J. SCHNELL.

SASH AND WINDOW FRAME.

No. 80,672 Patented Aug. 4, 1868.

Fig. 1.

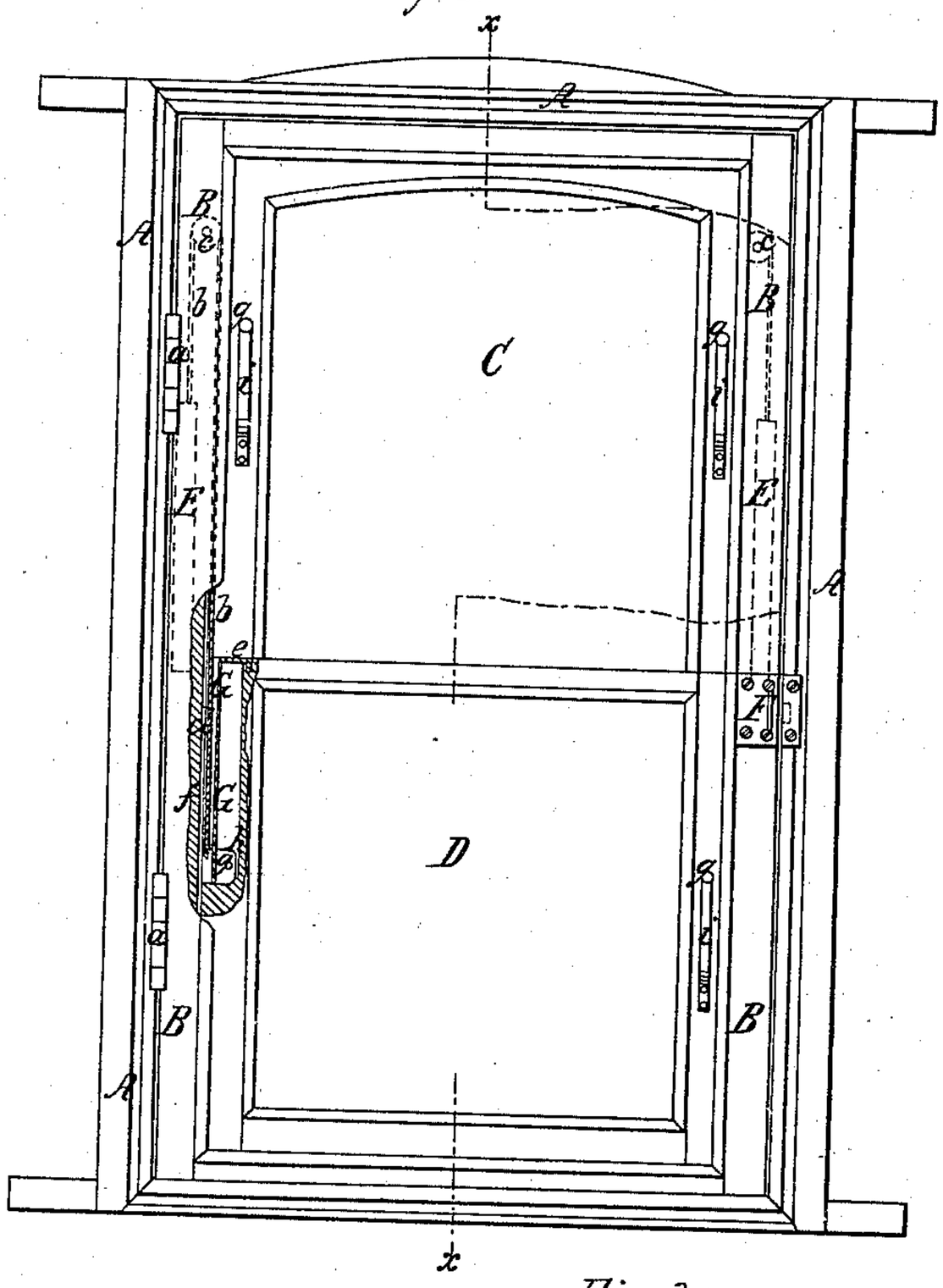


Fig. 2.

