

(No Model.)

H. W. RHODS.
SASH FASTENER.

No. 514,035.

Patented Feb. 6, 1894.

Fig. 1.

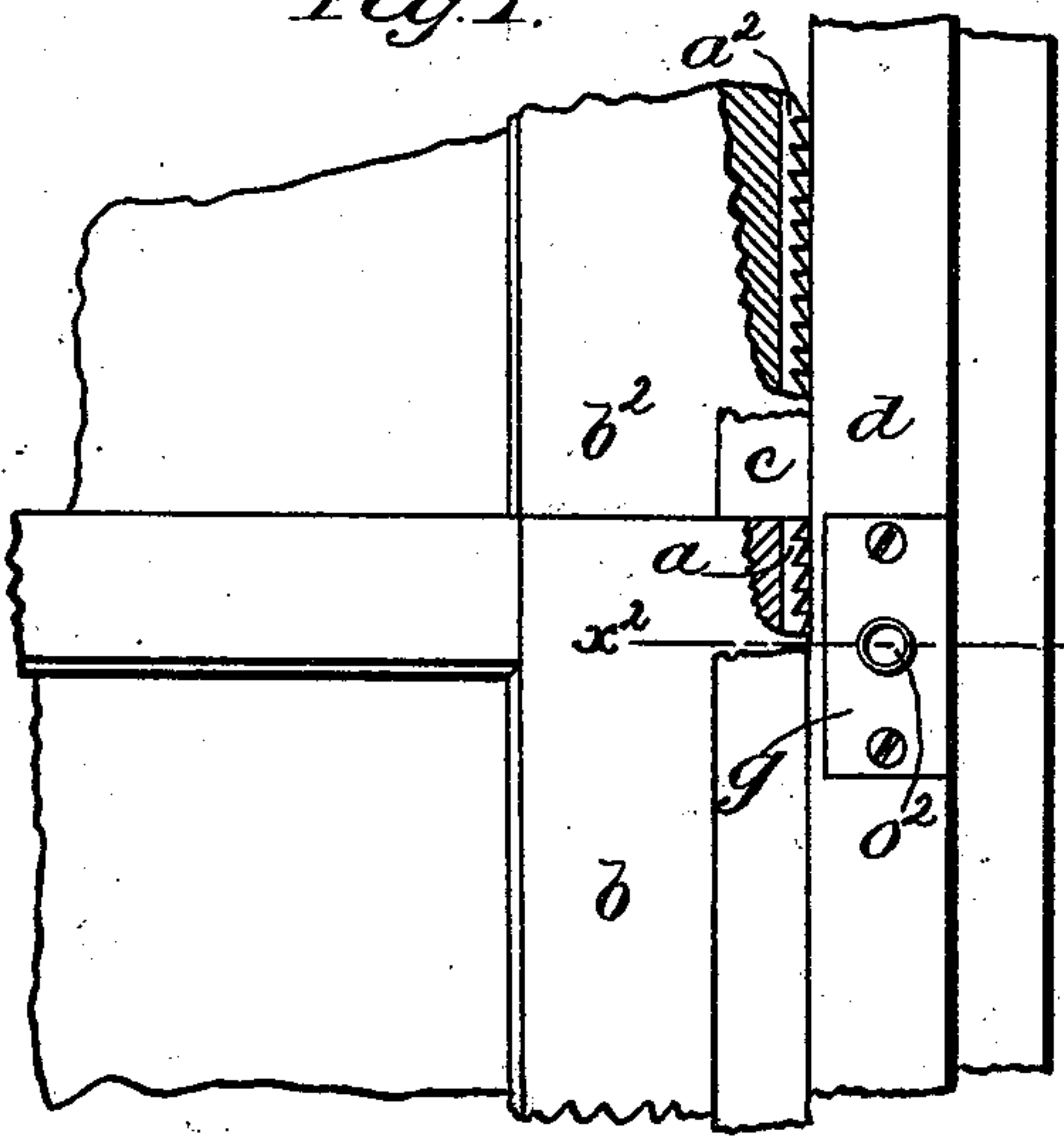


Fig. 3.

