

(No Model.)

R. W. HEPPELL.  
SASH LOCK.

No. 506,780.

Patented Oct. 17, 1893.

Fig. 1

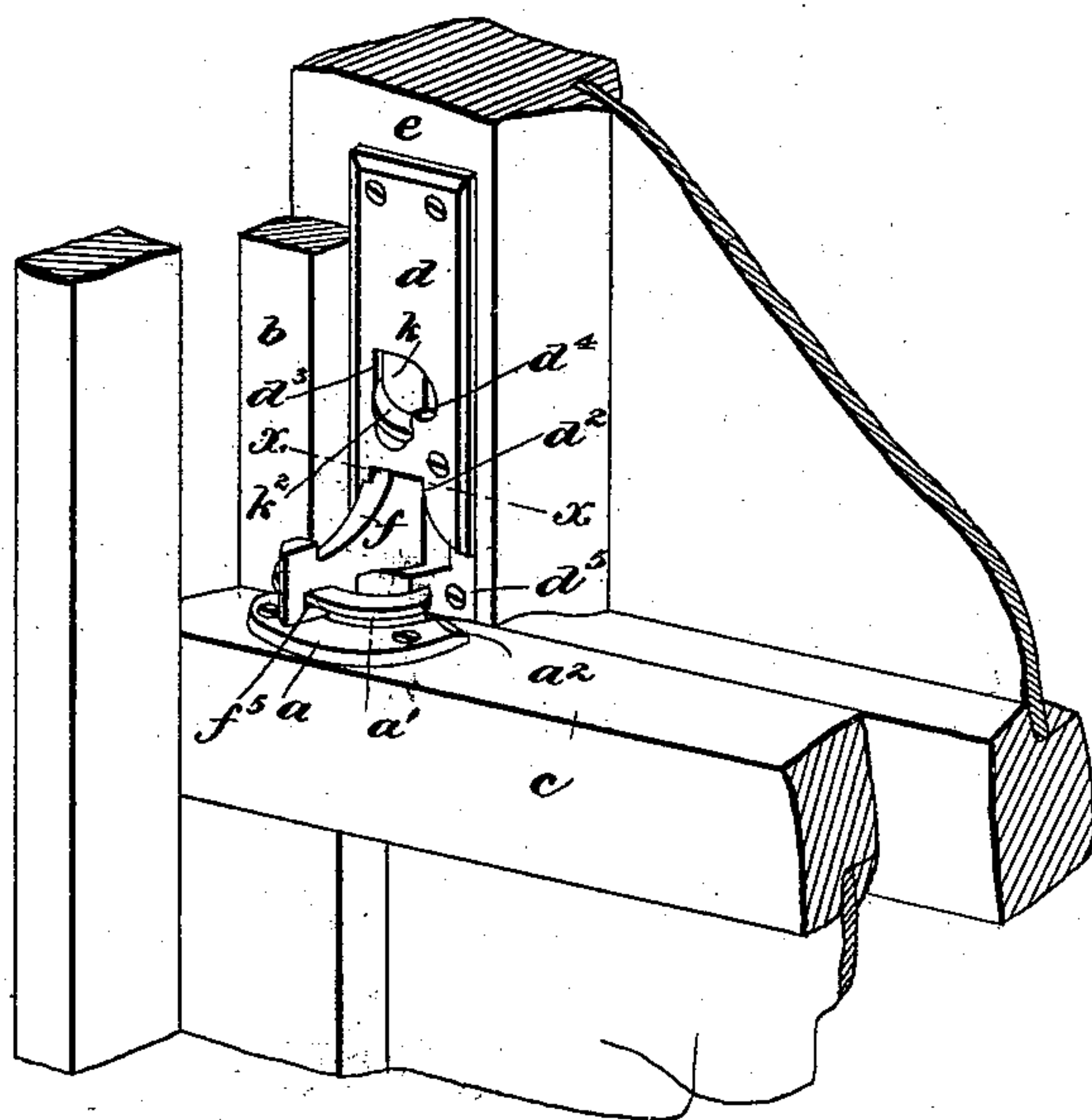


