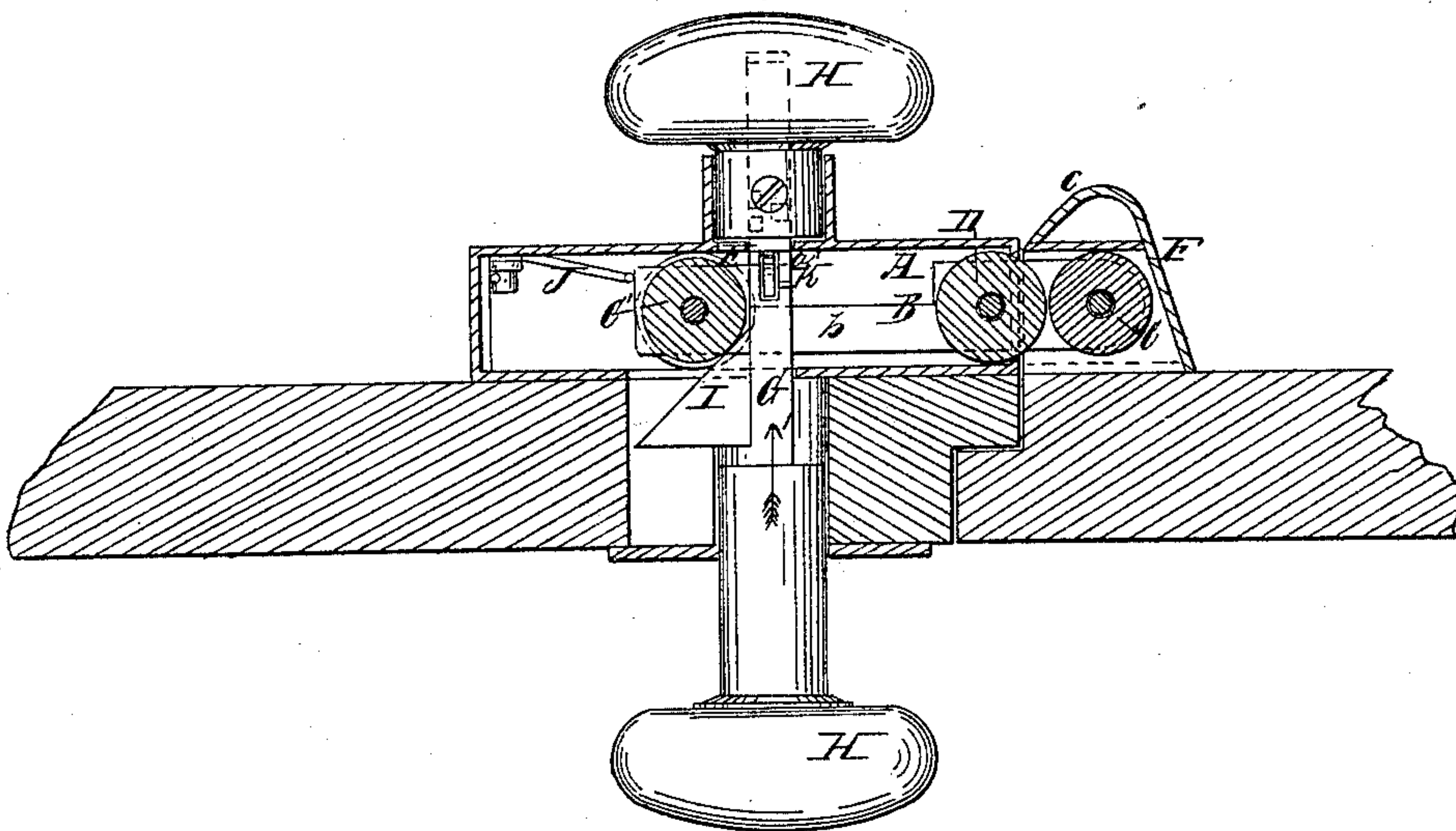