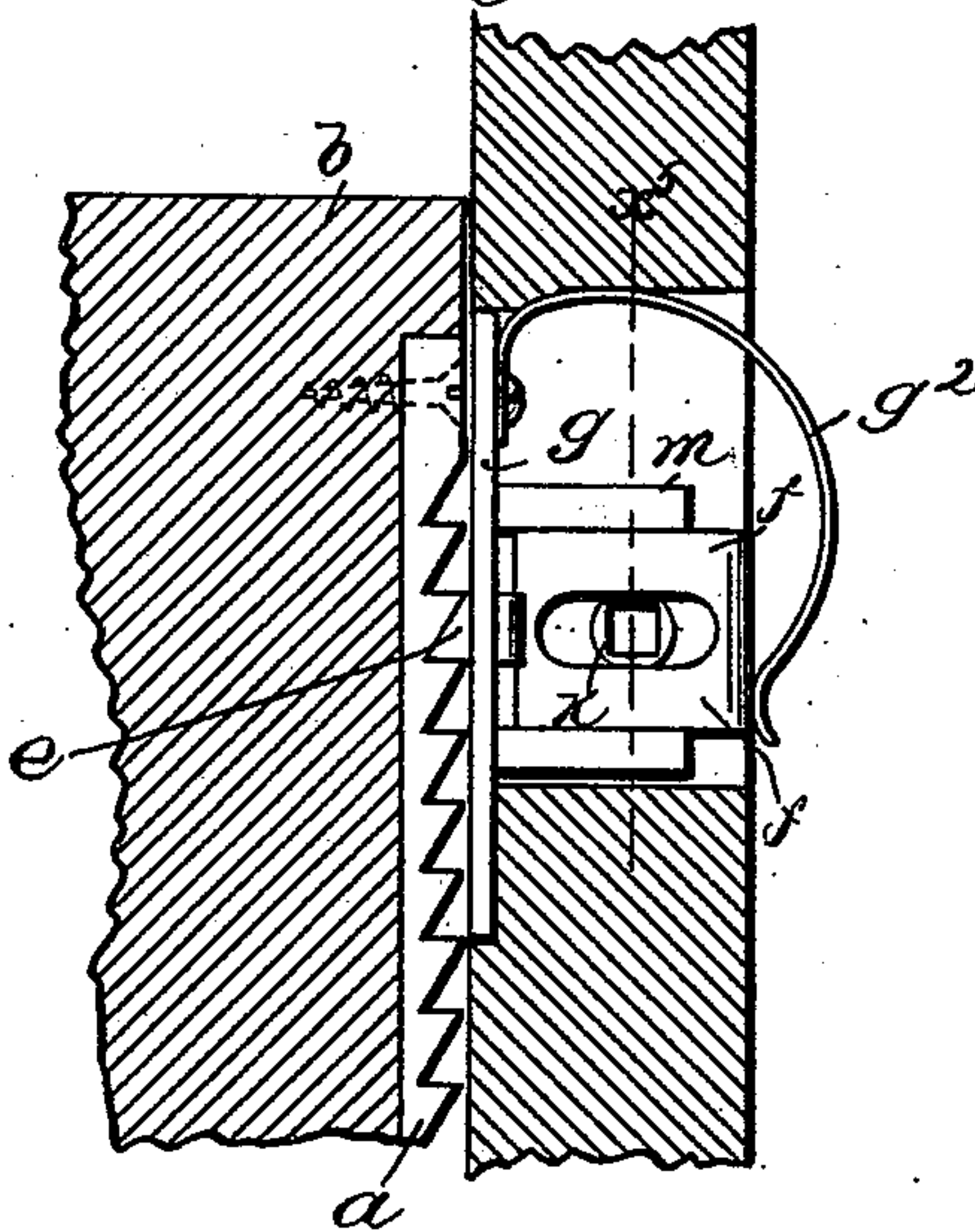


Fig. 2.