Fig. 2

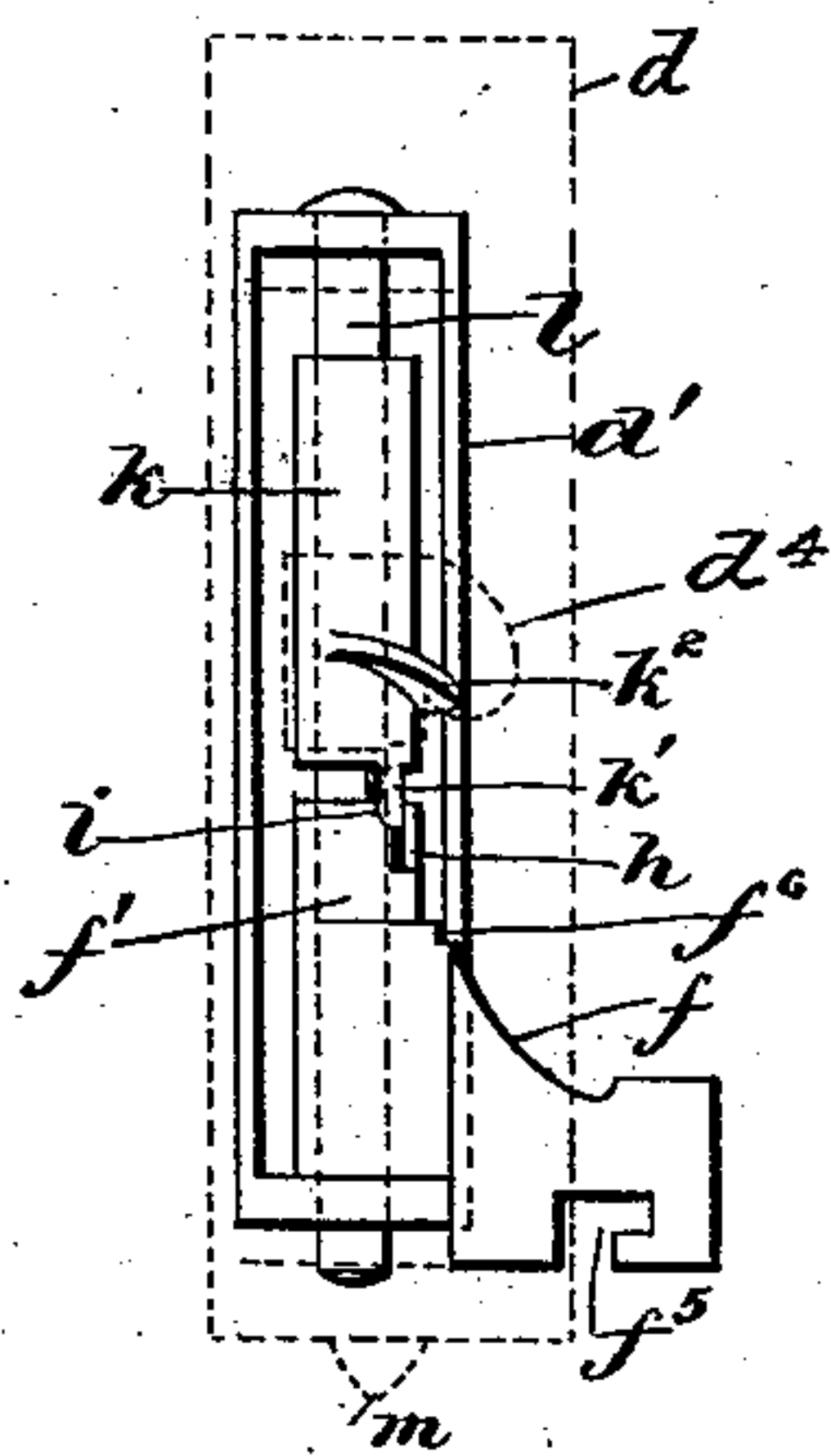


