

Thrasher & Horton,

Sash Holder.

N^o 18,611.

Patented Nov. 10, 1857.

Fig. 2.

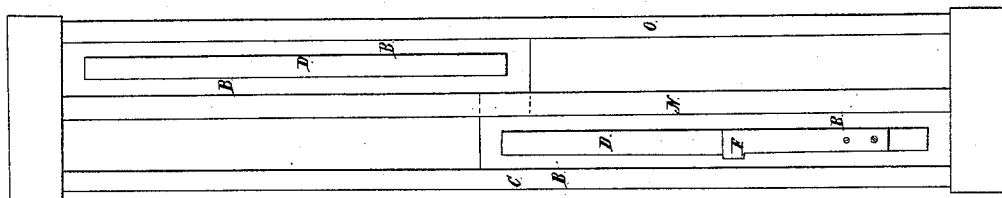


Fig. 3.

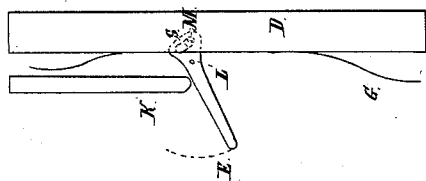


Fig. 4.

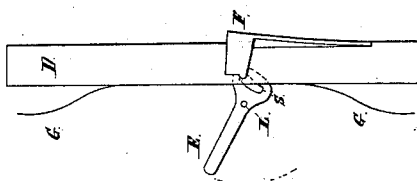
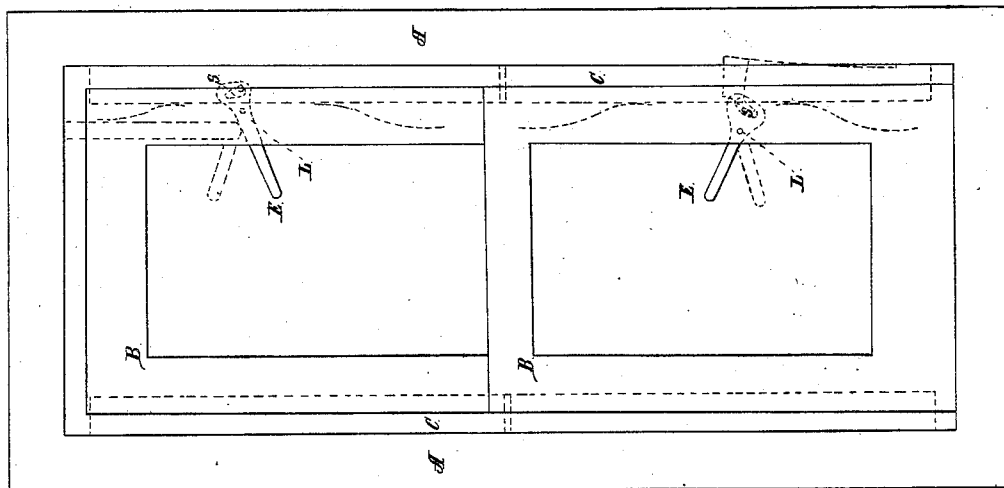


Fig. 1.



UNITED STATES PATENT OFFICE.

FRANCIS THRASHER AND HENRY B. HORTON, OF AKRON, OHIO.

WINDOW-SASH.

Specification of Letters Patent No. 18,611, dated November 10, 1857.

To all whom it may concern:

Be it known that we, FRANCIS THRASHER and HENRY B. HORTON, of Akron, in the county of Summit and State of Ohio, have invented a new and Improved Window-Sash; and we do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

In the construction of windows, it is very desirable to have the sash slide up and down freely and yet not be loose enough to rattle or to allow the ingress of air. It is also important to have the sash remain stationary when placed at any height. Among the many devices hitherto invented for this purpose, the weights and pulleys have been generally preferred, but they are both expensive and defective. When weights and pulleys are used, the sash is liable to become fixed when wet and swollen, and when dry to rattle and allow the wind to enter. Besides the weights and pulleys frequently get out of order and their repair is very troublesome and occasions much injury to the paint and often to the solid wood of all parts of the windows casings. Even when a friction strip has been employed, as in our invention, it has been found nearly or quite impossible to regulate the friction so as to support the sash during long continued dry hot weather, and yet allow it to be raised or lowered with ease when the wood is wet and swollen. Different forms of friction rollers have been tried both with and without a lock but as they require the use of a metallic box in order to fasten and guide them, such rollers are found too expensive and otherwise objectionable to come into general use. In order to obviate these objections, we have applied a lock to the friction strip, by which means the friction can be diminished, so that a feeble arm can raise or lower the sash with ease.