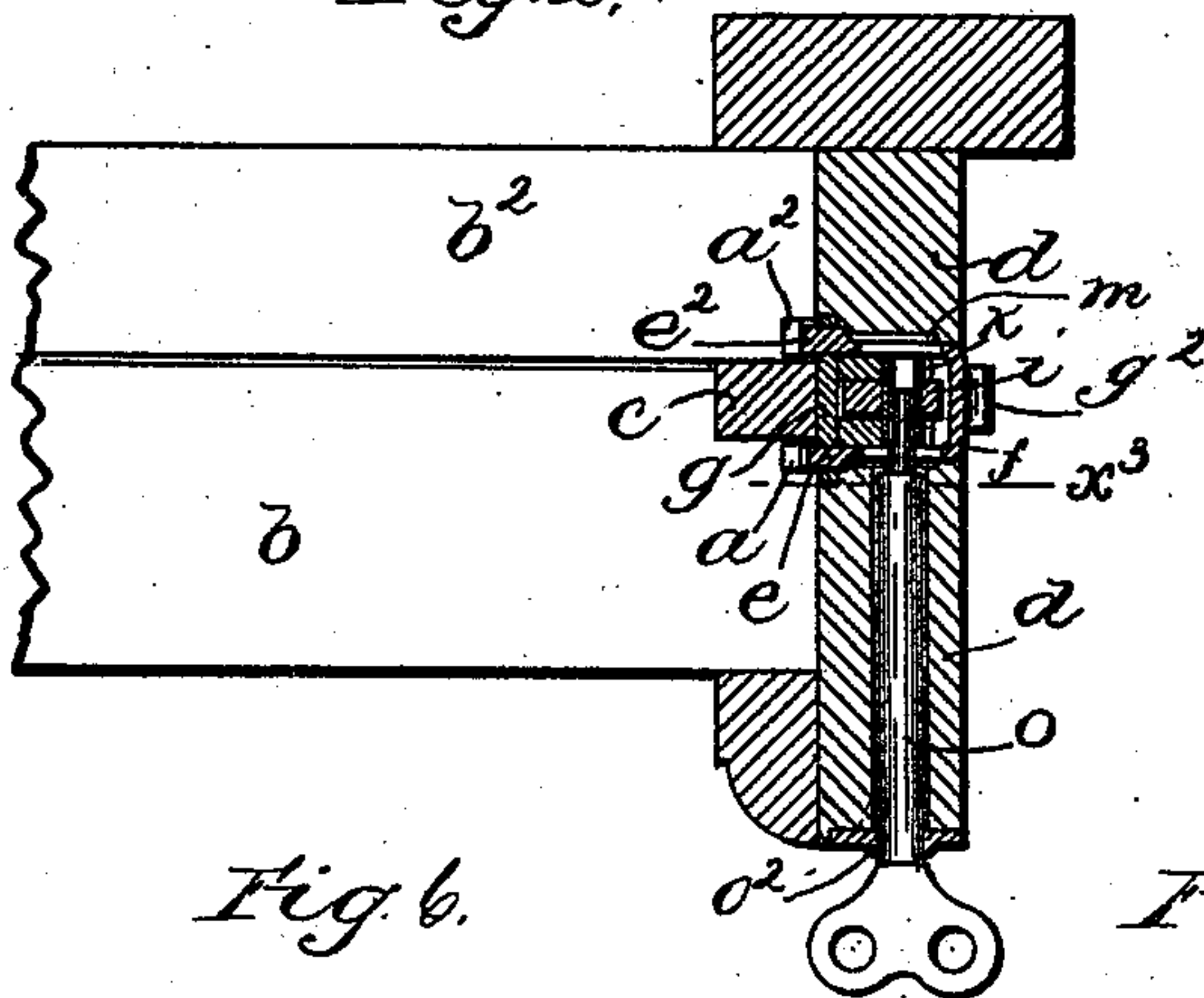


Fig. 4.

