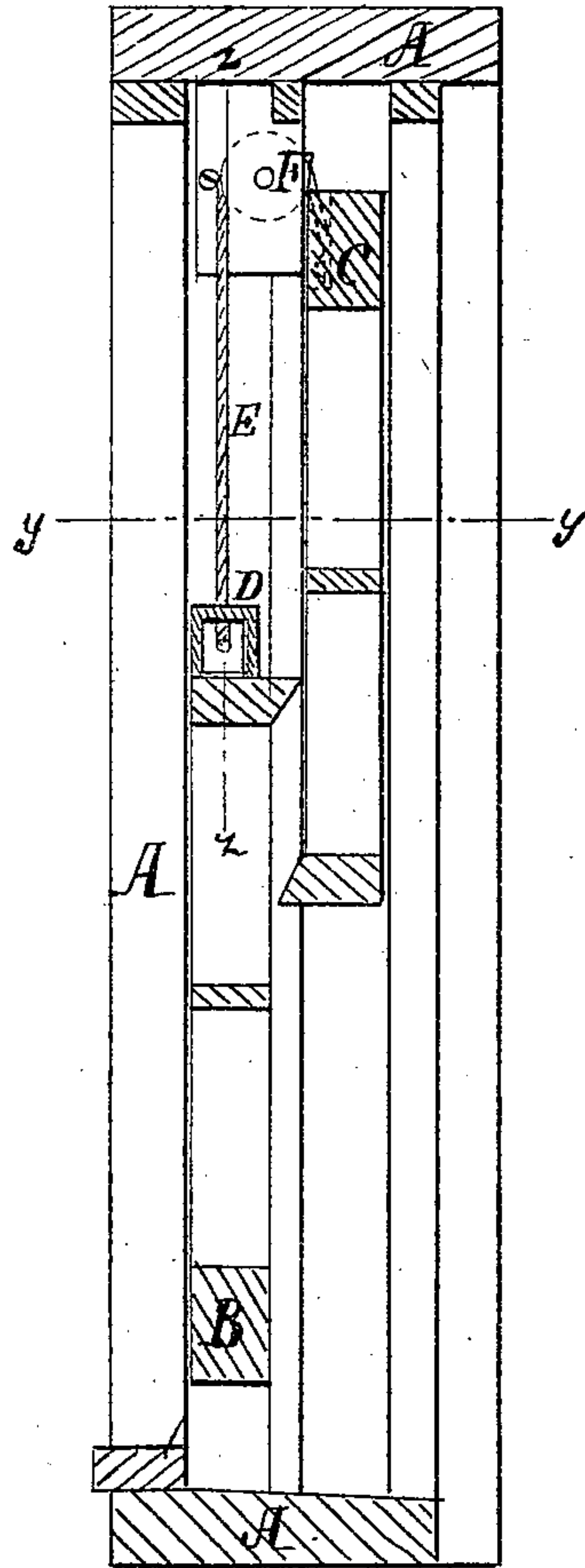


P. H. Hardy. Sash Adjuster.
assigned to Self & E. M. Hardy

Fig. 1

