

(No Model.)

F. J. SMITH.
DOOR SECURER.

No. 521,870.

Patented June 26, 1894.

Fig. 1.

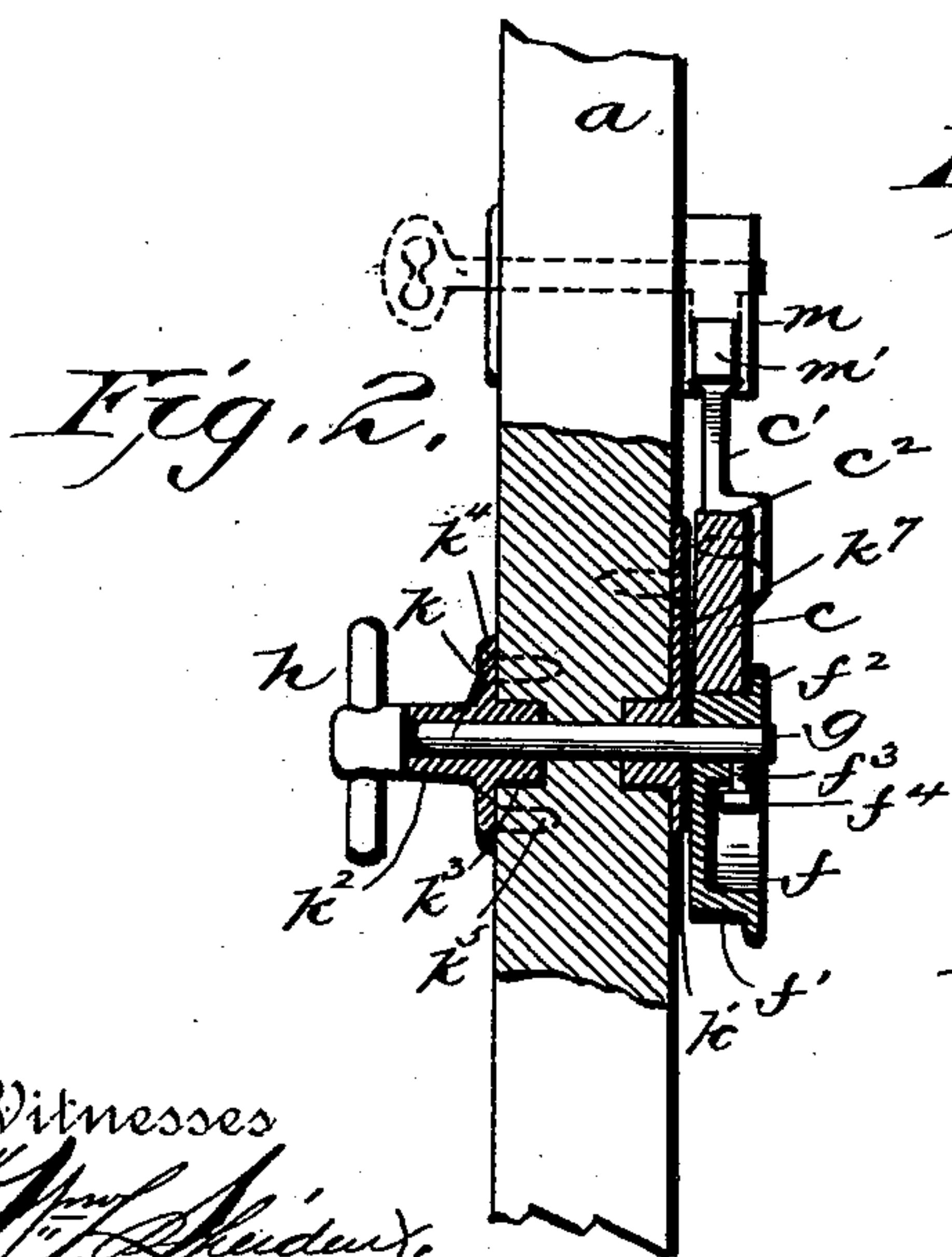
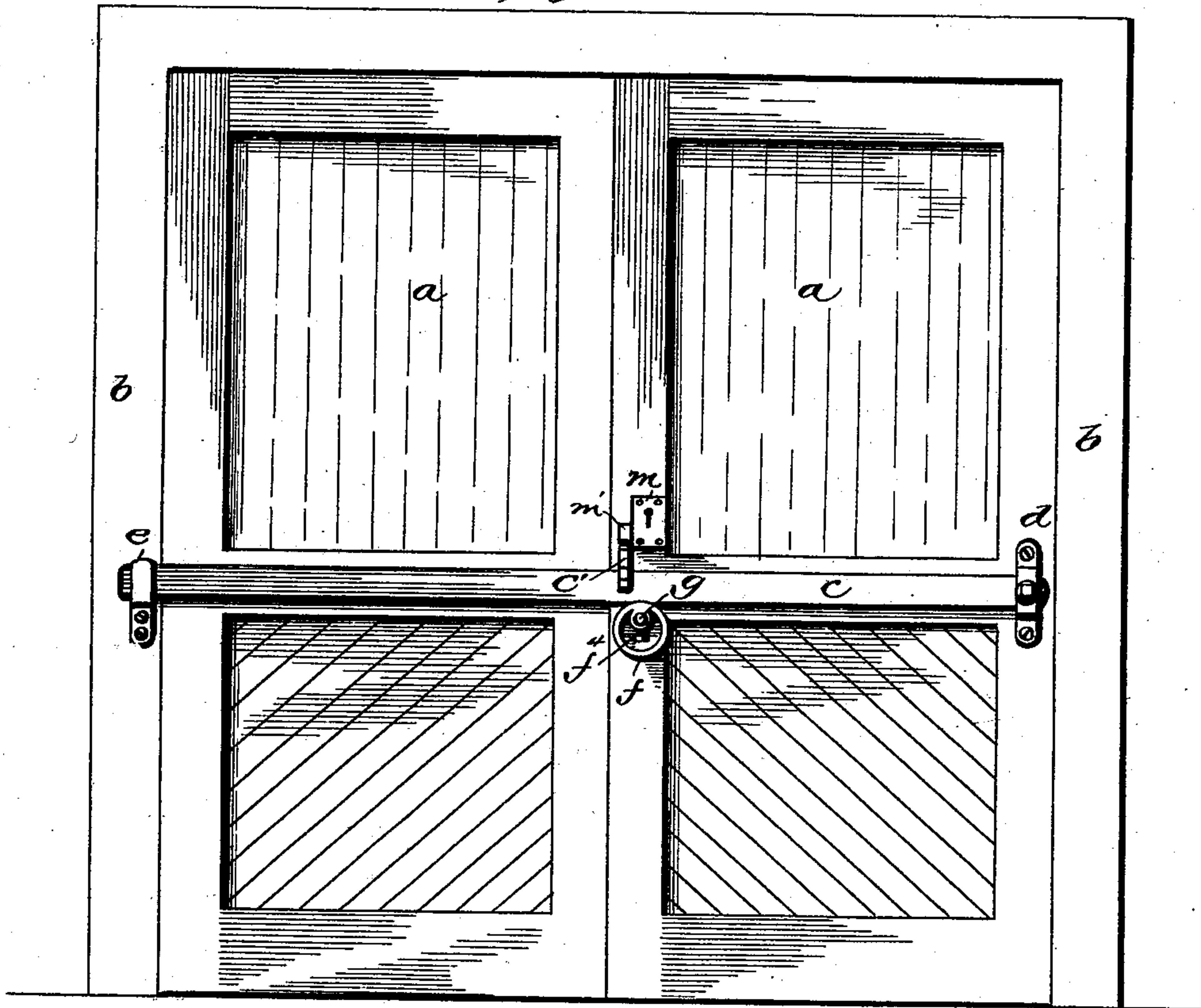


