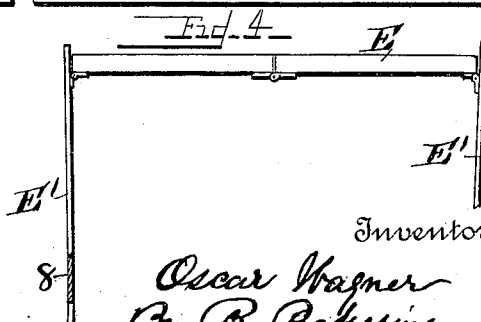
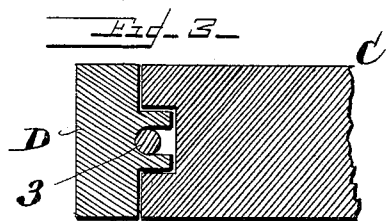
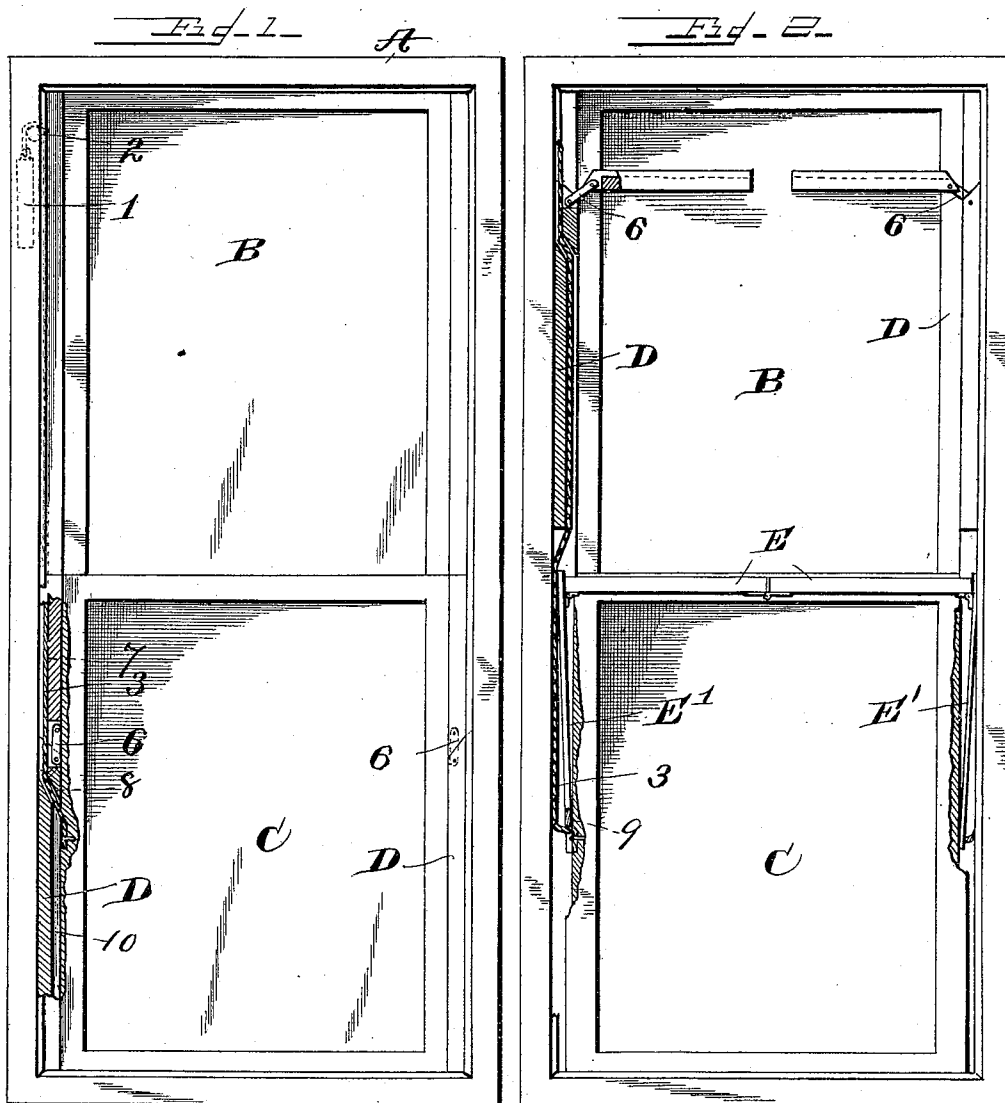


(No Model.)