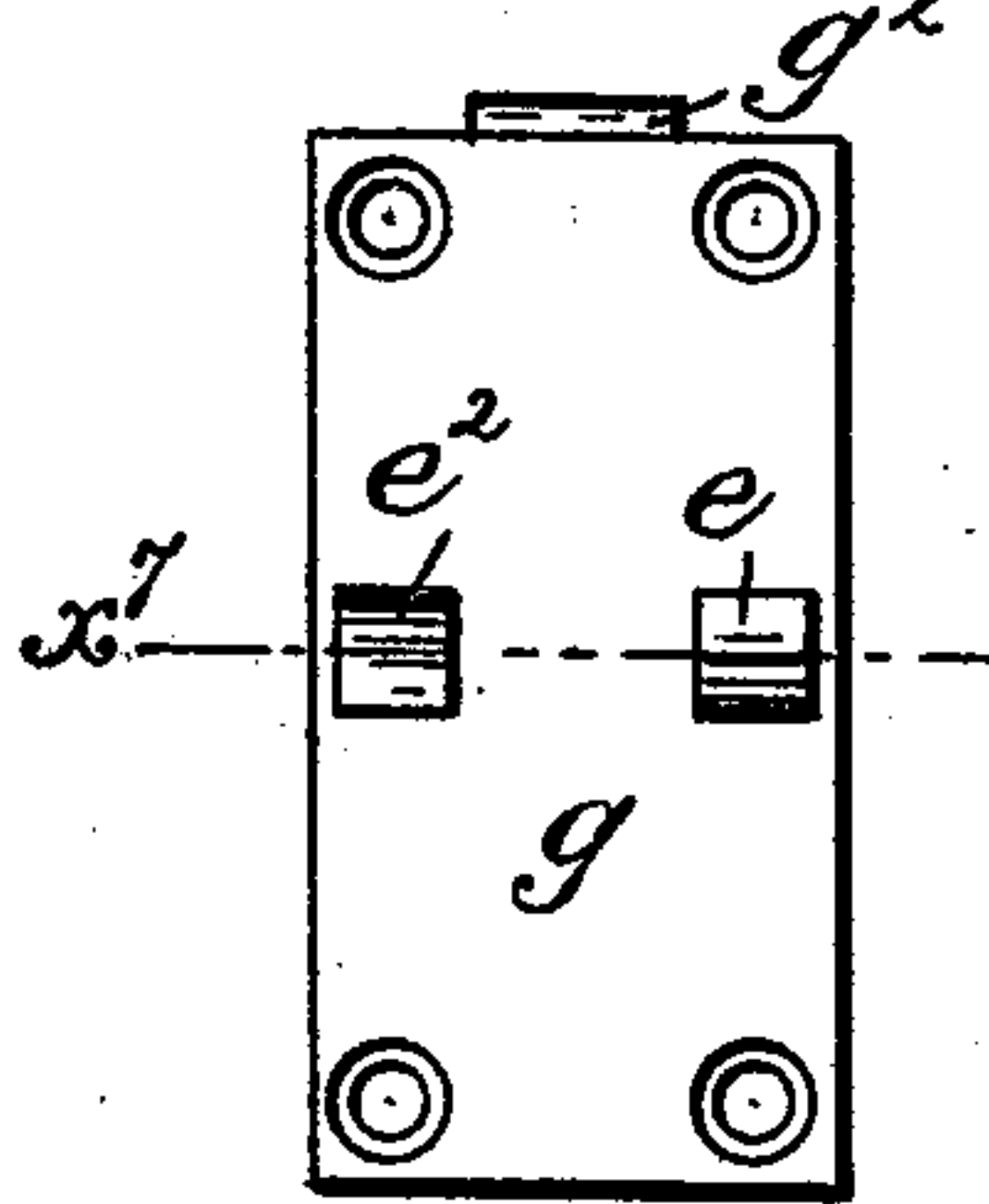


Fig. 6.