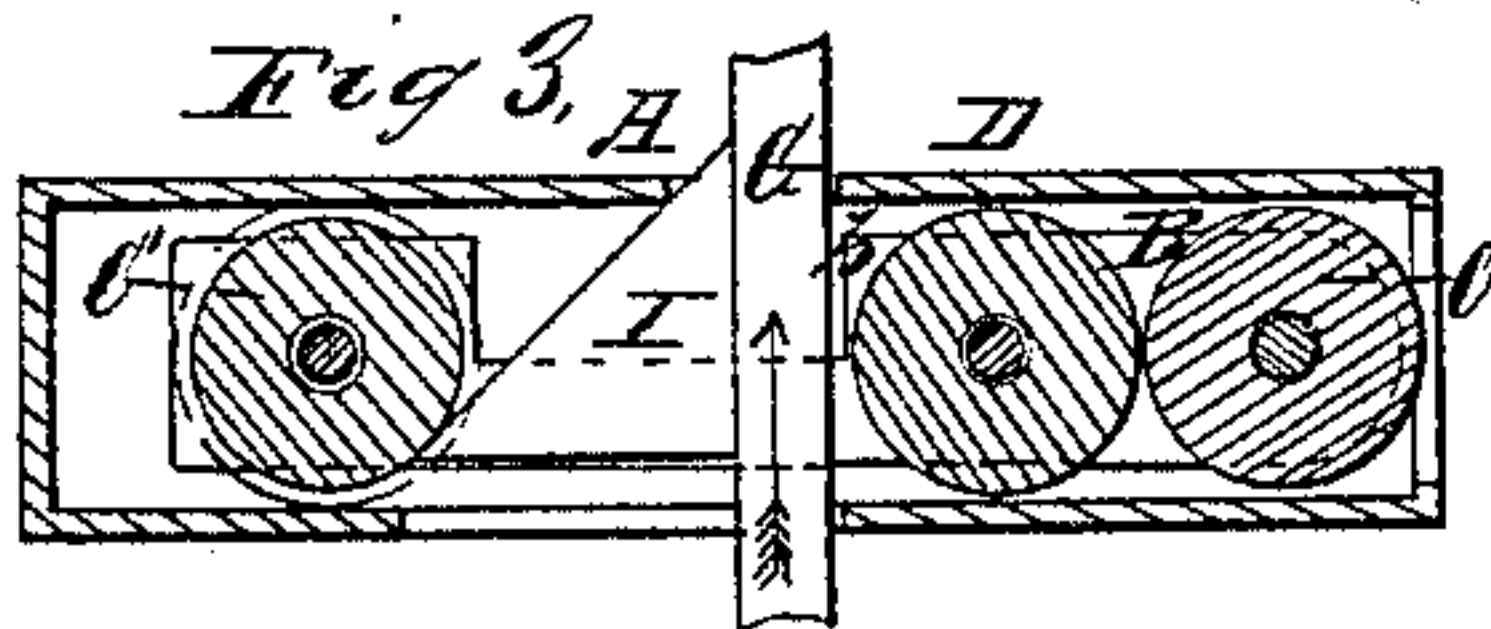