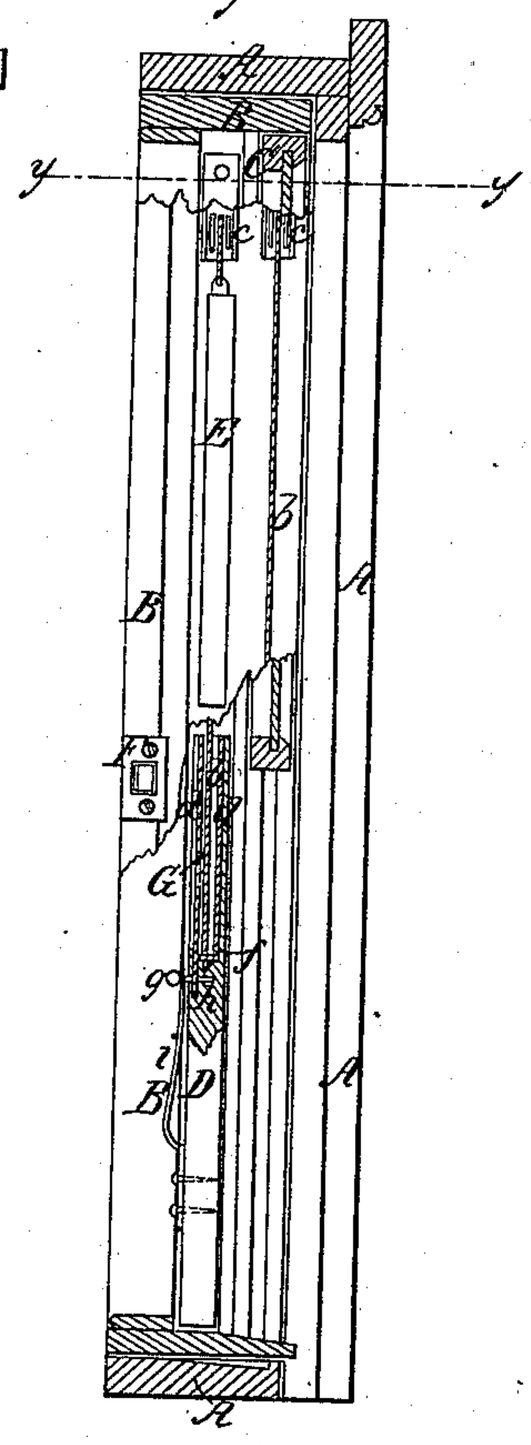
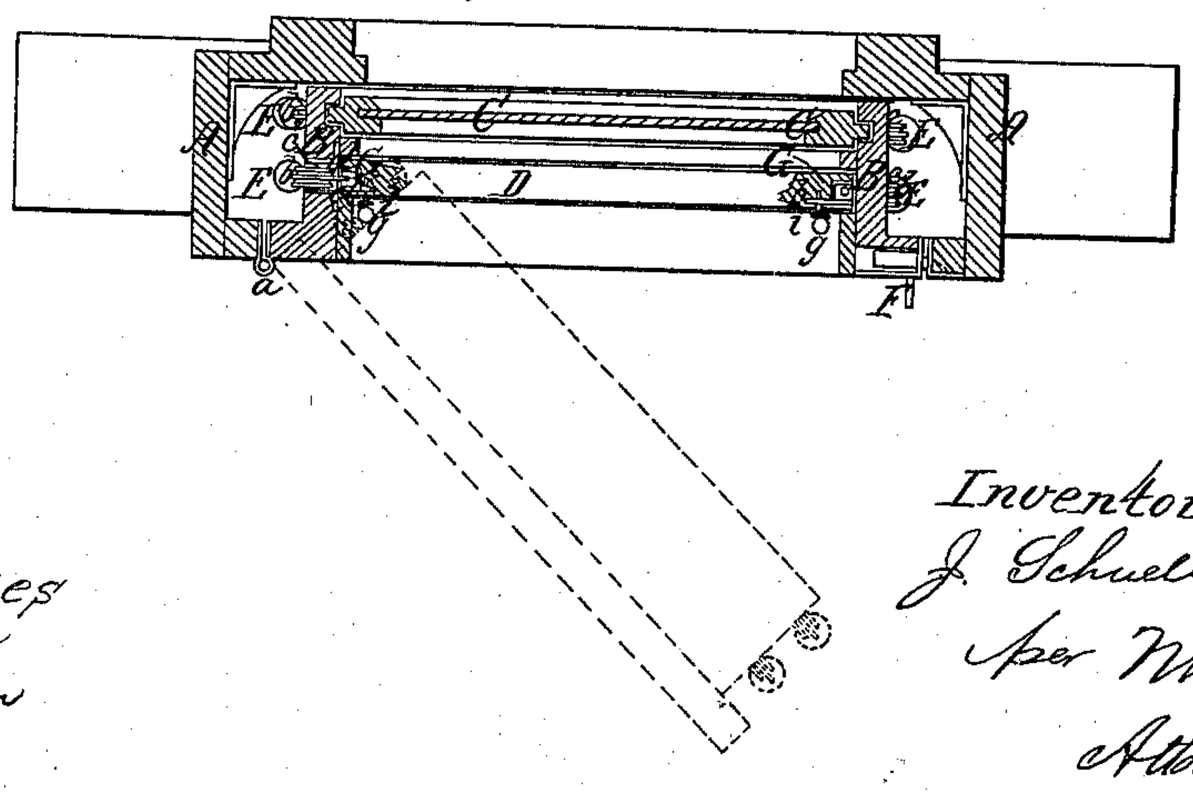


Fig. 3.