72850



PATENTED

DEC 31 1867

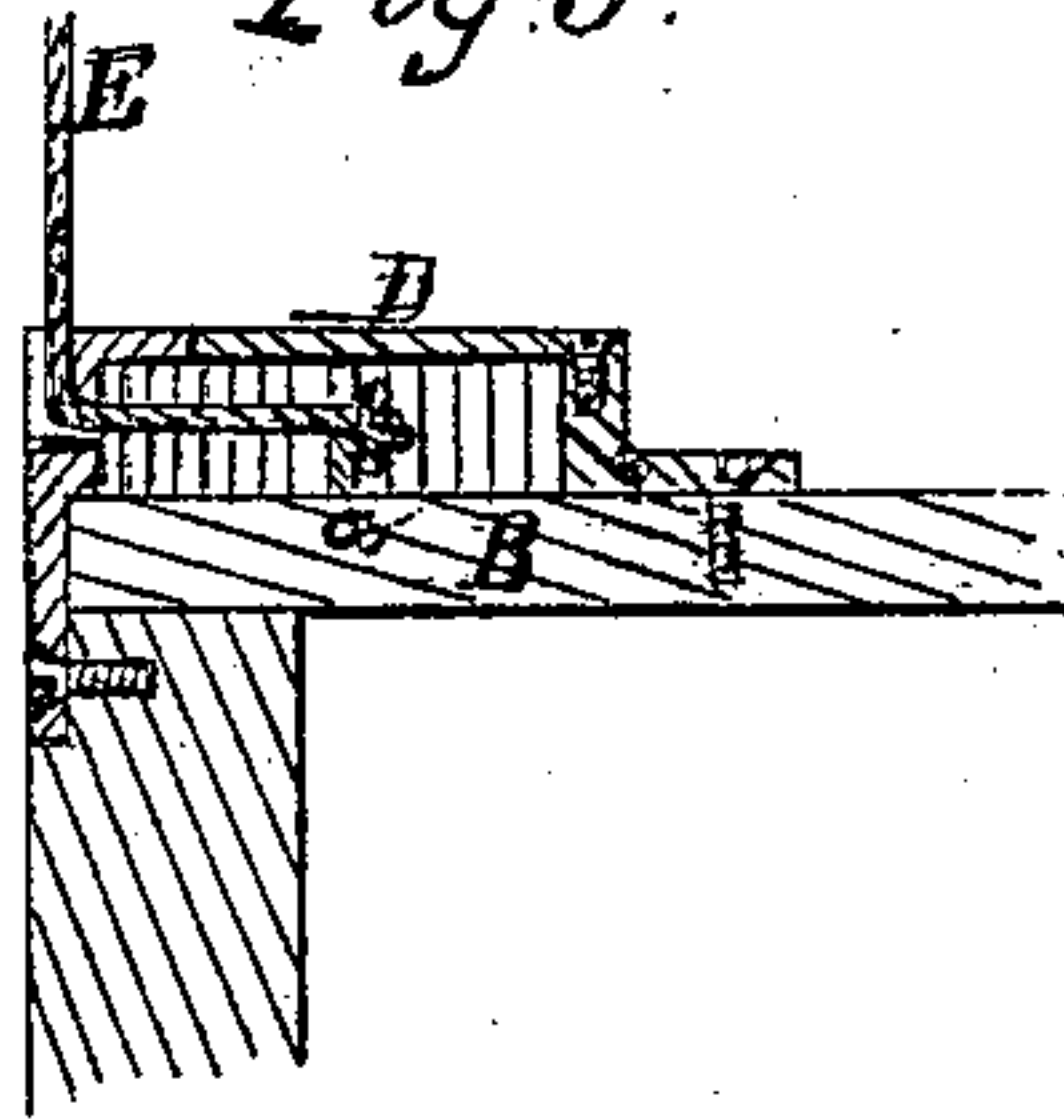
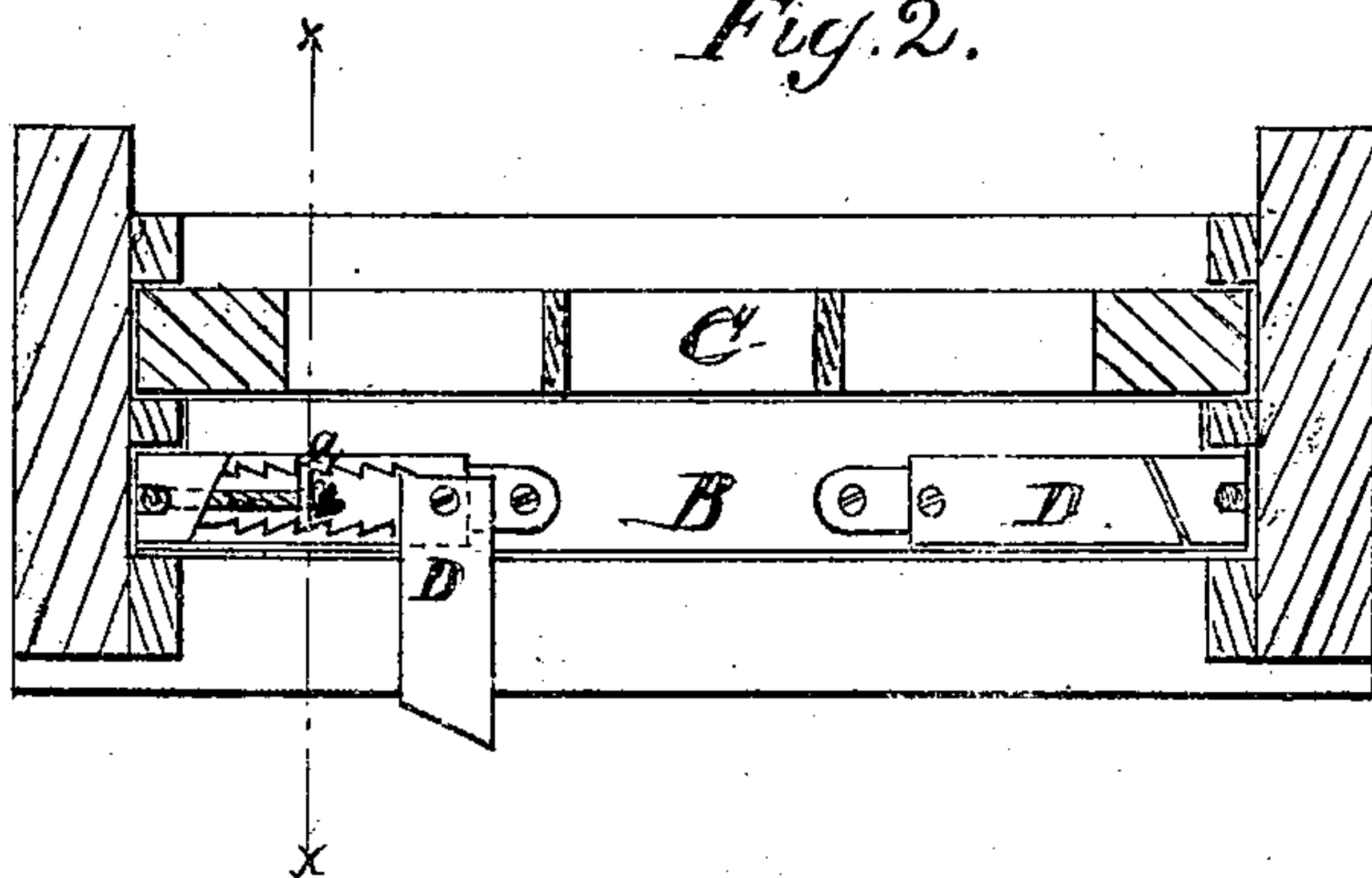


