

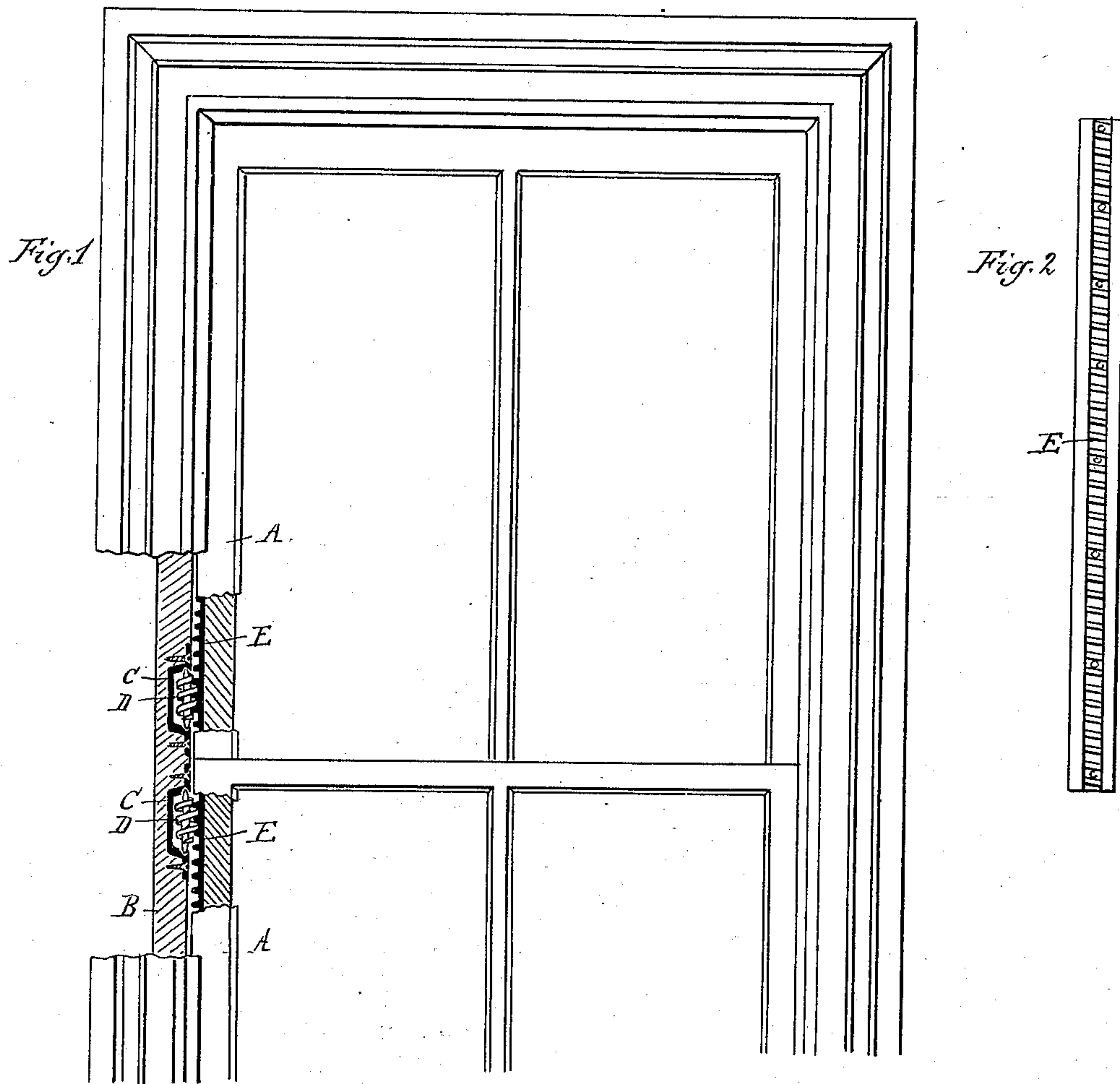
(Model.)

D. L. PHIPPS.

SASH BALANCE.

No. 278,042.

Patented May 22, 1883.



Attest:

A. Barthel

A. J. Sprague

Inventor:

Daniel L. Phipps

by his Atty *Wm. L. Sprague*

UNITED STATES PATENT OFFICE.

DANIEL L. PHIPPS, OF MILLINGTON, MICHIGAN.

SASH-BALANCE.

SPECIFICATION forming part of Letters Patent No. 278,042, dated May 22, 1883.

Application filed December 23, 1882. (Model.)

To all whom it may concern:

Be it known that I, DANIEL L. PHIPPS, of Millington, in the county of Tuscola and State of Michigan, have invented new and useful
5 Improvements in Devices for Hanging Window-Sash; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.
10

The nature of this invention relates to certain new and useful improvements in the construction and operation of devices for hanging window-sash, whereby each sash is balanced,
15 so to speak, in the frame without the employment of the cord, weights, and pulleys, as in the ordinary construction; and the invention consists in the peculiar construction, arrangement, and combination of the various parts,
20 all as more fully hereinafter set forth.

Figure 1 is an elevation of a window, with a portion of the frame broken away. Fig. 2 is an elevation of the edge of the sash.

In the accompanying drawings, A represents
25 the sash of a window, and B the jamb or frame. In the face of the jamb I form a recess to receive the recessed plate C, in which is pivotally secured, in any proper and convenient

manner, the worm D, the periphery of which projects slightly beyond the face of the jamb. 30 In the edge of the sash-frame I insert the rack-bar E, the face of the teeth of which are flush with the edge of the sash, and are upon the same pitch or inclination as the pitch of the worm D, with which the said rack-bar engages 35 when the sash is in place.

In practice it will be found that a window provided with this device can be easily raised or lowered, as may be desired, and with a worm and rack-bar will form a lock which will hold 40 the sash in the position in which it is left.

In fitting this device to the window the rack should extend the whole length of the sash, while the worm for the lower sash should be placed near the top of such sash and the one 45 for the upper sash near its lower end.

What I claim as my invention is—

In combination with a window-sash and the frame thereof, the worm D and rack E, when constructed, arranged, and operating substantially as and for the purposes set forth. 50

DANIEL L. PHIPPS.

Witnesses:

A. N. WOODARD,
A. B. WARD.