Fig. 3.

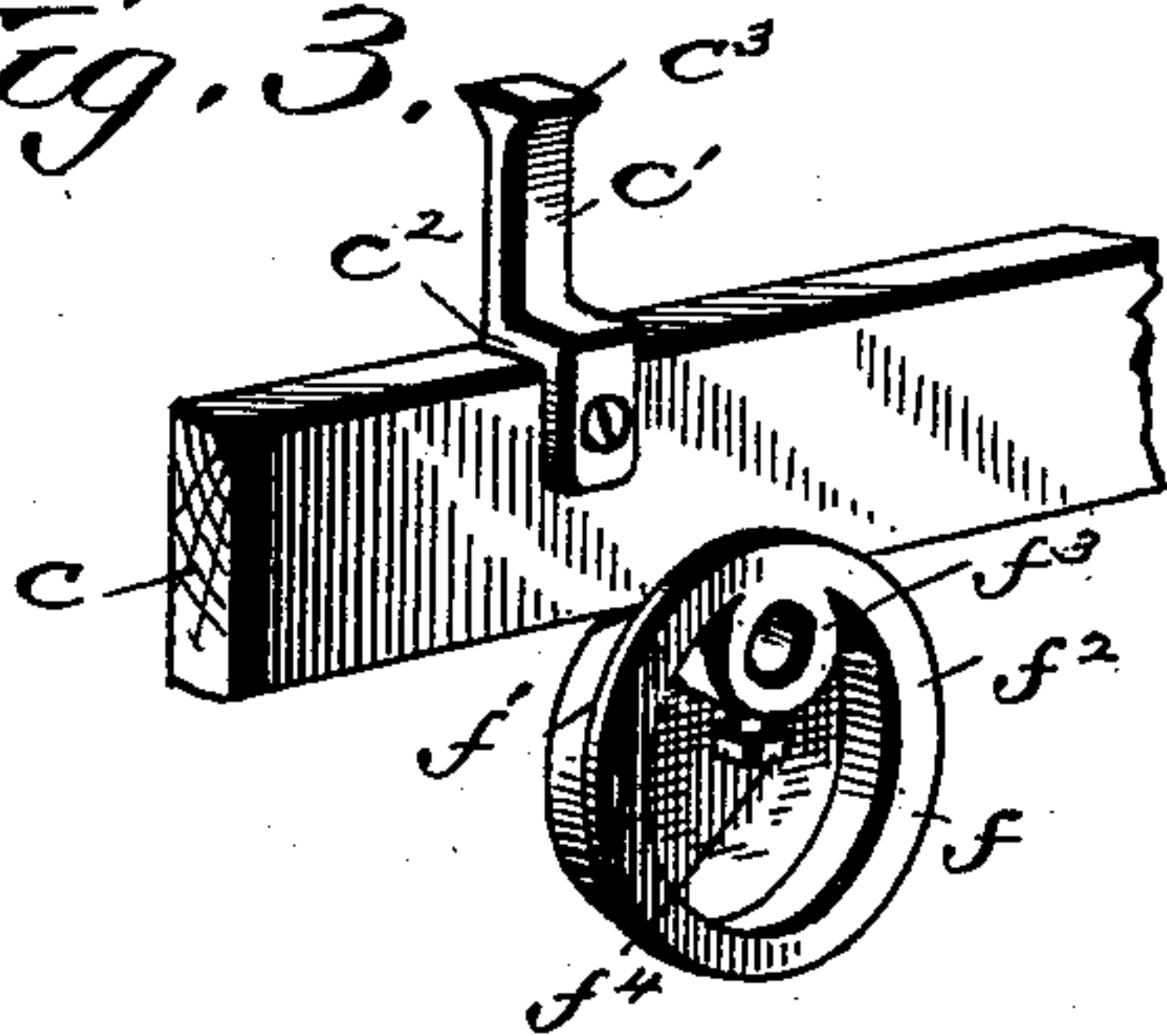
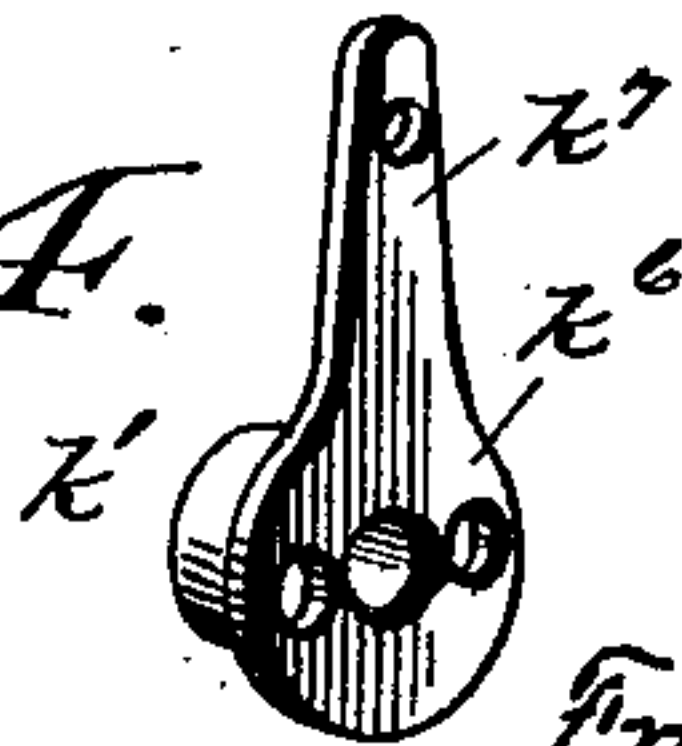


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK J. SMITH, OF MARCELLUS, MICHIGAN.

DOOR-SECURER.

SPECIFICATION forming part of Letters Patent No. 521,870, dated June 26, 1894.

Application filed January 29, 1894. Serial No. 498,327. (No model.)

To all whom it may concern:

Be it known that I, FRANK J. SMITH, a citizen of the United States, residing at Marcellus, in the county of Cass and State of Michigan, have invented certain new and useful Improvements in Door-Securers; and I do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of door locking bars adapted to be actuated from the outside in the locking and unlocking operation. The further purpose of my invention is to produce a door bar which can be more readily applied to ordinary doors and with smaller expense and which will at the same time be simple and efficient.

To this end my invention consists of the novel features which will be more fully described hereinafter and defined in the claims.