Our invention consists of an improvement in window sashes.

In the accompanying drawing, Figure 1, is a front view of a window frame and sash with our invention applied. Fig. 2, shows the friction strip inserted into both sashes. Figs. 3, and 4, show the connection of the friction strips and lock.

In Fig. 1, A represents any common window frame with the sashes B in place. The ordinary stop strip is seen at C.

In Fig. 2, are seen the blind strip O, the sash strip N, and the stop strip C, also our friction strip D, inserted into a groove in the edge of the sash B. This friction strip is better seen in Fig. 3, and Fig. 4. It is made about $\frac{3}{4}$ of an inch wide and $\frac{5}{8}$ of an inch thick. It is not quite so long as the sash, lest the latter should be weakened by its insertion. On one edge of the friction strip are springs G, Figs. 3, and 4, fastened to the strip by screws. These springs occupy the bottom of the groove in the sash, and tend to force the friction strip from the groove, against the frame or jamb casing of the window, as seen in Fig. 1, (the friction strip and springs G, being shown in dotted lines.) By this arrangement the window sash is supported at any desired height.

In Figs. 1, 3, and 4, is shown a lever E which passes through a slot in the sash, as seen in Fig. 1, and enters a slot in the friction strip, better seen in Figs. 3, and 4 in dotted lines. This lever E, vibrates upon the pin L, by which it is fastened to the sash. It has an eccentric slot S through which the pin M, Fig. 3, passes, thus fastening the lever to the friction strip. The long arm of this lever may be easily raised or lowered by the finger so that the pin M, may be made to occupy either end of the slot S, thus locking or unlocking the friction strip, and diminishing or increasing the friction at pleasure. By moving the lever E so as to lock the friction strip, the sash is easily raised, when the friction strip may be again unlocked. A sliding pin K, Fig. 1, and 3, is inserted into the upper sash, with its lower end resting on the lever E. When the lever E is raised, the pin K is pushed up so as to strike the window frame upon raising the sash to its full height, thus unlocking the strip D.

The lower friction strip, Figs. 1, and 4, has a spring F, which locks the sash down by entering a notch in the jamb casing. A projection upon this spring has a pin which enters the eccentric slot S in lever E, by which means the spring F, and the friction strip itself are moved by the lever E.

Both the upper and the lower sash may be pulled down while the friction strip is unlocked and the springs G are in full action, but in order to raise either sash the lever E should be first moved so as to lock the friction strip, when both hands are left free to raise the sash.

Our locking friction strip, as above described, may be readily applied to old windows, by slightly diminishing the width of the sash, if necessary, and then cutting a
5 groove for the insertion of the friction strip. It often happens with old houses that one corner or the middle has settled down, so that the window sashes do not shut closely, either at the top or at the bottom.
10 In such cases we insert a friction strip in each edge of the sash, which will then shut perfectly tight. This second strip is seen at *g*, Fig. 1, in dotted lines. This strip is employed without a lock, as the lock upon
15 the opposite side of the sash will sufficiently relieve the friction of both strips to allow the sash to be raised with ease.

The lever *E*, and springs *G*, may be stamped from sheet metal by a single stroke.

And in like manner the spring *F* with its 20 projection and pin may be cut in one piece and then bent into form.

This mode of constructing windows is better and cheaper than any now in use.

Having thus fully described our inven- 25 tion, what we claim and desire to secure by Letters Patent of the United States is:

The locking friction strip, for the purpose of raising the window with ease and sustaining it at any height, substantially as set 30 forth.

In testimony whereof we hereunto set our hands.

FRANCIS THRASHER.

HENRY BISHOP HORTON.

Witnesses:

EDW. F. BROWN,

DANIEL BREED.