

(No Model.)

L. OPPENHEIM.

WINDOW SASH.

No. 394,003.

Patented Dec. 4, 1888.

Fig. 1.

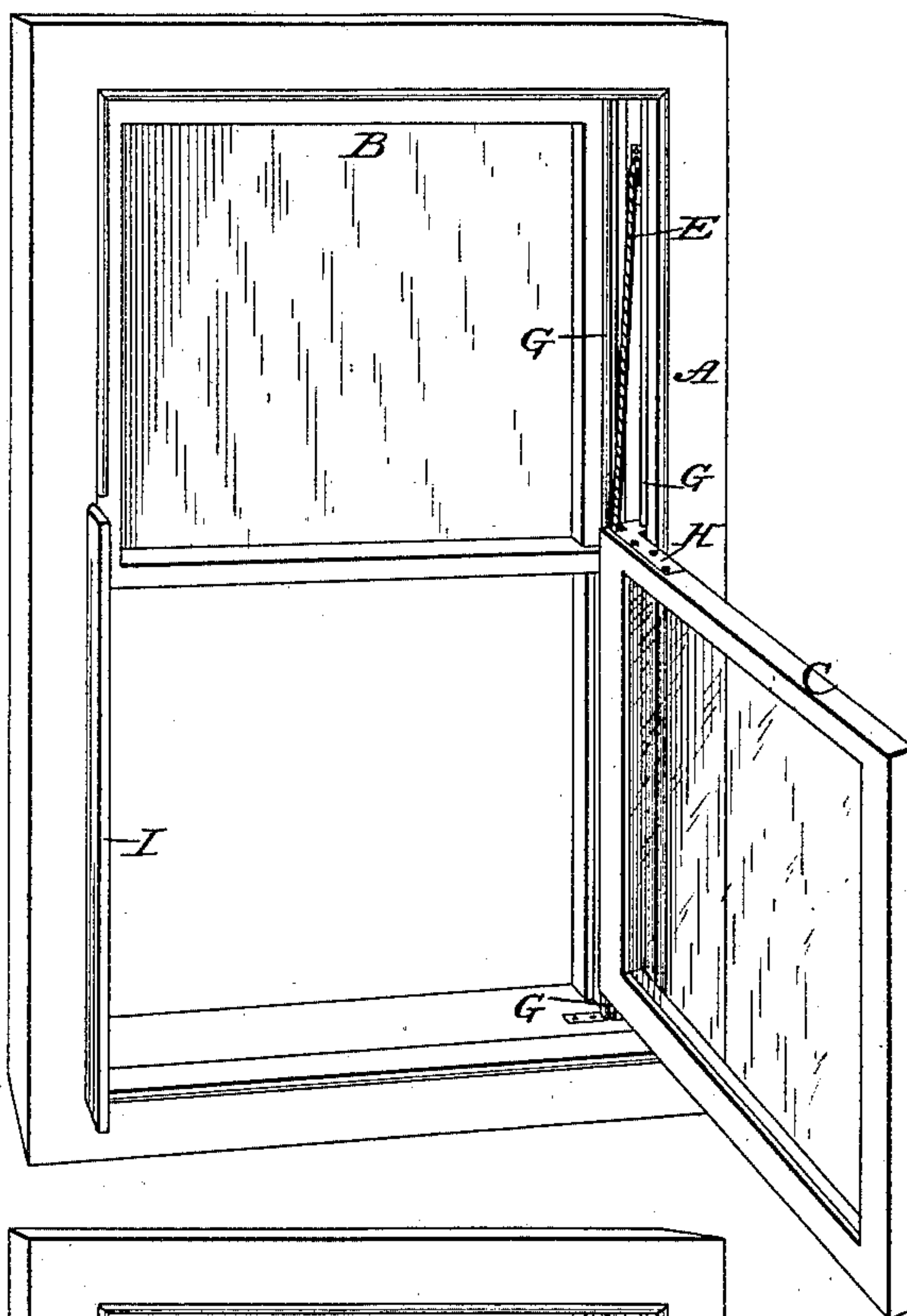


Fig. 3.