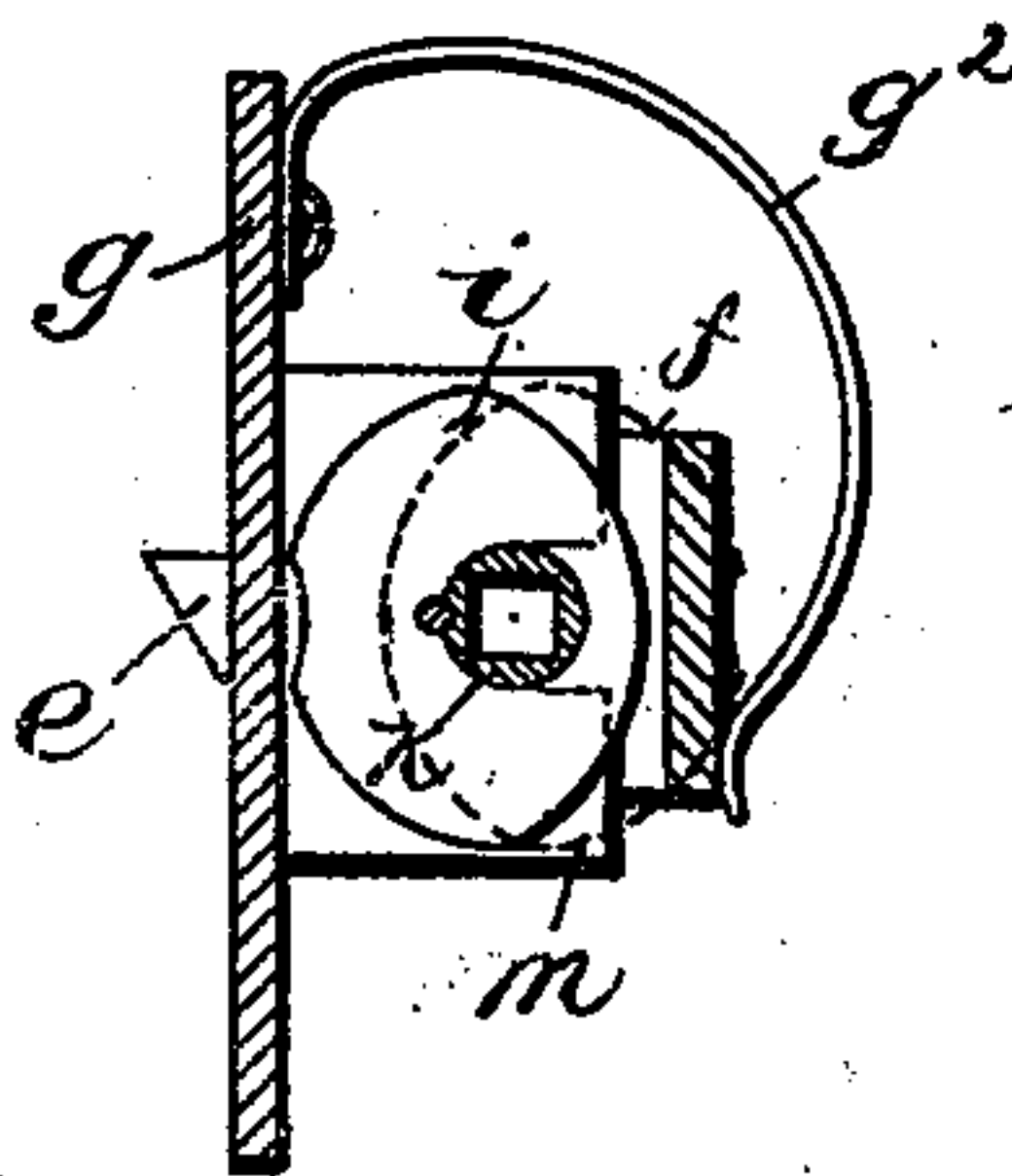


Fig. 5.