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JOHANN SCHNELL, OF NEW YORK, N. Y.

Letters Patent No. 80,672, *dated August* 4, 1868.

IMPROVED SASH AND WINDOW-FRAME.

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, JOHANN SCHNELL, of New York, in the county of New York, and State of New York, have invented a new and useful Improvement in Sashes and Window-Frames; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a front elevation, partly in section, of my improved window-frame and sash.

Figure 2 is a vertical transverse section of the same, taken on the plane of the line *x x*, fig. 1.

Figure 3 is a horizontal section of the same, taken on the plane of the line *y y*, fig. 2.

Similar letters of reference indicate like parts.

This invention relates to a new manner of constructing window-frames, with a view of facilitating the cleaning of the glass panes, the replacing of broken panes, and the repairing of broken sash-cords.

The invention consists, first, in hanging the frame, in which the sashes move up and down, to the casing of the window, so that it can be folded or turned like a folding window, and still be provided with sliding sashes.

The advantages of this arrangement are, first, that the washing of the window-panes is facilitated, as the persons washing on the outside will not have to endanger their lives and limbs by sitting or standing on the window-sill, and that they will not annoy pedestrians in the street, by splashing the water of the outsides of the panes upon them.

Another advantage of this folding sash-frame is, that new panes can be set in conveniently, without exposing the person of the glazier to the dangerous positions in which he is now frequently put.

Another advantage again is, that the whole and entire window can be opened, while with the ordinary sliding sashes, only half the window can be opened.

That the weights which balance the sashes are exposed at the ends of the folding frame, is another advantage connected with the folding window.

My invention consists, second, in securing that end of each sash-cord which is generally attached to the sash, to a plate or bar, secured to the edge of the sash by means of a spring-catch. By means of this device the cord can, when injured or torn, be replaced, without taking the sash out of the frame, as has now generally to be done, when a cord breaks. The taking apart of the frame is thus avoided.

When a cord breaks, the aforesaid plate or bar is taken out, the end of a new cord secured to it; it is then replaced, and locked by the aforesaid catch. The frame is then swung open, the cord drawn over the pulleys, tied to the weight, and everything is again in working order.

A, in the drawing, represents a window-casing, of ordinary or suitable construction, shape, and size, secured rigidly in the wall of a building.

B is a frame, hinged, by means of hinges *a a*, to the casing A, so that it can swing thereon, and fit, when closed, tight therein. The frame B should swing toward the inside, although, if desired, it may be so hung as to swing outward.

In the frame A are arranged the sliding sashes C D, which are balanced by means of weights E E, as ordinary sashes are usually balanced; the weights being, by means of cords *b b*, fitted over pulleys *c c*, that have their bearings in the frame B, connected with the sashes.

The weights hang on the outer edges of the frame B, as shown, and are exposed when the frame is swung open.

The frame B can be held locked or closed by means of a spring-bolt, F, or by any other equivalent device.

Each cord, *b*, is secured with one end to the weight E, and with the other end to a grooved bar or plate, G, said bar or plate being secured to the sash. The shape of each bar or plate G is more fully shown by section in fig. 1. It is a straight plate, having two wings *d d*, projecting from one side, and an arm, *e*, projecting from the upper end, as well as an arm, *f*, which connects the lower ends of the wings *d*. The arm *e* may be hook-shaped, if desired. The end of the cord is fastened to the arm *f*. The bar G is fitted into a recess or slot, provided at the edge of the sash, and is locked to the sash by means of a pin, *g*, which fits through the sash into one or both

of the wings *d*, or into another projecting wing, *h*, as shown. The said pin *g* may be attached to a spring, *i*, which holds it in place, and which is attached to the inner side of the sash.

When the cord is torn, the bar G can be easily taken out, by freeing it of the pin *g*, without necessitating the removal of the sash from the frame B, or the disturbance of any part of the said frame.

To recapitulate, it will be understood that the main difference between my invention and the ordinary window in use consists, first, in having the frame in which the sashes slide up and down, and in which the sashes are held, hinged to the casing; and, second, in attaching the sash-cords to the bars G, which can be locked to the sashes, but which, when desired, can be easily drawn out, to have the cords replaced or readjusted.

I have stated that the weights are exposed when the frame is opened; this is not absolutely necessary, as they may be concealed behind hinged or removable gates, attached to the ends of the frame B.

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

1. The hinged frame B, in which the sashes C D slide up and down, as specified.

2. The arrangement of the window-sashes C D, in a frame, B, which is hinged to the casing A, all constructed to operate substantially as herein shown and described, for the purpose specified.

3. The bars or plates G, when removably secured to the sashes, and held by means of the catch *i g*, all constructed and arranged to operate in the manner and for the purpose substantially as herein set forth and shown.

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