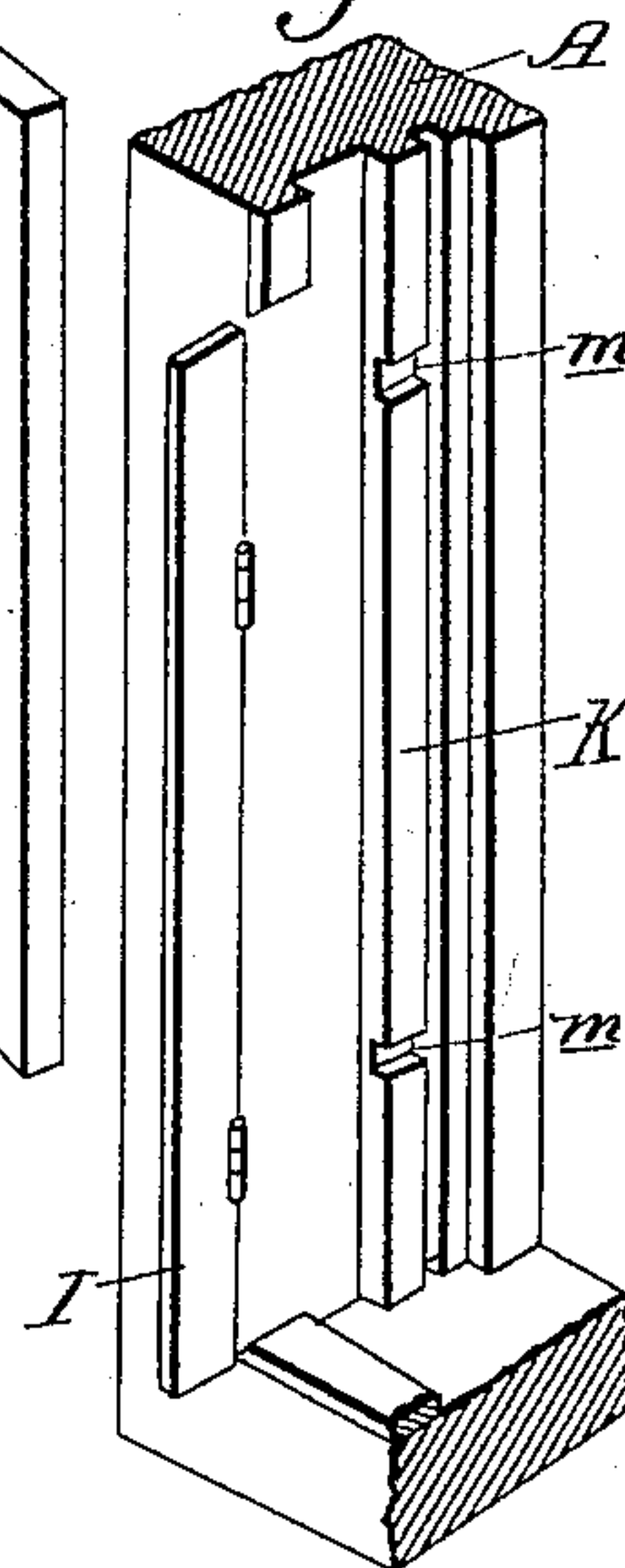