In the accompanying drawings: Figure 1, represents the inside of a pair of doors and a door frame surrounding them to which my improved device is applied; Fig. 2, an edge view of a section of the door showing the manner in which the operating mechanism is constructed and applied, the door being represented in dotted lines, and Figs. 3 and 4 views of details.

The reference letter *a* represents one of a pair of doors and *b* the framing around the doors.

c represents the door bar which is adapted to extend across the back of the doors. One end of this bar is pivoted to a cleat *d* attached to one side of the door, and the other end of the bar drops down into an open clasp or keeper *e* on the frame *b* surrounding the doors. The free end of the bar is raised and lowered by means of an eccentric *f* and this eccentric is turned or rotated by a spindle *g* passing through the door *a* and having on its outside end an operating handle *h*. The eccentric is provided with a rim *f'* wide enough for the reception of the edge of the bar and this rim is provided with an annular flange *f²* which overlaps the side of the bar a short distance and keeps it from slipping off. The

spindle is fixed to the eccentric by passing through a hole made in an embossment *f³* in which it is locked by a set screw *f⁴*. The spindle revolves in a pair of bearings *k* and *k'* located upon opposite sides of the door, the outside bearing *k* consisting of a casting having a sleeve *k²* projecting outwardly, a lug *k³* adapted to be sunk in the door, and an annular flange *k⁴* through which fastening screws *k⁵* pass. The opposite or inside bearing *k'* is provided with an escutcheon *k⁶* which has an upwardly extending shield *k⁷* for the purpose of preventing the bar from rubbing against and injuring the door. The locking mechanism consists of an ordinary lock *m* having a bolt *m'* located over the spindle in such juxtaposition that the bolt when thrown out in locking adjustment will extend over a vertically extending arm *c'* fixed to the bar. This arm may be given any suitable form that will enable it to engage or be intercepted by the bolt *m'* when thrown out to project beyond the casing of the lock as shown in Fig. 1. Preferred form, however, of constructing the arm is to make it of flat metal bent with a shoulder *c²* to fit over the top of the bar and an inwardly extending lip *c³* on its upper end adapted to engage the bolt. It will be observed from the preceding description, that when it is desired to lock the doors the free end of the bar can be dropped down into the keeper *e*, the larger portion of the eccentric *f* having been turned downward so that the upward projecting arm *c'* on the bar will lie below the bolt *m'*. Now when the bolt is thrown outward over said arm by means of a key introduced from the outside, the bar will be locked down and the doors cannot be opened, because it will be apparent that any effort to raise the bar will cause the arm *c'* to come in contact with the locking bolt and thereby prevent the bar from being lifted out of the keeper. To open the door all that is necessary to be done is to throw back the bolt and give the eccentric a half turn upward whereby the arm *c'* will pass by the end of the bolt and the free end of the bar be lifted out of the keeper.

It is evident that my device might be varied in many slight ways that would naturally suggest themselves to an experienced mechanic, therefore I do not limit myself to

exact construction herein shown but consider myself entitled to all such variations as come within the spirit and scope of my invention.

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

1. A door fastening comprising a cross bar, a cam for moving the cross bar in a plane parallel with the door to release the latter, and
10 a key operated lock adapted to have its bolt projected across the path of the cross bar to secure the latter from movement, substantially as described.

15 2. A door fastening comprising a cross bar pivoted at one end, a keeper to receive the other or free end of the cross bar, a knob operated cam adapted to engage with the under side of the bar and lift the free end from the
20 keeper, and a key operated lock located above and adapted to have its bolt engage with the upper side of the cross bar, substantially as set forth.

3. The herein described door fastening comprising a cross bar pivoted at one end, a keeper
25 to receive the free end thereof, an arm projected from the cross bar, a key operated lock adapted to have its bolt projected across the path of the said arm, a knob spindle having
30 a flanged cam to engage with the cross bar,

and bearings for the ends of the spindle having sleeves which are let into the door, the inner bearing having an escutcheon and plate for the cross bar to rub against in its movements, substantially as described. 35

4. The combination in a door fastening device, a pivoted cross-bar, a keeper adapted to engage the free end of said bar, an eccentric for raising and lowering said end, an arm
40 on the bar, and a lock provided with a bolt adapted to be thrown into the path of said arm to intercept the lifting action of the bar, substantially as described.

5. The combination with a pivoted door-bar, of a keeper adapted to engage the free
45 end of the bar, an eccentric located on the inside of the door, an actuating spindle extending through the door and to which the eccentric is fixed, an upwardly projecting arm fixed to the bar, and a lock provided with a bolt
50 adapted to be thrown out within the range or path of said arm to prevent the bar from moving out of its keeper in the manner and for the purpose substantially as described.

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

FRANK J. SMITH.

Witnesses:

L. B. DES VOIGUES,
ALLIE M. DES VOIGUES.