

(No Model.)

2 Sheets—Sheet 1.

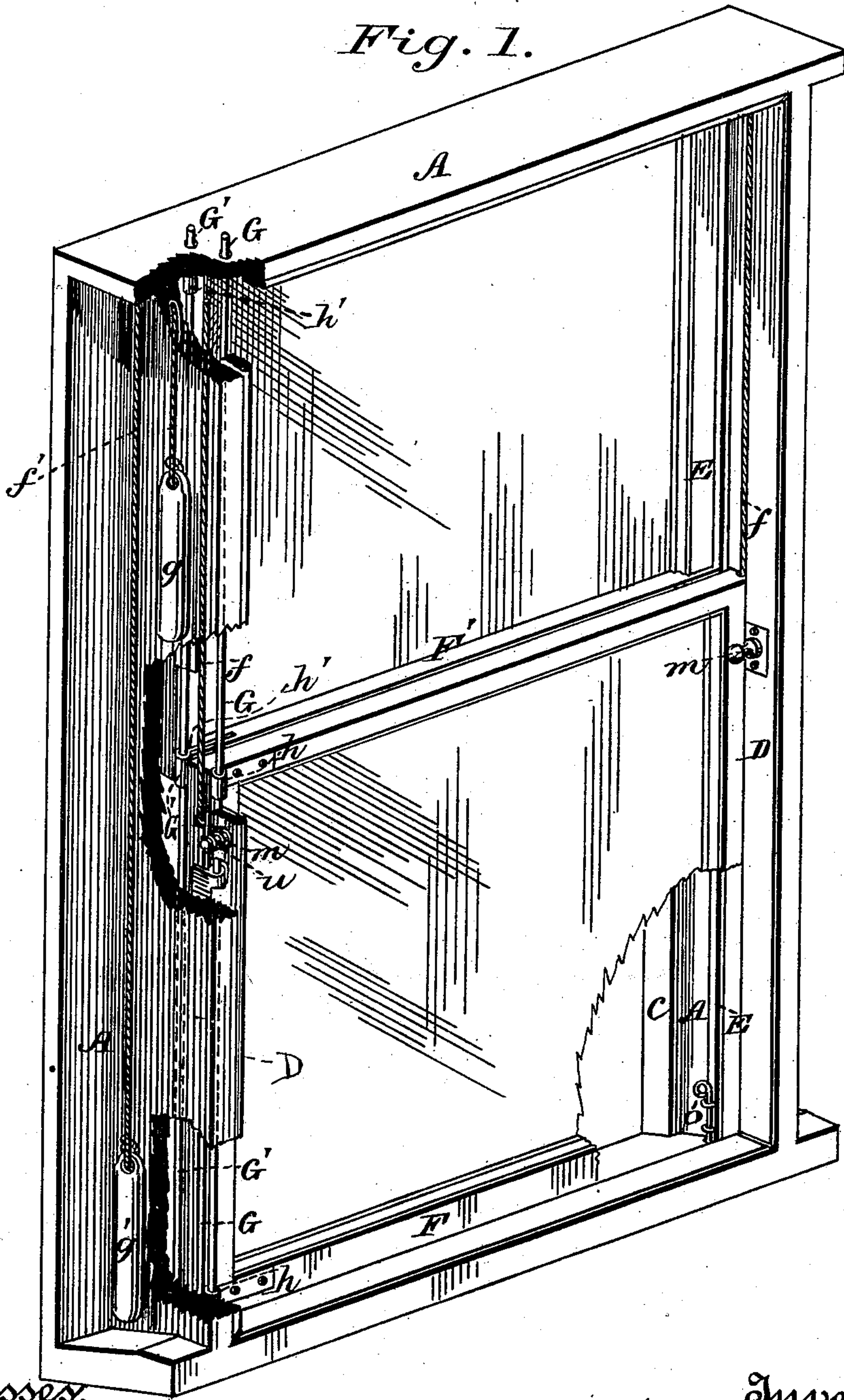
J. GRUNINGER.

WINDOW SASH AND FRAME.

No. 273,355.

Patented Mar. 6, 1883.

Fig. 1.