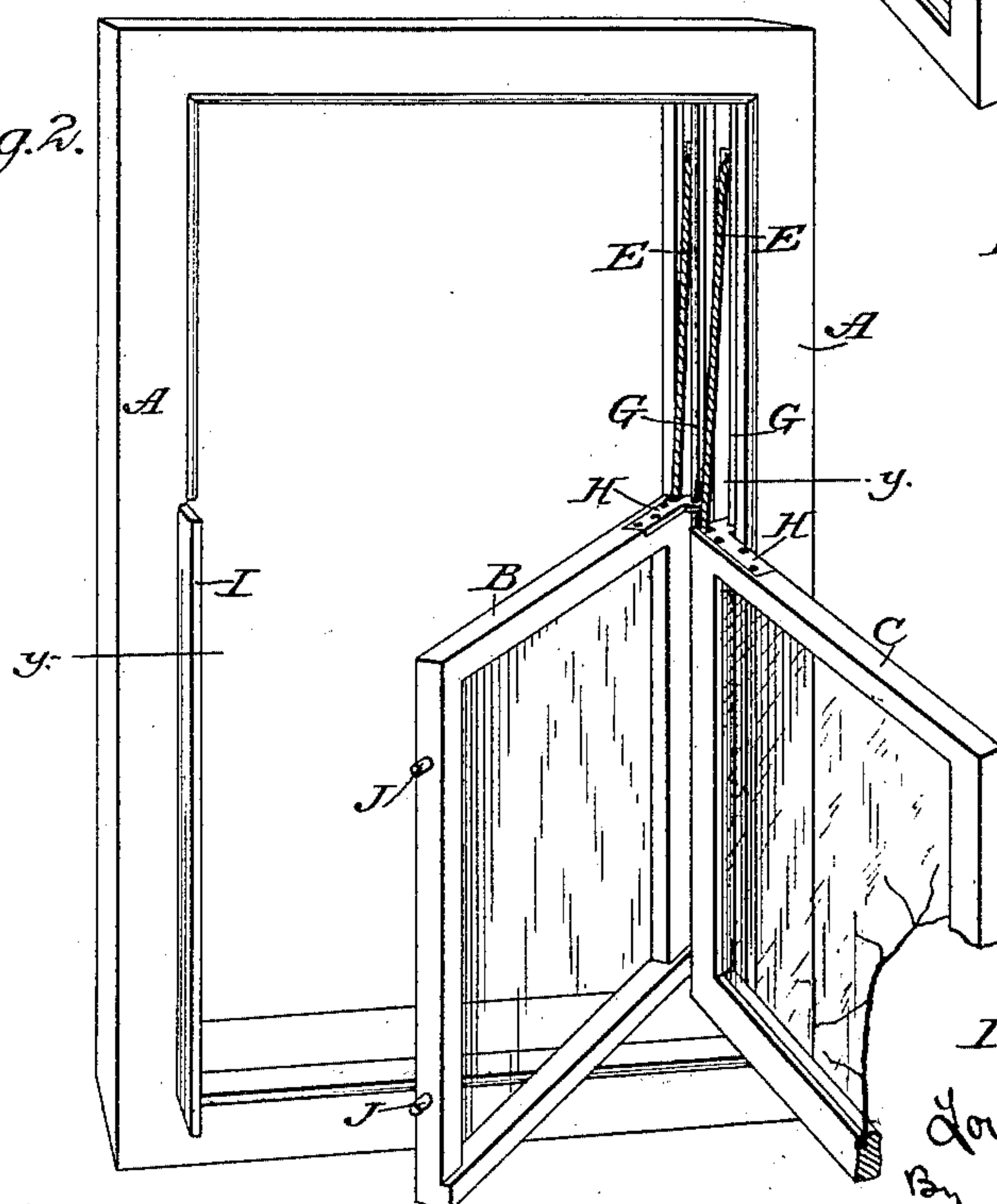