Fig. 2.



Witnesses:

Thos. Trushe
J. H. Fraser

Inventor:

P. H. Hardy
Per Munn & Attorneys

United States Patent Office.

P. H. HARDY, OF TERRE HAUTE, INDIANA, ASSIGNOR TO HIMSELF AND
E. M. HARDY, OF THE SAME PLACE.

Letters Patent No. 72,850, dated December 31, 1867.

IMPROVED SASH-ADJUSTER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, P. H. HARDY, of Terre Haute, in the county of Vigo, and State of Indiana, have invented a new and improved Sash-Adjuster; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The object of this invention is to provide a substitute for the expensive box, window-frame in common use, by adjusting the sashes with cords and pulleys attached to the sashes and to the frame in another and simpler manner.

And the invention consists in so attaching the cords and adjusting them that the sashes shall balance each other, and in the manner hereinafter described.

Figure 1 is a sectional elevation of a window, showing the frame with the sashes in place and with my adjusting-device attached, the section being through the line *x x* of fig. 2.

Figure 2 is a cross-section of fig. 1, through the line *y y*, showing the position of the adjusting-boxes on the lower sash.

Figure 3 is a vertical section of fig. 1 through the line *z z*.

Similar letters of reference indicate corresponding parts.

A represents the window-frame; B is the lower sash, and C is the upper sash; D represents the adjusting-boxes; E represents one of the cords; F represents the pulleys over which the cords pass. These pulleys are permanently attached to the upper-part of the frame, (one on each side,) and the cords being attached to the upper part of the upper sash, pass over the pulleys, and down on to the adjusting-boxes D. In these boxes the ends of the cords are attached to a stop-plate, which is seen in figs. 2 and 3 at *a*. The inner sides of these adjusting-boxes are notched or serrated, as seen in the drawing, so that the stop-plate *a* can be placed in any part of the box, and so that the slack of the cords (should they stretch) may be taken up thereby. But the cords may be stretched before they are used, and the stop-plates may be placed at the inner ends of the boxes, as the proper adjustment, when it is desired to move both sashes for purposes of ventilation.

In cold weather, or when it is desired to only drop the upper sash for the same purpose, the stop-plates can be withdrawn from the box, or placed at the lower ends of them, leaving the cords loose. This will allow the upper sash to drop the length of the boxes, while the lower one will remain down.

It will be seen that this invention can be applied to common windows, thereby securing, in point of ventilation, all the advantages to be derived from the more expensive box-frames with weighted sashes. Windows with this attachment may be readily taken from the frame for washing or repairs, and in that respect the arrangement is superior to the box-window. It will be seen also, that this adjustment can be applied to very tall windows where the sash is divided in three sections in height. All that is to be done is to make the centre sash stationary, and add another pulley, both pulleys being placed at the same height, and connecting the upper and lower sashes as described.

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

1. The adjusting-box C, with its movable stop-plate *a*, constructed, arranged, and operating substantially as herein shown and described for the purposes set forth.

2. In combination with the adjusting-box C, I claim connecting the upper and the lower sash together so that they will balance each other, substantially as described for the purposes set forth.

P. H. HARDY.

Witnesses:

RANDAL C. McCLURE,
GIDEON CROWTHER.