Witnesses,
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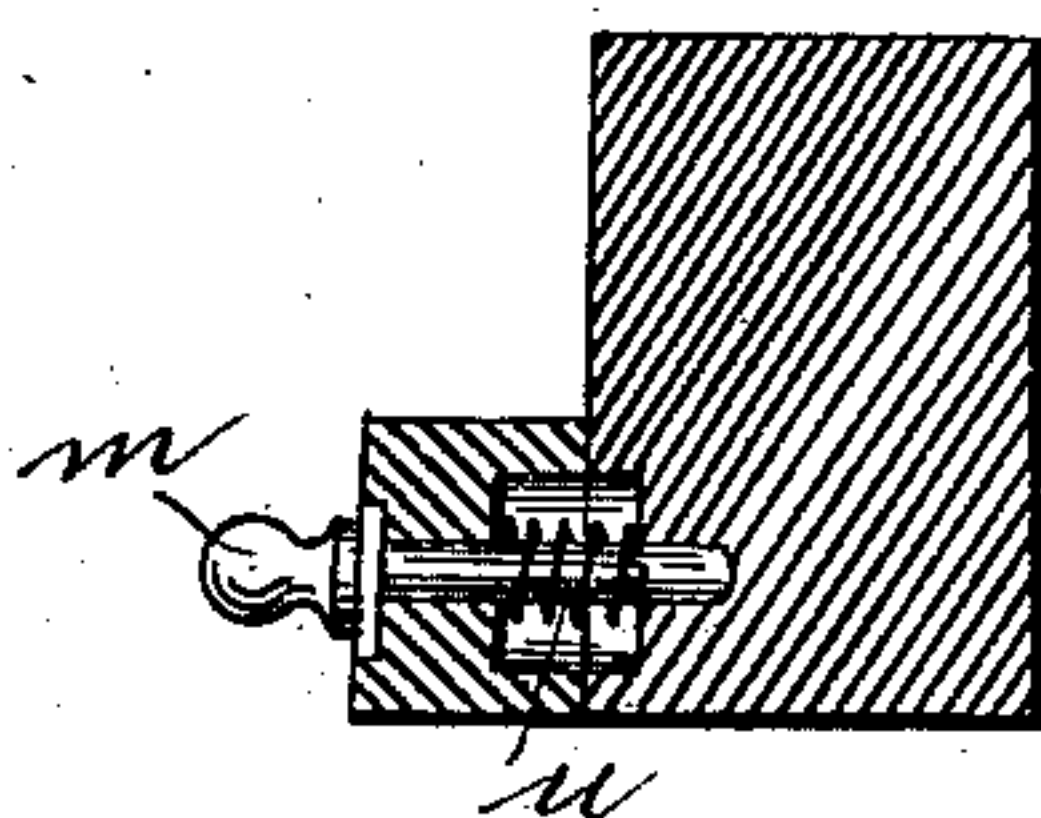
