(No Model.)

N. J. SKAGGS.
SASH BALANCE.

No. 409,376. Patented Aug. 20, 1889.

Fig. 1.

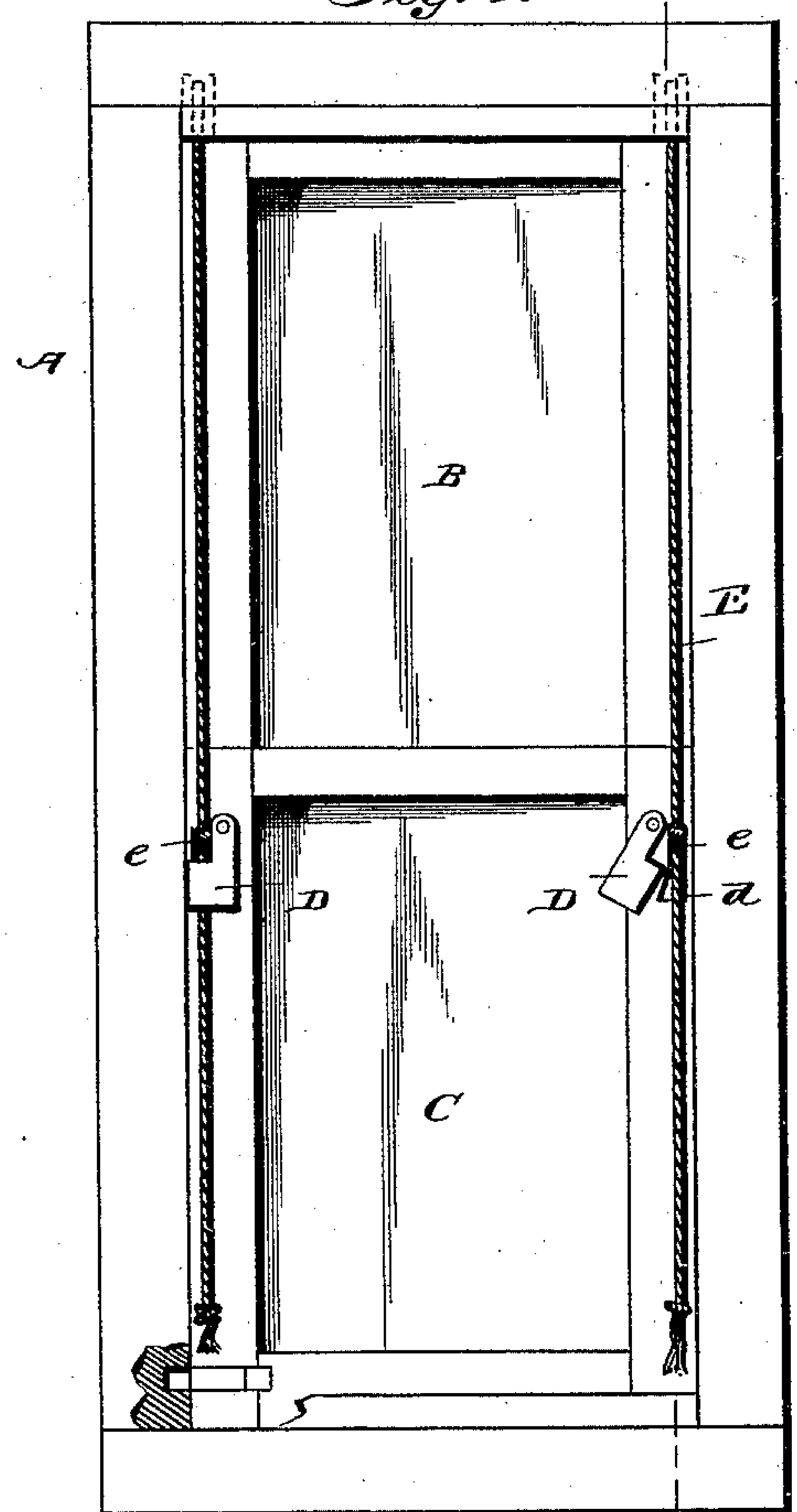


Fig. 3.