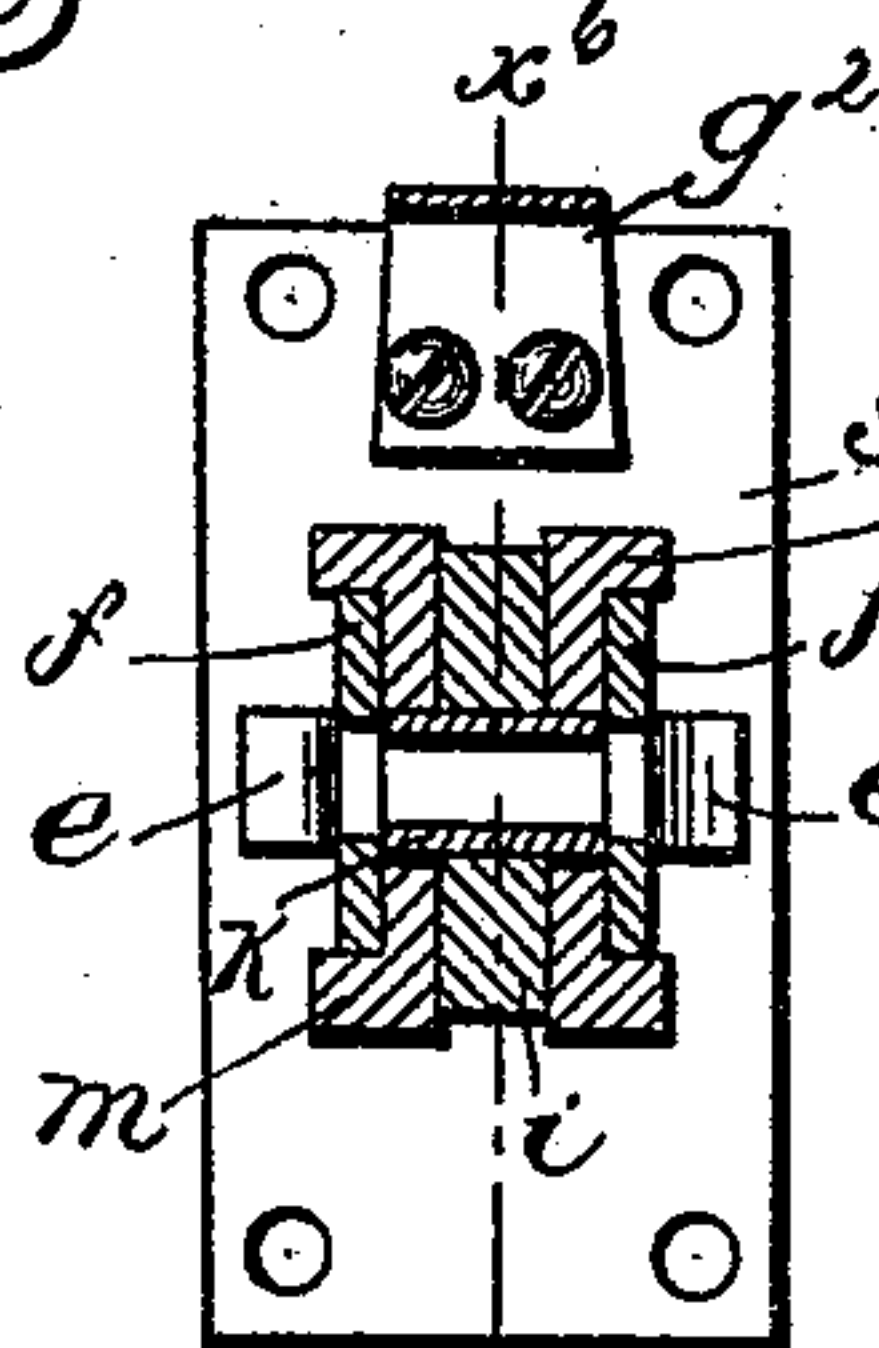
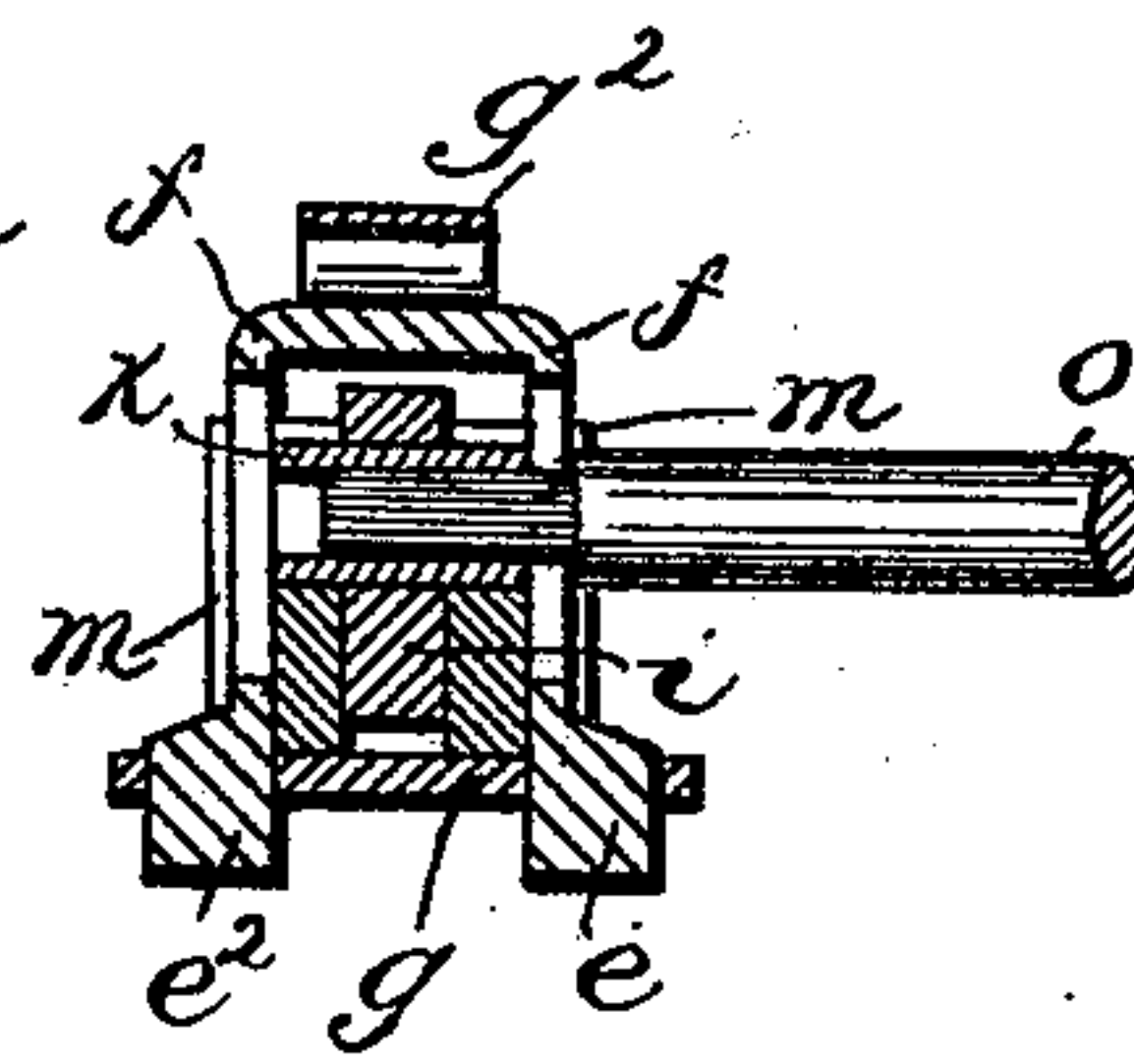