Fig. 3

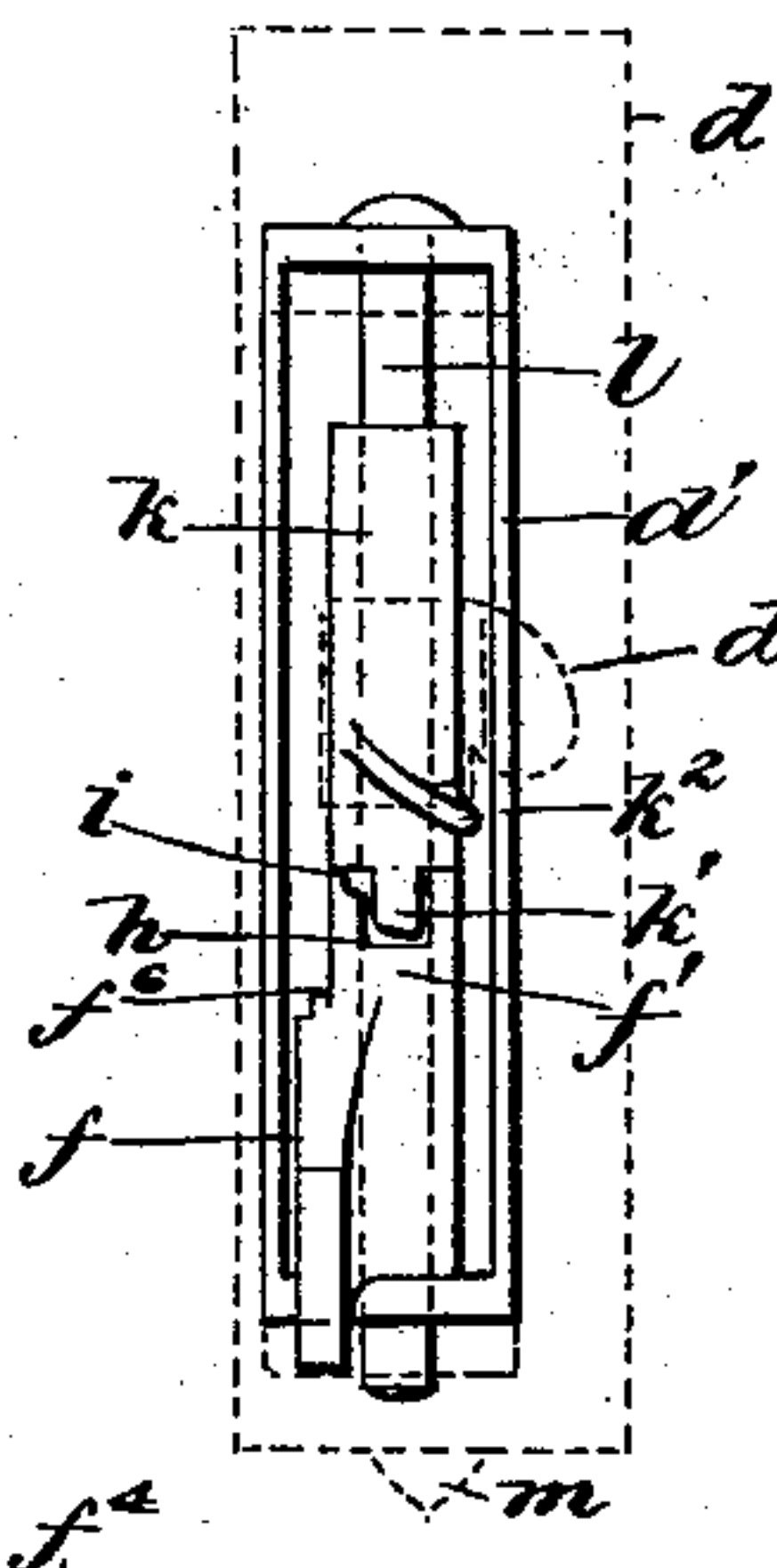


Fig. 4