Fig 3, A



Witnesses:

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GEORGE M. WOOD, OF DECATUR, ILLINOIS.

IMPROVEMENT IN LOCKS.

Specification forming part of Letters Patent No. 57,423, dated August 21, 1866.

To all whom it may concern:

Be it known that I, G. M. WOOD, of Decatur, in the county of Macon and State of Illinois, have invented a new and Improved Lock; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an internal view of my invention; Fig. 2, a horizontal section of the same in a locked state applied to a door, taken in the line *x x*, Fig. 1; Fig. 3, a horizontal section of the lock in an unlocked state.

Similar letters of reference indicate like parts.

This invention relates to a new and improved mode of operating a sliding latch and locking the same, substantially as herein shown and described, whereby it is believed that several advantages are obtained over the ordinary sliding latches now in use.

A represents the case of the lock, which may be of rectangular or other form, and secured to the door as usual.

B represents a slide-latch fitted in the case between proper guides *a*, and formed of two parallel plates, *b b*, between the outer and inner ends of which rollers C C' are fitted, a roller, D, bearing also between the plates at the rear of the outer roller, C, and rollers E E being at the outer side of the bolt at its inner end and in the same axis as the rear roller, C'. (See Fig. 1.)

The rollers D E E are designed to obviate friction in the sliding or moving of the latch B, while the outer roller, C, is designed to obviate friction as the outer end of the latch enters the keeper F, the outer or face side of the keeper being rounded, as shown at *c*, in order to form a surface to admit of the outer end of the bolt passing readily into the keeper as the door is closed. This will be understood by referring to Fig. 2.

G represents the spindle or arbor on which the knobs H H are secured. This spindle or arbor is allowed to move freely in the lock at right angles therewith, and it passes through the slide-latch B, between the plates *b b*, and has an oblique projection, I, attached thereto, which acts against the roller C' in the slide,

said roller being kept in contact with the oblique side of the projection I in consequence of a spring, J, bearing against the inner end of the slide-latch, the spring having a tendency to keep the outer end of the latch out from the side of the lock-case. (See Figs. 1 and 2.)

From the above description it will be seen that the slide-latch B will, on being shoved in the direction indicated by arrow 1, cause the oblique projection I to bear against the roller C' and force the latch into case A and out from the keeper F, so that the door may be opened, the spring J throwing the spindle or arbor G and slide-latch B back to their original position when the spindle or arbor is relieved of pressure.

The throw (extent of movement) of the slide-latch B may be regulated by adjusting one of the knobs H a greater or less distance on the spindle or arbor G, for by limiting the movement of the latter the movement of the slide-latch will also be limited, and its outer end made to extend a greater or less distance out from the side of the lock-case, as may be desired, the collar D limiting the extreme outward movement of the slide-latch.

By this arrangement it will be seen that the door may be opened by simply pressing against the spindle or arbor at one side of the door, or pulling it at the opposite side, and this may be done by persons with far greater facility than by turning the spindle or arbor as hitherto, as in the latter case a person must have one hand entirely at liberty, whereas in the other case the work may be done by a pressure of the arm against the knob at one side of the door, or by pulling upon it with a finger only of the hand at the opposite side of the door.

The slide-latch may be locked by shoving a bar, K, through a mortise, *a**, in the spindle or arbor. This bar K is of taper form, and it is attached to a slide, L, fitted within the case A between proper guides *b* b**. This slide L has an elliptical opening, *c**, made in it, in which opening an eccentric, *d**, works, the axis *e** of which passes through the lock-case at the inner side of the door, and has an arm attached for the convenience of turning the eccentric. The opposite end of the axis *e** does not pass through the lock-case, but has

a square upon it to receive a key from the outer side of the door. By turning the eccentric d^* the bar K may be shoved through the mortise a^* , or be withdrawn from it, and the slide-latch B rendered fixed or allowed free to move, as may be desired.

The keeper F may be attached to the side of the door-frame in such a manner as to be capable of being adjusted laterally, in order to compensate for shrinkage.

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

1. The combination of the slide-latch B with friction-rollers D E E, in order to admit of the free movement of the slide or to obviate fric-

tion, constructed substantially as shown and described.

2. The combination of the roller C, roller D E E, roller C', and slide-latch B, operating with the arbor G, with oblique projector I, substantially as described, for the purpose specified.

3. The locking device composed of the sliding bar K, working in a mortise, a^* , in the spindle or arbor, and operated in the manner shown, or in any equivalent way, substantially as and for the purpose herein set forth.

G. M. WOOD.

Witnesses:

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