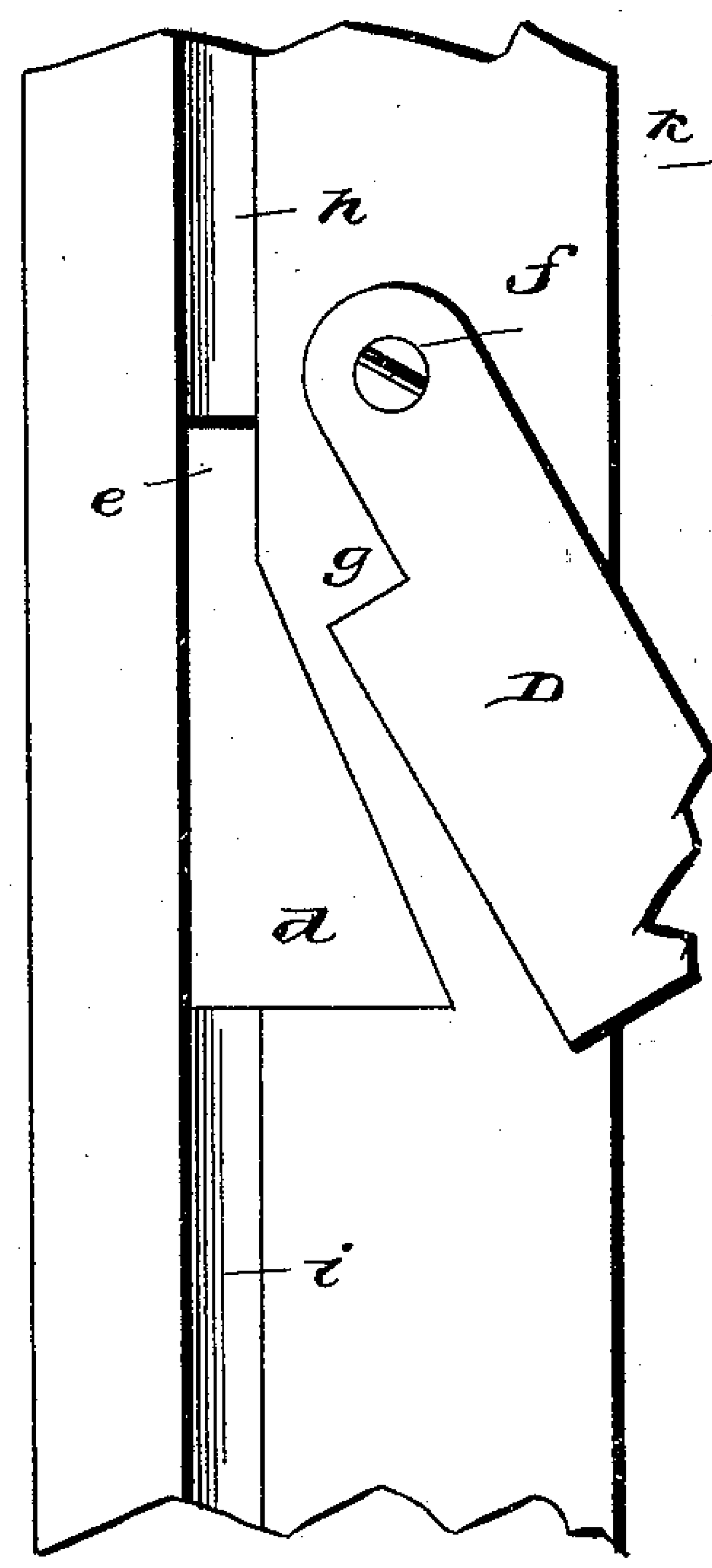


Fig. 2.

