

W. L. McDOWELL.

Window-Sash.

No. 138,755.

Patented May 13, 1873.

Fig. 1.

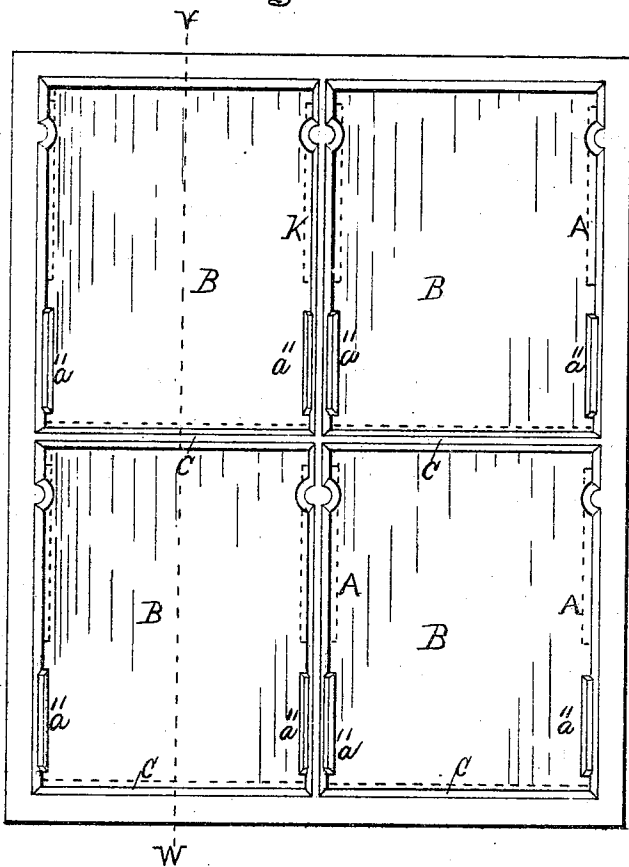
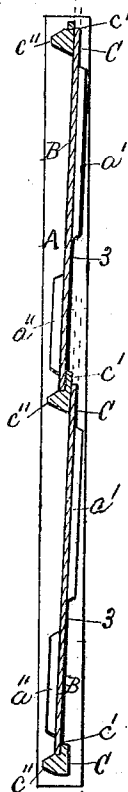


Fig. 2.



WITNESSES:

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WILLIAM L. McDOWELL, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN WINDOW-SASHES.

Specification forming part of Letters Patent No. 138,755, dated May 13, 1873; application filed April 8, 1873.

To all whom it may concern:

Be it known that I, WILLIAM L. McDOWELL, of the city of Philadelphia, in the State of Pennsylvania, have invented certain Improvements in Sashes for Glass, of which the following is a specification:

My invention relates to the mode of supporting window-glass in sashes without resorting to the use of glazing to retain the glass in position, and to preclude the entrance of rain or snow, and is equally applicable to sashes of either wood or cast iron or other metal; and consists in constructing the sides of the montants of a sash with two slightly-inclined flanges or narrow projections, and the horizontal or cross-pieces of the sash with an upright back and a water-table on each for each pane of glass, in such a manner that the pane can be readily slipped down from behind the upright back of the upper cross-piece into contact with the water-table of the lower cross-piece; the two inclined flanges on the opposite sides of the montants serving to guide the pane of glass to the water-table, and the whole together serving to support the pane in its proper position in the sash to turn the rain or snow downward to the table, and prevent its entrance into the building without requiring the usual resort to glazing along the montants and cross-pieces of the sash, as heretofore, the object of my invention being to facilitate the construction of the glass roofs and sides of large or exhibition buildings of iron, the roofs and windows of iron or fire-proof store-houses, and the roofs of green-houses, as well as the sky-lights of dwellings, whether the sash be made of metal or of wood.

Figure 1 is an elevation of a cast-iron sash of four panes of glass, presenting the front or weather side of the same, and embodying my invention. Fig. 2 is a vertical section showing that side of the sash which is on the left-hand side of the dotted line of Fig. 1.

The sides of each of the montants A A are provided with two flanges—an upper one, *a'*, and a lower one, *a''*—arranged in a slightly-inclined direction toward the inner side of the sash, and parallel to each other, so as to leave a space for sliding the pane of glass downward between them, as represented in Fig. 2. The bottom edge of the pane of glass B rests

upon the cross-piece C of the sash with its rear side against a raised portion, *c'* of the cross-piece C, while the part upon which the bottom edge of the pane of glass rests, projects outward sufficiently to produce a water-table, *c''*, whereby the water from the glass which rests upon it is dripped off clear of the glass immediately below it, as will be understood by reference to the same figure. Between the approximate ends of the two flanges, *a'* and *a''*, of the same side of the montant A for each side edge of a pane of glass there is a short space, 3, left open for the purpose of allowing the pattern used in molding iron-sash frames to be drawn from the sand; but for wooden sash, or for sash made of wrought-iron, the two said ends of the flanges may overlap a short distance.

In order to prevent the entrance of water or snow between the edge of the glass and the montant where the space 3 is left in cast-metal sash, a small piece of putty is intended to be glazed over the outside of the said part. The top end of the pane of glass B bears against the inner side of the cross-piece C, and consequently the rain or snow cannot enter from the outside of the sash, nor can rain or snow enter at the bottom or side edges of the glass.

For basement or cellar windows it is intended that skeleton ornamental figures, scrolls, or other open-work be cast with the sash on the outer side, and thus render the same capable of serving both as guards and sash in one piece, and the glass be withdrawn in summer.

It will be understood without further explanation that in these sashes the resort to glazing with putty around the ends and sides of each pane, as heretofore, is entirely avoided when the sash is made of either wood or wrought metal, and but a trifling portion of putty required when the sash is molded or made of cast metal; that much facility is afforded in securing the panes of glass in position as they are easily slipped into place; and that perfect security is afforded against the entrance of rain or snow from the outside, whether the invention be applied for the construction of exhibition-buildings or store-houses, or to the windows or sky-lights of dwellings or shops.

What I claim as my invention, and desire

to secure by Letters Patent is confined to the following, viz:

1. In combination with the montants or uprights A, the flanges or projections *a' a''* or their equivalents, arranged in relation to each other substantially as and for the purpose hereinbefore set forth and described.

2. In combination with the flanged montants

or uprights A, the cross-pieces C C, when constructed with the water-table *c''* and the raised portion *c'*, substantially as and for the purposes hereinbefore set forth and described.

WILLIAM L. McDOWELL.

Witnesses:

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