Fig. 7.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY W. RHOADS, OF PASSAIC BRIDGE, NEW JERSEY, ASSIGNOR TO THE
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SASH-FASTENER.

SPECIFICATION forming part of Letters Patent No. 514,035, dated February 6, 1894.

Application filed May 31, 1893. Serial No. 476,059. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. RHOADS, of Passaic Bridge, county of Bergen, State of New Jersey, have invented an Improvement in Sash-Fasteners, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention relates to a sash fastener and is embodied in a fastener adapted to engage with and lock each sash at any desired position in its run so that either or both sashes may be left part way open for ventilation but securely locked against further opening movement. The fastening comprises a toothed locking bar fixed to the stile of each sash, the one on the lower sash being on the rear edge of the stile thereof next to the parting bead and extending downward from the top of the sash, while the locking bar on the upper sash is near the front of the stile and consequently also near the parting bead and it extends upward from the lower edge of the upper sash. These bars generally need not be over six or eight inches in length as it is of no advantage to fasten the sashes if they are to be left open more than six or eight inches each, and the locking bar on the lower sash has upwardly inclined ratchet teeth, while the one on the upper sash has similar ratchet teeth, but downwardly inclined. The other member of the fastening is mortised into the casing of the sash frame about at the level of the meeting rails of the sashes when closed, said fastening member comprising a pair of dogs or spring actuated pawls, one co-operating with each of the locking bars on the sashes. These pawls work in a frame piece having a face plate that lies in the sash runs of the window frame, one pawl projecting at each side of the parting bead, and being of proper shape to prevent upward movement of the lower sash or downward movement of the upper sash by engagement with the ratchet toothed bars on said sashes. The pawls are normally pressed outward by a spring, but may be retracted so as not to project from the sash runs by means of a cam operated by a key introduced from the front of the window casing.

Figure 1 is a front elevation of a portion of the window frame and sashes provided with

a sash fastener embodying this invention; Fig. 2 a transverse section on line x^2 , Fig. 1; Fig. 3 a vertical section on line x^3 , Fig. 2, showing the locking bar of the lower sash and the entire frame member of the lock in side elevation; Fig. 4 a face view or front elevation of the frame member of the locking device detached; Fig. 5 a rear elevation thereof partly in section on line x^5 , Fig. 3; Fig. 6 a longitudinal vertical section at the point indicated by the line x^6 , Fig. 5; Fig. 7 a horizontal section at line x^7 , Fig. 4.