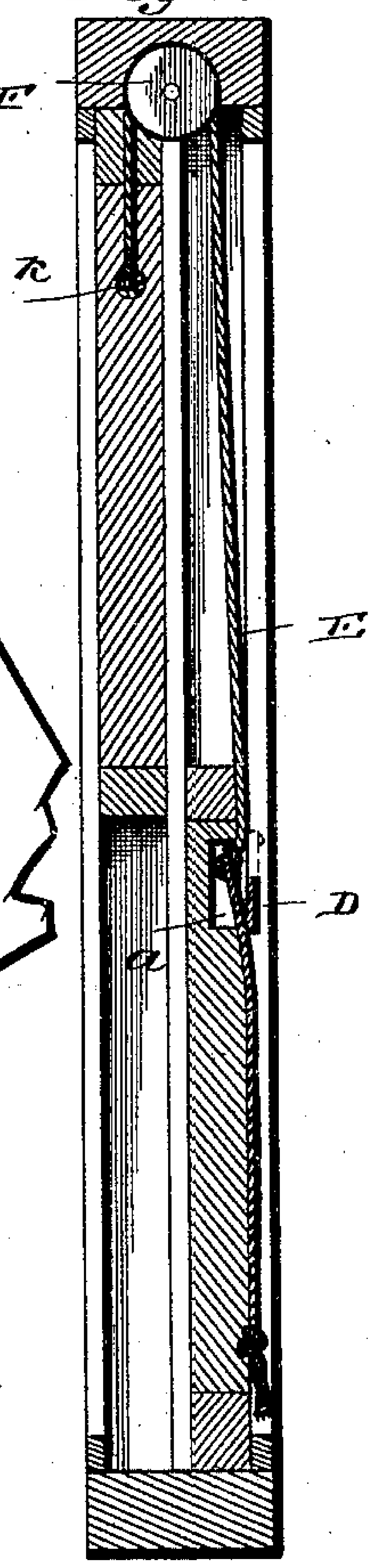
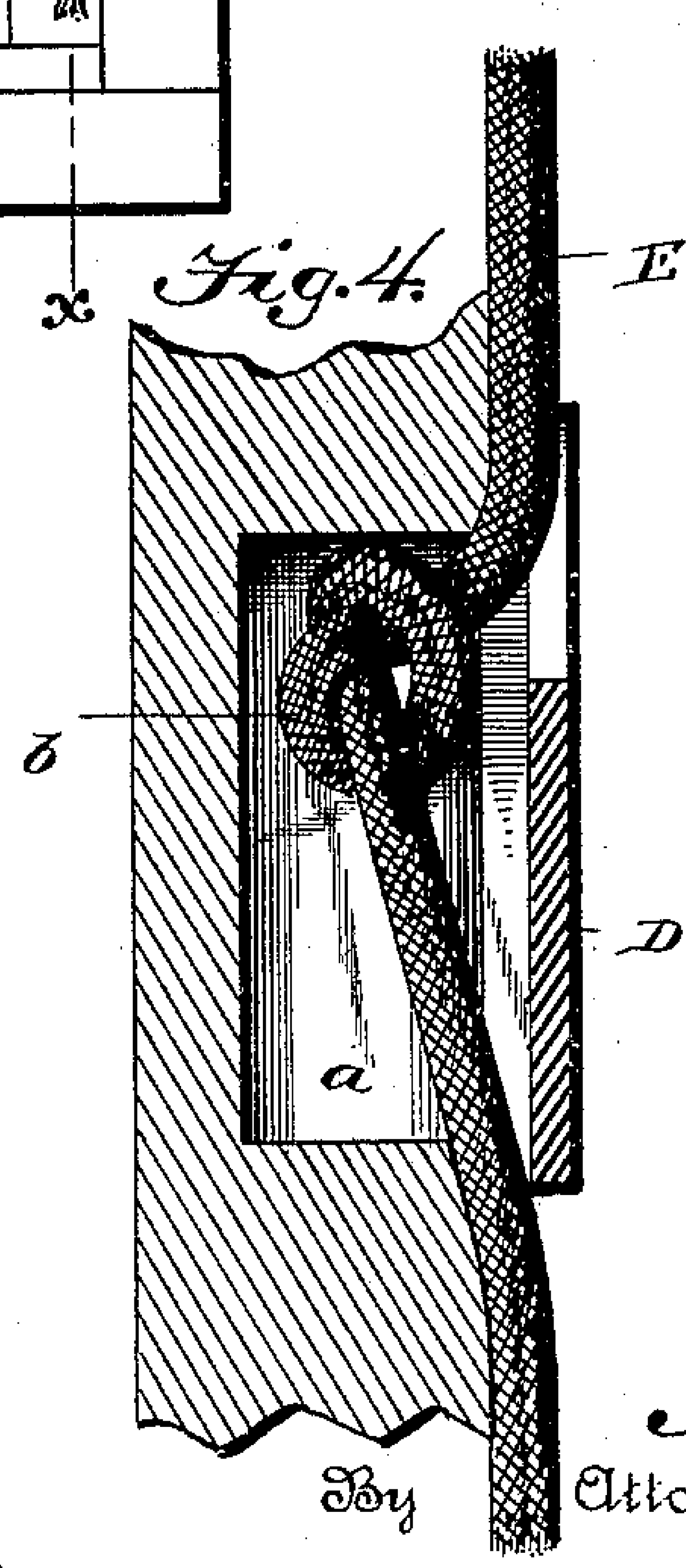


Fig. 4.