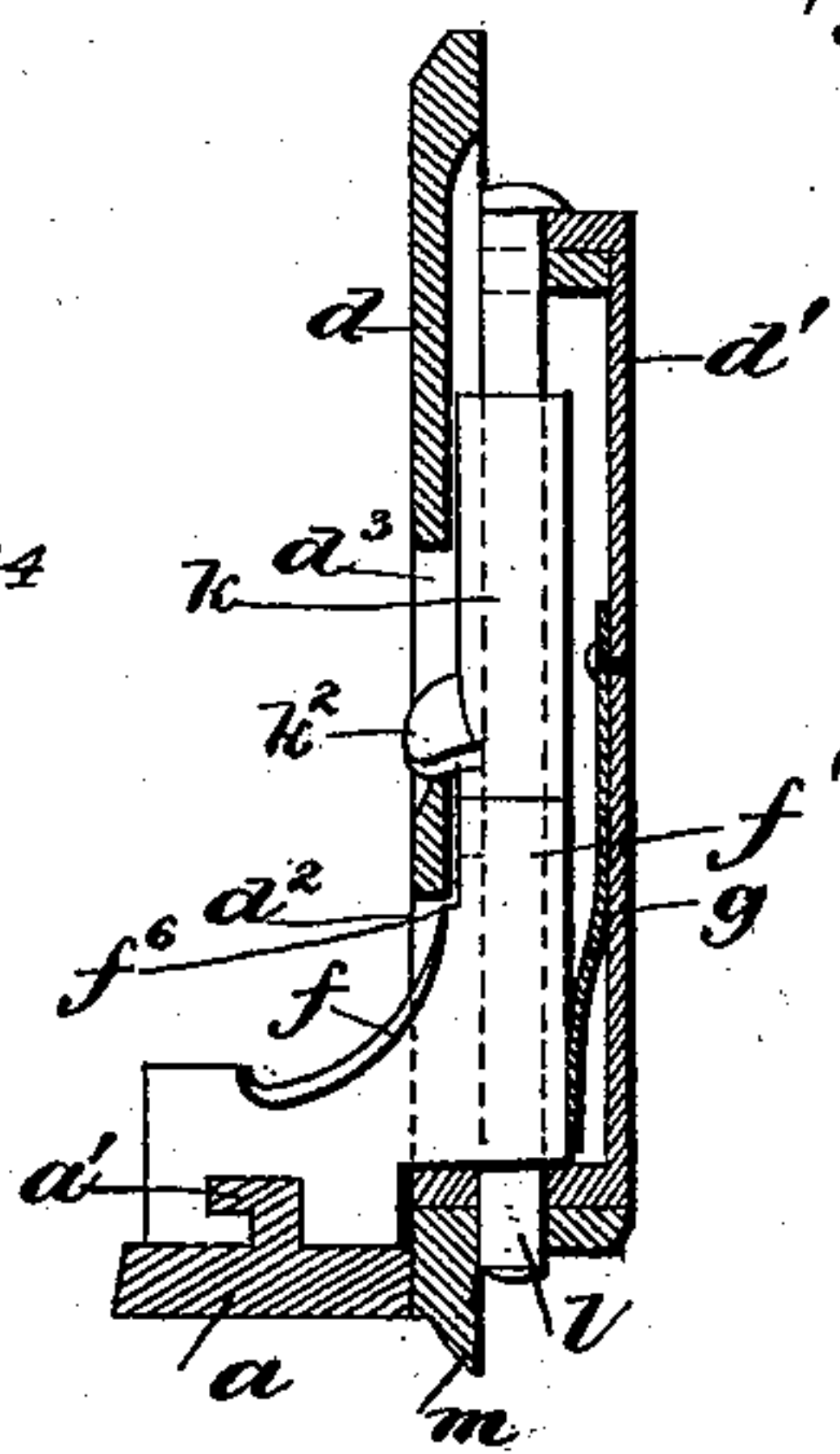
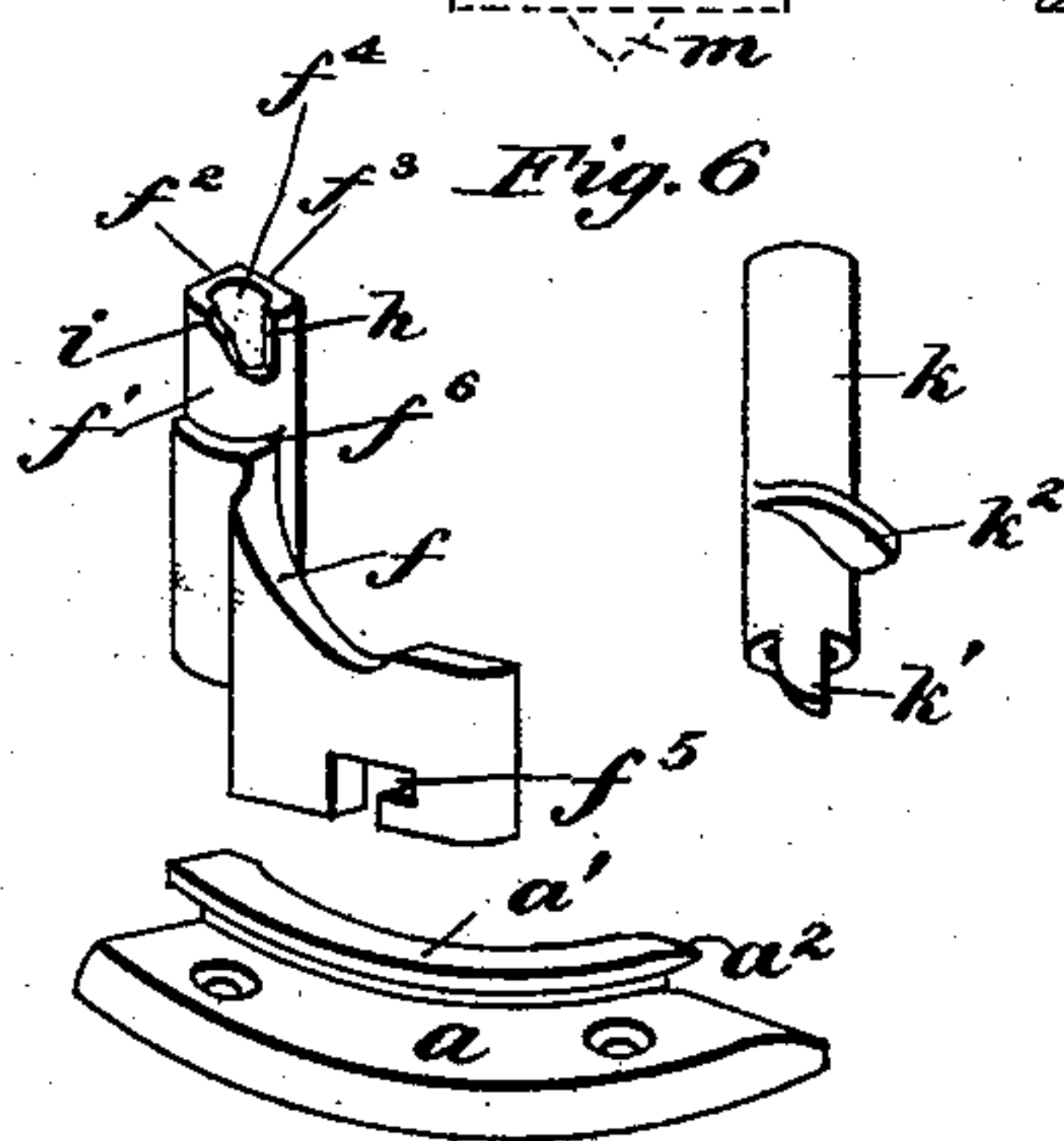