Fig. 2.



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UNITED STATES PATENT OFFICE.

LOUIS OPPENHEIM, OF NEW YORK, N. Y.

WINDOW-SASH.

SPECIFICATION forming part of Letters Patent No. 394,003, dated December 4, 1888.

Application filed July 24, 1888. Serial No. 280,907. (No model.)

To all whom it may concern:

Be it known that I, LOUIS OPPENHEIM, residing in the city, county, and State of New York, have invented certain new and useful
5 Improvements in Window-Sashes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a
10 part of this specification, in which—

Figure 1 is an elevation in perspective of a window fitted with hinged sashes embodying my invention, with the lower sash swung inward; Fig. 2, a similar view showing the
15 upper sash lowered and both sashes swung inward; and Fig. 3, a detached view, in perspective, of a portion of one side of the casing, illustrating the slotted parting-strip and hinged stop-strip.

20 Similar letters indicate like parts in all of the figures.

The object of my invention is to provide, by direct simple means, for the ready opening of hinged window-sashes counterbalanced
25 by weights and otherwise adapted in the customary manner to be raised and lowered in the casing.

It consists in the combination, with the ordinary counterbalanced window-sashes pivoted upon a vertical pivot-rod fixed at one
30 edge of each sash upon one side of the middle of its thickness by hinge-plates secured to the top and bottom of the sash and formed with a lateral eye adapted to embrace the
35 pivot-rod, of a transversely-slotted parting-strip to engage pins in the free lateral edge of the upper sash and a hinged stop-strip to engage the free lateral edge of the lower sash.

In the accompanying drawings, A represents the casing of a window of ordinary form and construction, B its upper sash, and C its
40 lower sash. The sashes B and C are fitted to move up and down in the casing A in the customary manner, and are counterbalanced by the usual weights, D D, attached to one edge
45 thereof by cords E E, carried over the friction-pulleys F F to depend and work in the vertical box formed in the casing to receive them. In all these particulars the sashes may be
50 formed and fitted in the usual manner, for my invention may be readily applied, with

but slight changes, to the customary forms of window-sashes now in use.

To carry out my invention vertical iron rods G G are secured parallel with and adjacent to that side of the window-casing in
55 which the weights are placed, and in line with or just outside of the inner face of each sash B and C, so as to be out of line with or in front of a vertical plane passing centrally
60 through the thickness of the sash and inside of the proximate lateral edge of the sash when it is in its place in the casing. These upright pivot-rods G G are each made fast to the casing at top and bottom, but are otherwise free
65 for their entire length.

Hinge-plates H H, formed with a suitable eye to embrace the rod G, and with a body adapted to be readily secured to the top and bottom of the sash, as shown, or to its inner
70 face, are fitted upon each rod G and G and made fast to the top and bottom of the sash, so as to hinge the sash upon the rod without interfering with its ordinary free up or down
75 movement in the casing.

The opposite or free lateral edge of the lower sash, C, is guided in its vertical movements by the customary stop-strip I; but this strip is hinged to the casing to permit it to
80 open out, so as to allow the edge of the sash to turn outward from the casing when it is desired to swing the sash open, as shown in the drawings.

The free lateral edge of the upper sash is confined and guided in its vertical movements
85 as the sash is lowered or raised by means of pins J J, (see Fig. 3,) projecting therefrom into the longitudinal guiding groove or recess formed, as usual, by the parting-strip K of the casing, and this parting-strip is notched
90 or transversely slotted at suitable points (see at *m* in Fig. 3) to permit the pins J J to pass through it when it is desired to swing the upper sash inward, as shown in Fig. 2.

In the use of the window thus fitted or constructed, both the upper and lower sashes are
95 free to move up and down, being counterbalanced by the weights D D, applied to one edge thereof, to operate in the usual manner. At the same time either sash may be swung
100 inward as a door.

To swing open the lower sash, C, the hinged

stop-strip I is opened, so as to release the free side edge of the sash, as shown in Fig. 1. The sash may then be turned upon its hinges H H without interfering with the operation of the sash-cord E and weight D, by which it is counterbalanced. To swing open the upper sash, B, it is only necessary to drop it until its retaining-pins J J are in register with the transverse slots or notches *m* in the parting-strip K, whereupon it may be freely swung out upon its hinges. After being thus opened either sash may still be raised or lowered, as illustrated in Fig. 2, its vertical movements being guided by the pivot-rod G to which it is hinged.

I am aware that window-sashes have heretofore been hinged at one edge upon vertical rods, upon which they are free to be raised and lowered, and hence I do not claim, broadly, this feature of my invention.

My improvement relates specially to the peculiar novel devices whereby the sashes may be swung upon their hinges when desired without removing the stop and parting strips from the casing.

I claim as my invention—

1. The combination, with a window-casing and a sash mounted both to move up and down in said casing and to swing therein, of pins fitted in the free lateral edge of the sash, and a strip engaging said pins to confine the sash and having transverse slots to register with the pins and thereby permit a swinging movement of the sash, substantially in the manner and for the purpose herein set forth.

2. The combination, substantially as set forth, of the window-casing, the sashes mounted to move up and down and to swing therein, the transversely-slotted parting-strip, the hinged stop-strip, and the pins in the lateral edge of the upper sash adapted to register with the slots in the parting-strip, substantially in the manner and for the purpose herein set forth.

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

LOUIS OPPENHEIM.

Witnesses:

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E. M. WATSON.