The fastening comprises a locking member a , see Figs. 2 and 3, at the rear corner of the stile of the lower sash b and a similar locking member a^2 at the front inside edge of the upper sash b^2 said members consisting of ratchet toothed bars of a length equal to the greatest distance that it is desired to open the sashes and fasten them against further movement. It is obvious that the bars might extend the entire length of each sash; but usually a length of five or six inches will be sufficient for all practical purposes. Each bar has teeth of ratchet shape, those on the lower sash inclining upward, and those on the upper sash inclining downward and the said bars are adjacent to and one at the front and the other at the rear of the parting bead c , of the sash frame. These locking bars co-operate with the other member of the fastening which is mortised into the side member or casing d of the window frame, and comprises two dogs or pawls e , e^2 , see Figs. 4 and 7, connected with a U-shaped piece or pawl carrier f working in guides in a frame piece having a face plate g which is let into the face of the casing d of the sash frame under the parting bead c as best shown in Fig. 2. The face plate g is thus flush with the runway or surface of the casing d on which the sashes are guided in their up and down movement, and the pawls e , e^2 , are in line with the locking bars a , a^2 , that is, one at the front and the other at the rear of the parting bead c which may extend across the front of the face plate g . Each pawl e , e^2 , is properly inclined to co-operate with a corresponding locking bar a , or a^2 , the pawl e for example engaging with the teeth of the bar a so as to prevent upward movement of the lower sash b while the pawl, e^2 ,

engages with the bar a^2 so as to prevent downward movement of the upper sash b^2 so that both sashes are securely locked against further opening movement at whatever position they may be when the pawls e, e^2 , are thrown into engagement with the bars a, a^2 . The said pawls e, e^2 , are thrown outward at the proper time to engage with the bars a, a^2 , by means of a spring g^2 which bears against the rear side of the U-shaped pawl carrier f and thus presses the pawls e, e^2 , outward so that they project from the face plate g although they can yield inwardly, and will thus prevent a downward movement of the lower sash or upward movement of the upper sash while permitting movement of either sash in the opposite direction.

In order to unlock the sashes so that they may run up and down freely the pawls e, e^2 , are retracted so as not to project beyond the face plate g by means of a cam or eccentric i fastened to a shaft k and working between the guide projections m at the rear of the face plate g in which the pawl carrier f operates. The shaft k of the cam i is provided with a squared hole or otherwise properly shaped to be engaged by a key o , see Fig. 2, which may be inserted through an opening o^2 at the front of the window frame and the said eccentric is in position to engage with the rear portion of the pawl carrier f so that when turned to the position shown in dotted lines Fig. 6, it will force the pawls backward or inward against the stress of the spring g^2 thus disengaging the pawls from the locking bars a, a^2 , and leaving the sashes free to run. The pawl carrier f is slotted where it is traversed by the key o as best shown in Figs. 3 and 6, so as to permit the movement of the pawl carrier in its guides, and the cam i is flattened or

recessed at the point of greatest throw or eccentricity as shown in Fig. 6, to prevent accidental turning after it has been brought to the position to fully retract the pawls e, e^2 . With the cam i in the position shown in full lines Fig. 6 the pawls e, e^2 , are under control of the spring g^2 and will engage with the locking bars a, a^2 , at each tooth thereof and while permitting a closing movement of either sash will prevent any opening movement thereof, but with the said cam turned half round to the position shown in dotted lines Fig. 6, the pawls are retracted and the sashes are unlocked and may be moved up and down freely as required. The locking bars a, a^2 , overlap one another slightly when the sashes are fully closed, and the herein described sash fastener forms an efficient lock to hold the sashes fully closed as well as to fasten them when open a short distance.

I claim—

A sash fastener comprising a ratchet toothed locking bar a having upwardly inclined teeth on the lower sash and a ratchet toothed locking bar a^2 having downwardly inclined teeth on the upper sash combined with a fastening member adapted to be secured in the casing of the sash frame having pawls to cooperate with said locking bars a spring to throw said pawls outward into engagement with said locking bars and a retractor to withdraw the said pawls from engagement with the locking bars, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY W. RHOADS.

Witnesses:

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FRANK W. WILLIAMSON.