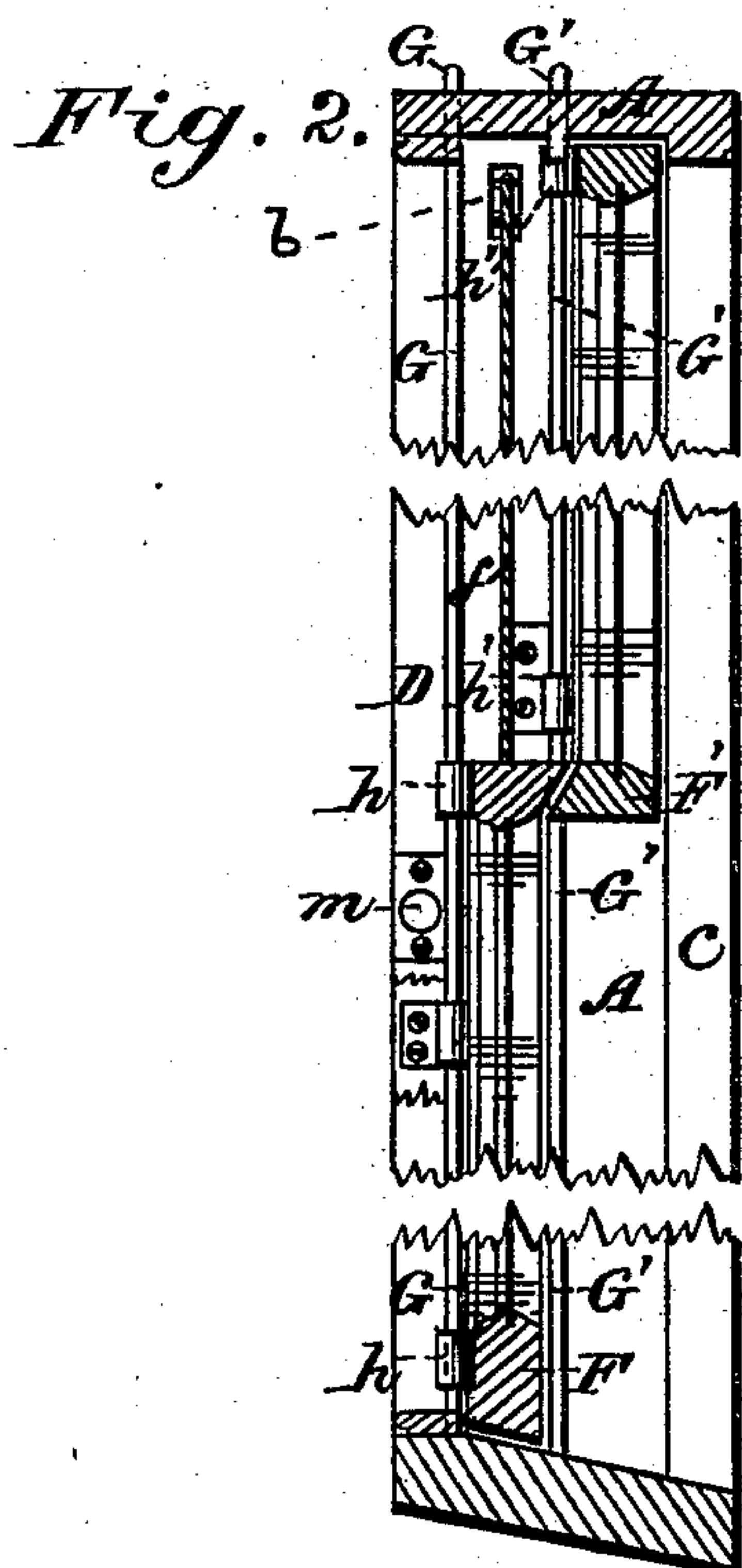
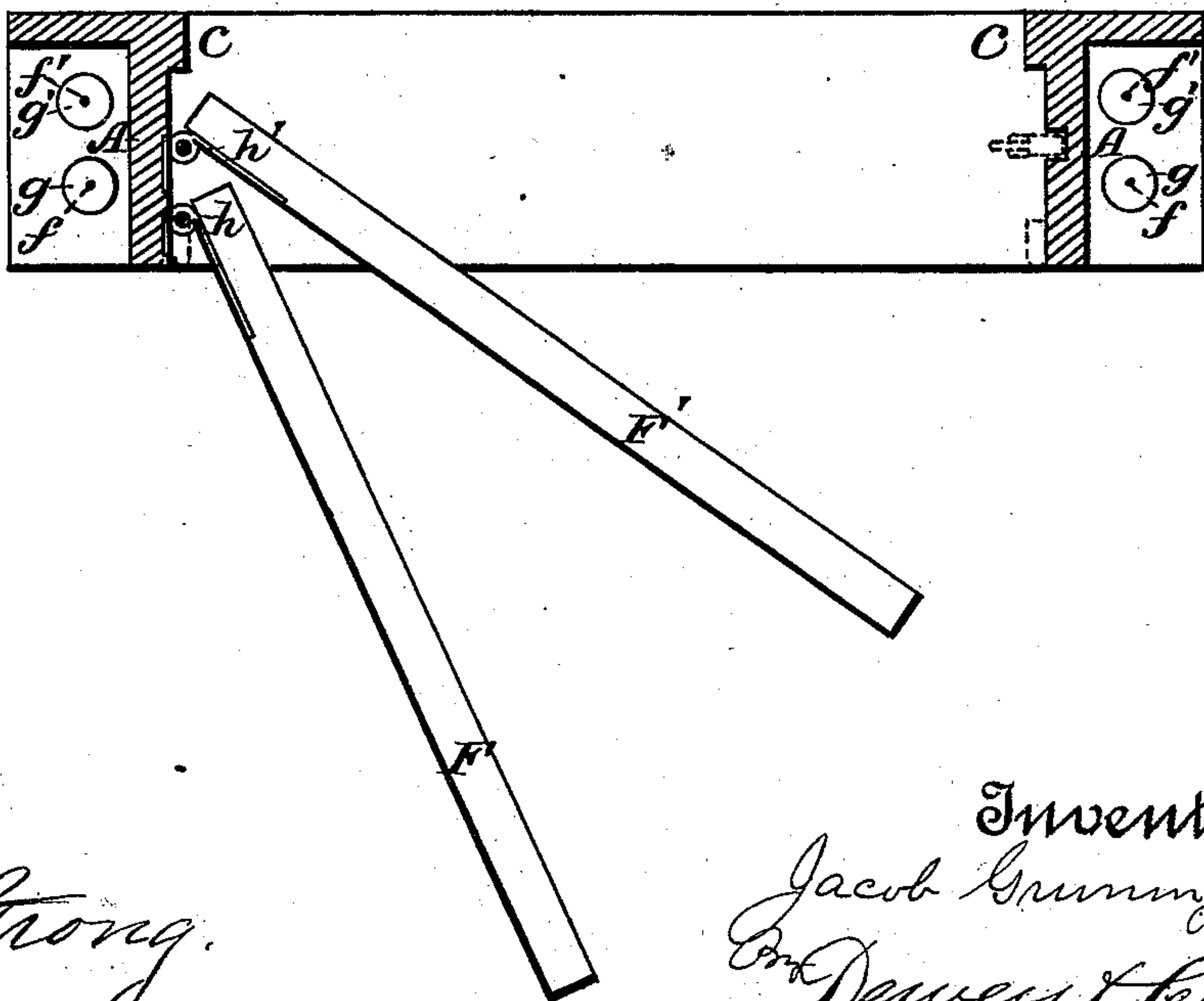