O. WAGNER
WINDOW.

No. 472,239.

Patented Apr. 5, 1892.



Witnesses

Leopold Leibold,
John H. Blank

Inventor

Oscar Wagner
By B. Reising
His Attorney

UNITED STATES PATENT OFFICE.

OSCAR WAGNER, OF DAYTON, OHIO, ASSIGNOR OF ONE-HALF TO CHRISTIAN REUSCH, OF SAME PLACE.

WINDOW.

SPECIFICATION forming part of Letters Patent No. 472,239, dated April 5, 1892.

Application filed July 22, 1891. Serial No. 400,290. (No model.)

To all whom it may concern:

Be it known that I, OSCAR WAGNER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Windows; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in window-sashes, the features of which will be fully hereinafter described and claimed.

The object of my invention is to so secure the sash within the window-frame that the same may be rotated on the balance or suspension cord and be thereby reversed in position for the purpose of more conveniently cleaning the outer surfaces of the panes. This object I accomplish by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a window frame and sash with the reversing device attached and having portions cut away to exhibit the interior. Fig. 2 is the same view with the reversing device elevated, the supporting-frame, the sash-strip omitted on the left side, and portions cut away. Fig. 3 is a section of the lower part of the left closing-bar. Fig. 4 is a side view of the upper part of the supporting-frame.

Like letters and numerals designate like parts throughout the several views.

The window-frame, the sashes, with the exception that they are narrower, the sash-strips, the cords, counter-weights, and pulleys, are all constructed and attached in the usual manner.

In the illustration, A is the window-frame; B, the upper and C the lower sash. The sashes are made narrower and only fill the frame by putting the two closing-bars at their sides. The closing-bars D are alike in construction. The closing-bar is provided with groove 7 in its back to near the center, and at the lower end

of said groove the orifice 8 is cut through to the opposite side, and from this orifice the groove 10 in the tongue extends to the lower end. Said orifice and grooves are for the supporting-cord 3, which is connected to the sash C near its vertical center in the groove formed therein for the tongue of said closing-bar. At Fig. 3 is shown the relation of these parts by a transverse section of said closing-bar, sash-rail, and cord. Above the center the closing-bar is sawed apart at a bevel, and these parts are joined by sawing the ends at their centers longitudinally and securing in the kerfs the plate 6 by pins. The object of this is that the upper ends may be folded down, as shown at Fig. 2, and thereby the closing-bars be carried freely above the under sash that the same may be reversed without hinderance. The cord is attached to the weight 1 and is passed over pulley 2, (both shown in dotted lines,) passes through the back groove, orifice, and forward groove, and is attached to the sash within its groove. A pair of the closing-bars are placed within the usual grooves formed by the window-strips, and they fill the space between the sides of the sash and the jamb of the frame, and in this position they may be united by hasps to the sash and be moved together or moved separately in the raising and lowering of a window, as may be desirable. Closing-bars of the same construction are likewise used with the upper sash B. To reverse the lower sash, raise up the closing-bars, as shown at Fig. 2, and this will release the sash, which hangs freely on the supporting-cords and may be turned at pleasure. As a matter of convenience, but not a necessity, I use the support comprising the hinged cross-bar E and hinged to the outer ends the slats E' E'. When the closing-bars are up, the slats are entered in the grooves of the frame and the hinged bar is brought to a horizontal position, thus binding the cord and holding up said closing-bars while the panes are being washed. In the lower ends of the slats are notches 9 to retain the cords in position while the support is used.

Having fully described my invention, what

I claim, and desire to secure by Letters Patent, is—

1. The closing-bars D D, each provided with rear and front grooves with connecting-orifices and tongues on their inner faces, in combination with the window-frame, grooved sash, cord, and weight, substantially as described.

2. The supporting-frame comprising the hinged bar E and slats E' E', hinged to said

bar, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

OSCAR WAGNER.

Witnesses:

B. PICKERING,

OSCAR F. DAVISSON.