Witnesses

[illegible]

[illegible]

Inventor

Newton J. Skaggs.

By Attorneys

Smith & Shuley.

N. PETERS, Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

NEWTON J. SKAGGS, OF MONTGOMERY, ALABAMA.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 409,376, dated August 20, 1889.

Application filed May 13, 1889. Serial No. 310,513. (No model.)

To all whom it may concern:

Be it known that I, NEWTON J. SKAGGS, a citizen of the United States, residing at Montgomery, in the county of Montgomery and State of Alabama, have invented certain new and useful Improvements in Sash-Cord Fasteners; 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.

This invention has relation to improvements in sash-balances and sash-cord fasteners; and the novelty will be fully understood from the following description and claim, when taken in connection with the accompanying drawings, in which—

Figure 1 is a front view of the window with my improvements applied. Fig. 2 is a vertical sectional view taken on the dotted line *x x* of Fig. 1. Fig. 3 is an enlarged detail view of one of the lower sash-stiles with my improvements applied; and Fig. 4 is an enlarged sectional view of the said style, showing a cord with the knot in position.

Referring by letter to the said drawings, A indicates the window-frame, and B the upper and C the lower sash, which may be of any ordinary or approved construction.

The stiles of the lower sash C have mortises and communicating apertures, which are similar in construction, and a description of one will answer for both. These stiles, as better shown in Fig. 4, are provided at a suitable point in their outer sides and near their upper ends with a mortise *a*, sufficiently large to receive a knot—such as *b*—formed in the sash-cord.

In the face of each stile I form an aperture *d*, which is of approximately V form, communicating at its upper end with a rectangular reduced portion *e*. This aperture also communicates with the mortise *a*, formed in the side walls of the stile, and is designed to form an entrance for the knot in the cord, which is held therein by the peculiar formation of the mortise, and is assisted by a securing-plate D. This plate or button D, which is made of wood, metal, or other suitable material, is pivoted to the stile, as shown at *f*, so that it may cover the V-shaped aperture *d* and assist in retaining the knot in position within the mortise *a*. This pivoted plate D is cut away in an angular form, as shown at *g*, so that when it is in position covering the main portion of the aperture in the stile it will leave the reduced portion *e* of the said aperture exposed to permit the sash-cord to pass therefrom. The stile is furthermore provided in its face with a groove *h*, which extends a sufficient distance upward from the reduced portion *e* of the aperture, and a similar groove *i* is formed, leading a sufficient distance from the base of the said aperture *d* so as to receive the cord at those points.

E indicates the sash-cord, there being two employed. These sash-cords have one end secured in any suitable manner, as shown at *k*, to the stiles of the upper sash, the opposite ends of which are free, and provided at a suitable distance from the lower end with a knot *b*, designed to be placed through the V-shaped aperture *d* into the mortises *a* and there properly retained by the pivoted plate D. It will thus be seen that the sashes are connected by means of the cords or ropes, and that the said ropes may be readily attached and detached from the lower sash, overhead pulleys F being arranged in the upper portion of the frame, over which the cords are received and guided. The frame is furthermore provided at suitable points with apertures to receive bolts carried by the respective sashes, so that they may be locked in an open or closed position, as desired.

From the foregoing description, taken in connection with the annexed drawings, the operation of my invention will be obvious. It will be seen that the movements of one sash will control the movements of the other, and consequently an opening may be had from above and below, or the lower sash may be moved to the top, or vice versa.

Should it be desirable to allow the lower sash to remain down and let the upper one down beside it, it is simply necessary to turn the plates D to uncover the apertures *d* and remove the knots in the cord therefrom, when the weight of the upper sash by slackening the cord will allow it to come down.

Should it be desirable to lock both in an elevated position, the lower one may first be

raised and secured by its bolt to the casing. The cords can then be removed from the apertures in the stiles, and by drawing upon them the other sash can be raised and secured in position.

Having described my invention, what I claim is—

The combination, with a window-frame, of the sashes arranged therein, the lower sash having apertures *d* formed in the face of its stiles, which apertures communicate with a reduced rectangular aperture *e* and open into mortises *a*, the cords secured to the upper sash and having a knot adapted to be placed in the apertures of the lower sash-stile, and the pivoted plates having a cut-away portion *g* and adapted to cover *d* and confine the knots of the cords therein, substantially as specified.

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

NEWTON J. SKAGGS.

Witnesses:
JNO. MCINTYRE,
JAS. MCINTYRE.