

G. M. BARTH.
Windows.

No. 144,430.

Patented Nov. 11, 1873.

FIG.1.

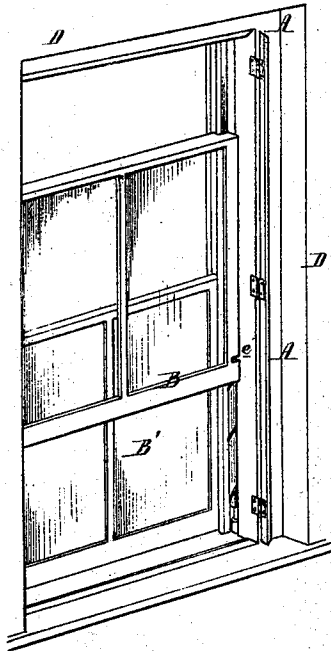


FIG.2.

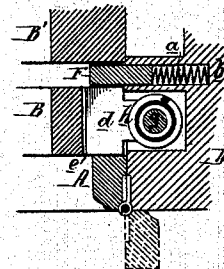


FIG.3.

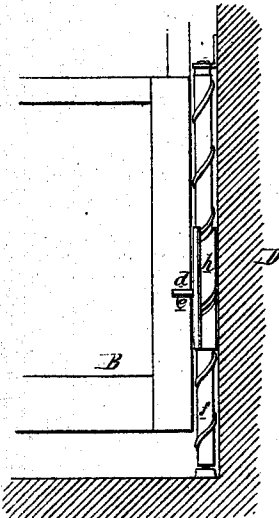
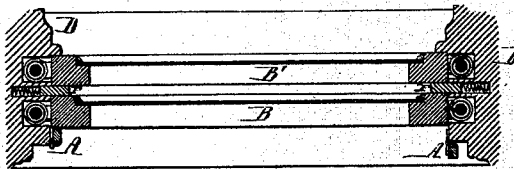


FIG.4.



WITNESSES. Harry Smith
Thomas McKeown

G. M. Barth
by his Attor.
Horison and Son.

UNITED STATES PATENT OFFICE.

GOTTLIEB M. BARTH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO
HIMSELF AND AUGUSTUS SAUER, OF SAME PLACE.

IMPROVEMENT IN WINDOWS.

Specification forming part of Letters Patent No. **144,430**, dated November 11, 1873; application filed
September 21, 1872.

To all whom it may concern:

Be it known that I, GOTTLIEB M. BARTH, of the city and county of Philadelphia, State of Pennsylvania, have invented certain Improvements in Window Frames and Sashes, of which the following is a specification:

The object of my invention is to enable sashes to be readily removed from and replaced in a window-frame; and I attain this object in the manner best observed in the perspective view, Figure 1, and enlarged sectional plan view, Fig. 2, as follows: By so hinging the molding-strips A A, which overlap the edges of the lower sash B to the window-frame D, that they can be turned outward, as shown, so as to release and permit the removal of the said lower sash from the frame, and by combining the intermediate partition-strips F, between the two sashes, with springs *a*, which yield and enable the said strips to be pushed back into the recesses *b* of the window-frame, in order to release and permit the removal of the upper sash B', the sashes are connected to the cords and weights or other balancing devices by projections *d* on the latter, adapted to transverse notches *e* in the opposite edges of the sashes, this method of connecting enabling the said sashes to be readily detached from or attached to the balancing devices in the act of removing them from or replacing them in the window-frame.

The hinging of the molding strips A A to the window-frame, and rendering the strips F adjustable, in the manner described, instead of securing them permanently, as usual, enables both the sashes to be readily removed at any time, for purposes of cleansing or reglazing, without delay or disfigurement of the window-frame by hammering and prying. It is not necessary, however, that the strips at both sides of the sash should be hinged, as the

sash could be removed if one strip only were hinged so as to be turned outward and to one side. Neither is it necessary that both of the intermediate strips F should be combined with springs so as to be pushed back into the frame. The sashes may be balanced by the usual arrangement of cords and weights; but I prefer to employ the balancing device shown in the vertical section, Fig. 3, and sectional plan, Fig. 4, of the drawing, for which Letters Patent were allowed to Christian Diehl and myself on the 9th day of April, 1872. It consists of a tube, *f*, containing a torsion-spring, *g*, and having an external steep screw-thread to which is adapted a nut, *h*, connected to the sash by the above-described lug *d*, and notch *e*. The nut slides up and down with the sash, and turns the tube, by which the spring is twisted and untwisted, the tendency of the said spring being to turn the tube in such a direction as to elevate the nut, which, with its lug *d*, sustains the sash.

I do not claim either the hinged front strips or the movable partition strips used separately; but

I claim—

1. The combination of the adjustable strip F and the hinged strips A and sashes B B', as set forth.

2. The combination of a sash with lugs or projections *d*, secured to the balancing devices, and adapted to notches cut in the edges of the said sash, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GOTTLIEB M. BARTH.

Witnesses:

WM. A. STEEL,
HARRY W. DOUTY.