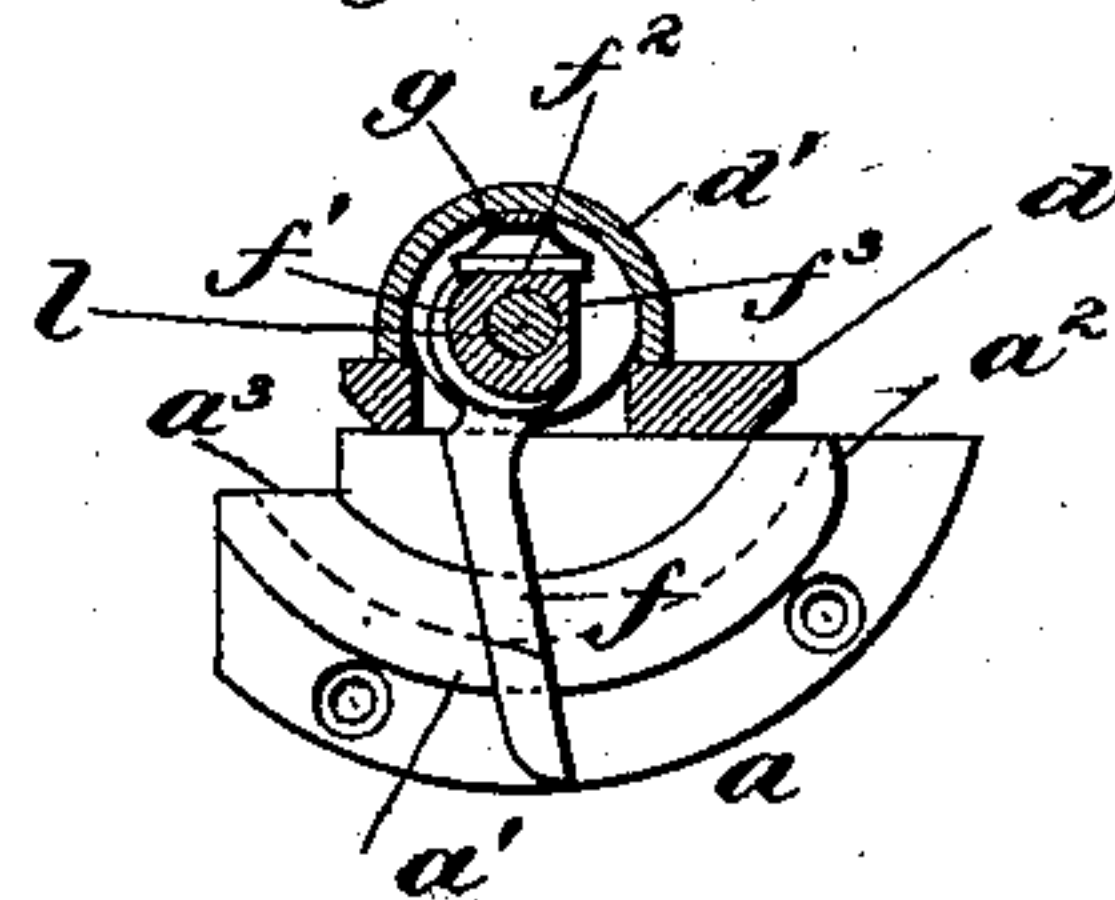