Fig. 3.



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UNITED STATES PATENT OFFICE.

JACOB GRUNINGER, OF SAN FRANCISCO, CALIFORNIA.

WINDOW SASH AND FRAME.

SPECIFICATION forming part of Letters Patent No. 273,355, dated March 6, 1883.

Application filed October 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, JACOB GRUNINGER, of the city and county of San Francisco, State of California, have invented an Improved Window Sash and Frame; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a new and useful improvement in window sashes and frames; and it consists in a means for hinging the window-sashes in their frames, whereby by the removal of the inside beads and a parting-strip both sashes may be swung to the inside, as will hereinafter fully appear.

The object of my invention is to provide easy access to the outer surface of the windows for purposes of cleaning. When the sashes are fast in their frames there is much danger in getting at the outside to wash the glass, and many accidents have occurred; but by swinging the sashes into the room the glass may be washed on the outside with safety and convenience.

Referring to the accompanying drawings, Figure 1 is a perspective view of the device. Fig. 2 is a vertical section; and Fig. 3 is a plan in section, showing its operation.

Let A represent the frame, in the sides of which the pulleys *b* are mounted.

C are the outside beads; D, the inside beads, and E is a parting-strip on one side only.

F is the lower sash, and F' the upper sash, the former having cord *f* and weight *g*, and the latter cord *f'* and weight *g'*, whereby in the usual manner the sashes may be raised or lowered.

Secured upon the inside of frame A is a vertical rod, G, extending from bottom to top of the frame A. Upon this rod the lower sash, F, is hinged by bearings *h*, which permit it to be raised and lowered. Upon a similar rod, G', the upper sash is hinged by bearings *h'*.

In order to allow the sashes to swing upon their rods, it is evident that the inside beads, D, and the parting-strip E must be made removable. The inside beads are beveled at top and bottom to make neat joints, and have preferably a pin in their tops. At their centers they have pins *m* extending through and provided with springs *u*, whereby they are held

in place. Corresponding sockets in the sides of frame A receive the ends of the pins *m*, and these ends, projecting into the sockets, prevent the removal of the beads.

To remove the beads the pins *m* are pulled back to release their points from the sockets, and the beads may then be withdrawn from the bottom and entirely removed. Then the lower sash may be swung into the room, taking care to first release the cord *f* from its face. When ready to be turned-back the cord *f* may be drawn down and refastened. The parting-strip E is loosely fitted in its place, and is held there by a sliding pin or catch, *o*, at its bottom. The lower sash being turned into the room and the parting-strip removed, the upper sash may be pulled down and also turned into the room, after first releasing one of its weight-cords. When the outside of the glass is washed the cord is refastened, and the upper sash turned back to its place and secured by the insertion of the parting-strip. The lower sash is then turned into place, after having refastened its cord, and both inside beads are put in position. The whole operation is thus completed with convenience and safety.

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

1. The window-frame A, having fixed outside beads, C, a removable parting-strip, E, on one side, removable inside beads, D, and the vertical rods G G' on one side, in combination with the window-sashes F F', hinged on said rods, and adapted to be vertically adjusted by means of cords and weights, as shown, substantially as and for the purpose herein described.

2. The window-frame A and vertically-adjustable hinged window-sashes F F', in combination with the removable inside beads, D, having pins *m* fitting in sockets in the frame, and held automatically in position in the beads by coiled springs surrounding them, substantially as herein described.

In witness whereof I hereunto set my hand.
JACOB GRUNINGER.

Witnesses:

JNO. J. MCCARTHY,
J. H. BLOOD.