Fig. 5



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# UNITED STATES PATENT OFFICE.

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## SASH-LOCK.

SPECIFICATION forming part of Letters Patent No. 506,780, dated October 17, 1893.

Application filed May 18, 1893. Serial No. 474,685. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD W. HEPPELL, a citizen of the United States, residing at Dunkirk, in the county of Chautauqua and State of New York, have invented a certain new and useful Improvement in Sash-Locks, of which the following is a full, clear, and exact description.

The object of this invention is to provide a device for locking together window-sashes in such manner that the lock itself shall be practically burglar-proof in so far as tampering therewith from outside is concerned.

In carrying out my invention, I use a catch-plate having thereon an elevated inverted L-shaped rail, to be arranged at one end of the meeting rail of the lower sash of the window, and I employ a swinging self-locking jib arranged in the stile of the upper sash just above its meeting rail and in line with the catch-plate, to engage the catch plate and so lock the sashes together.

Having thus stated the principle of my invention, I will proceed now to describe the best mode in which I have contemplated applying that principle and then will particularly set forth and finally claim the part or improvement which I claim as my invention.

In the accompanying drawings illustrating my invention, in the several figures of which like parts are similarly designated, Figure 1 is a perspective view. Fig. 2 is an elevation of the jib member, showing its face-plate in dotted lines, and the jib unlocked. Fig. 3 is a similar elevation showing the jib locked. Fig. 4 is a vertical section looking toward the right of Fig. 3. Fig. 5 is a horizontal section taken in the plane of line  $x-x$ , Fig. 1; and Fig. 6 is a perspective showing the jib, its locking mechanism and the catch-plate detached and in perspective.

The catch-plate  $a$  is shown as a segment of a disk, and is provided with the elevated, inverted-L-shaped rail  $a'$ , one end  $a^2$  of which rail is beveled or rounded in order to facilitate the engagement of the jib therewith, as will presently appear. This catch-plate has its end  $a^3$  notched in order to fit snugly up against the parting bead  $b$  of the window casing or frame when the said catch-plate is ap-

plied to the upper surface of the meeting rail  $c$  of the lower sash, substantially in the position shown in Fig. 1.

The jib member is composed of a face-plate  $d$ , which is designed to be applied, by means of screws or otherwise, to the face of the stile  $e$  of the upper sash in line with the catch-plate  $a$ . This face-plate is provided at its rear with a casing  $d'$ , which is let into the stile, and which receives the jib and its locking device and appurtenances. The jib  $f$  is made with a hub  $f'$  having two squared or flat portions  $f^2, f^3$ , and a central opening or bore  $f^4$ . The outer end of the jib is made with an inverted, L-shaped or rectangular slot  $f^5$  corresponding in shape and location with the elevated rail of the catch-plate. This slotted portion of the jib extends somewhat below the bottom of its hub, and at its upper juncture with the hub it is provided with the shoulder  $f^6$ . The face-plate  $d$  is provided with an opening  $d^2$  at its lower end to receive the jib, and said opening is of a height substantially equal to the distance between the shoulder  $f^6$  and the bottom of the hub  $f'$  to afford bearings for the jib and prevent its displacement longitudinally of the plate. A further bearing for the bottom of the hub of the jib is provided in the bottom of the casing  $d'$ , substantially as shown in Fig. 4. A flat or other spring  $g$  is secured in the back of the casing  $d'$ , and normally acts against one or the other of the flat sides  $f^2, f^3$  of the hub of the jib in order to hold said jib up to its opening, and also to assist in holding it in its opened and closed positions. The upper portion of the hub of the jib is provided with a deep notch  $h$ , and, also, a shallow notch  $i$ , for purposes presently appearing. Above the jib the face-plate is provided with an opening  $d^3$  having a lateral, shouldered cavity  $d^4$ . The jib-locking cam or device is composed of a cylindrical tube  $k$ , having at one end a projecting finger  $k'$ , which, as will presently appear, engages the notches  $h$  and  $i$  of the hub of the jib. This locking device has an inclined finger-piece  $k^2$ , which plays in the opening  $d^3$  in the face-plate. A vertical pin-  
dle  $l$  is passed through the tubular, cylindrical device  $k$ , and the hollow hub  $f'$  of the jib, and



its ends engage the top and bottom of the casing  $d'$  in order to align the jib and its locking cam, and to secure them in the casing.

The face-plate  $d$  is recessed at  $d^5$  in order to permit the jib to be swung back in unlocked position, and thus lie within the plane of the face-plate, so as to be out of the way of the meeting rails of the sashes in the movement up and down of the said sashes. When the jib is thus thrown into the position of disuse, as shown in Fig. 2, it projects beyond the stile sufficiently to enable a person to insert his finger back of the said jib to pull it out into engagement with the catch-plate.

In order to assist the holding screws in retaining the jib member in place, I may provide the bottom of the face-plate with a spur  $m$  which may be driven into the meeting rail of the upper sash.

The operation is as follows: When the jib is in the unlocked position, shown in Fig. 2, its locking cam or device  $k$  has its finger-piece  $k^2$  resting in the bottom of the cavity  $d^4$ , and in that position the finger  $k'$  is out of engagement with the notch  $h$ , but rests in the notch  $i$ , and hence when the jib is swung outwardly to engage the catch-plate, the farther wall of the notch  $h$  engages the finger-piece  $k'$ , rotates the locking cam, and thus draws its finger-piece  $k^2$  out of the cavity  $d^4$ , and thereafter the locking cam, acting by gravity, causes its finger  $k'$  to descend into the notch  $h$ , and so locks the jib against rotation in the reverse direction. Hence the jib not only engages the elevated rail  $a'$  of the catch-plate to prevent longitudinal movement of the sashes, but by virtue of the engagement of the locking cam with the hub of the said jib, the jib itself is locked against further swinging movement, and this locking mechanism being within the casing and wholly concealed, is thereby protected from manipulation from the outside and the sash-lock is, to this extent, rendered what might be termed burglar-proof. To unlock the jib, the locking cam is lifted by its finger-piece  $k^2$  until said finger-piece rests on the edge of the cavity  $d^4$ , and thereafter, by the inward swinging of the jib, the notch  $i$  is brought into engagement with the finger  $k'$  and the finger-piece  $k^2$  is swung back into the bottom of the cavity  $d^4$ , and the parts thus set ready for the next operation of swinging out the jib to lock the sashes.

The device is shown as a left-hand lock, but it is obvious that it may also be made as a right-hand lock.

Among the advantages possessed by my invention in addition to those already enumerated, is this, that by its use the bottom sash

cannot be pried up from outside, as is the case with the common middle or meeting rail locks.

What I claim is—

1. In a sash lock, the combination of a catch plate, a swinging jib having a hub and an automatically operating jib-locking device arranged above the hub of the jib and supported independently thereof and adapted to engage said hub when released from such support by the movement of the jib as the latter is swung into full locking position, substantially as described.

2. In a sash lock, the combination of a catch plate, a swinging jib having a notched hub, a face plate having a lateral cavity  $d^4$  and a jib-locking device arranged above the hub and having a finger-piece  $k^2$  adapted to engage the said cavity to support the locking device in unlocked position, and also having a finger  $k'$  adapted to be engaged by the hub as the jib is swinging into locking position to release the jib-locking device and permit it to lock the jib when in locking position, substantially as described.

3. A sash lock having a swinging jib provided with a hub having a notch in one end, a sliding locking device having a finger adapted to engage the said notch, and means to disengage the said finger and notch, and a casing and face-plate for said jib and locking device, substantially as described.

4. A sash lock having a swinging jib provided with a deep and a shallow notch at one end, a sliding locking device provided with a finger adapted to engage the said notches, and means to lift the said locking device out of engagement with the notches, and a casing and face-plate to receive the said jib and locking device, substantially as described.

5. In a sash lock, a swinging jib having a deep and a shallow notch, combined with a sliding locking device having a finger adapted to engage the said notches, said finger normally resting in the shallow notch when the jib is unlocked, the said notches opening into one another, so that when the said jib is swung into the locking position, the locking device is positively carried with it and the entrance of its finger into the deep notch is insured, and a face-plate and casing for the said jib and locking device, substantially as described.

In testimony whereof I have hereunto set my hand this 16th day of May, A. D. 1893.

RICHARD W. HEPPELL.

Witnesses:

WM. H. FINCKEL,  
HARRY Y. DAVIS.