A. K. PHILLIPS.

VENTILATING WINDOW FRAME AND SASH.

No. 195,772. Patented Oct. 2, 1877

Fig 1

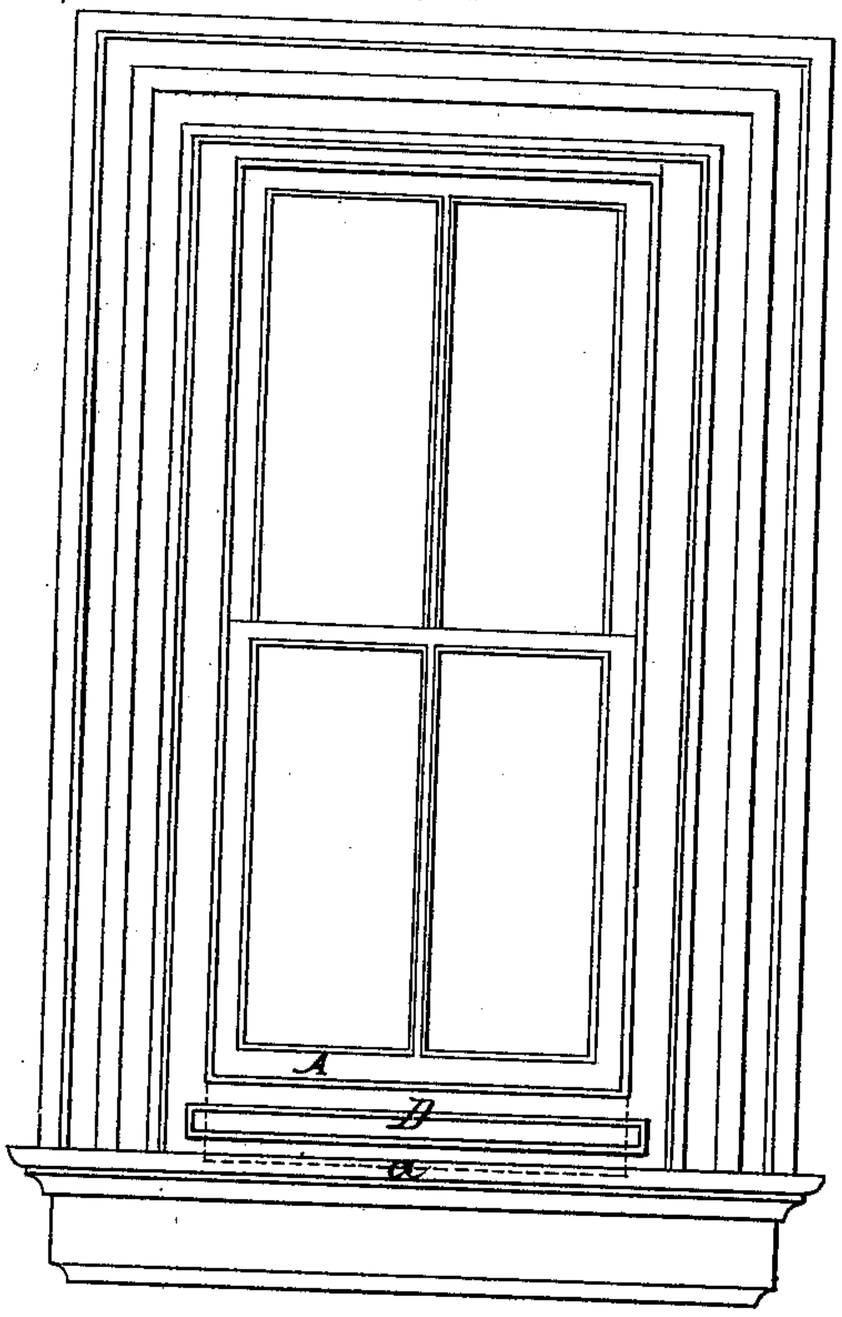
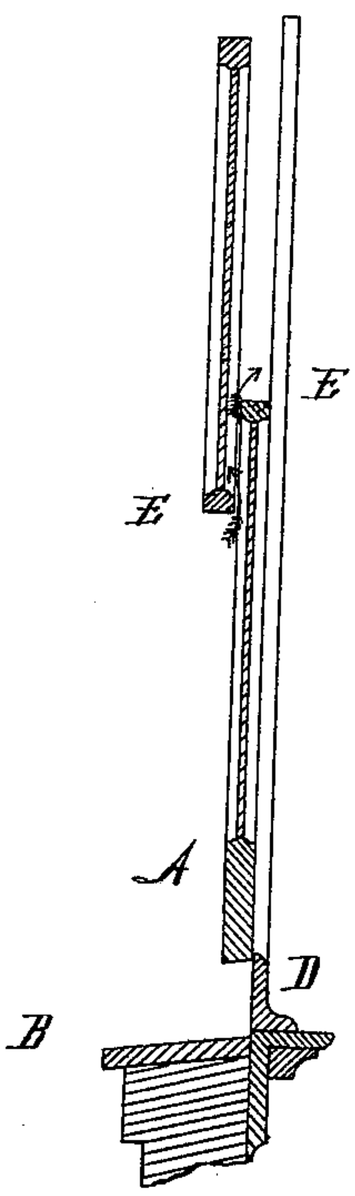


Fig 2



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AUGUSTUS K. PHILLIPS, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN VENTILATING WINDOW FRAMES AND SASH.

Specification forming part of Letters Patent No. **195,772,** dated October 2, 1877; application filed April 17, 1877.

To all whom it may concern:

Be it known that I, AUGUSTUS K. PHILLIPS, of the city of St. Louis, county of St. Louis and State of Missouri, have invented new and useful improvements in the construction of the bottom rails of window-sashes and in the sills of window-frames, whereby ventilation, by opening a window, is much more advantageously obtained, which improvements are fully set forth in the annexed specification, and in the accompanying drawing, in which—

Figure 1 is a front elevation of a window constructed with my improved sash-rail, window-sill, and wide interior weather-strip, and wherein the lower dotted horizontal line *a* represents the lower edge of the sash-rail A.

D is the interior weather-strip. The position of the lower sash-rail in this view is as seen when the window is closed.

Fig. 2 is a vertical sectional view of my improved window-sash, showing the window-sill B, the wide interior weather-strip D, the wide bottom rail A, and the meeting-rails E E. The positions of the lower sash-rail A and the meeting-rails E E in this view are as seen when the window is open for ventilation.

Fig. 1 represents the window as seen from the inside.

The object of my invention is to provide for such a construction of windows and their frames for dwelling-houses and other buildings as shall permit of a more thorough and healthful ventilation of rooms, by opening the windows therein, than has heretofore been attainable.

It is well known that windows of the usual construction, when opened to ventilate a room by drawing them down from the top, almost invariably precipitate a strong current of cold air down upon the heads of persons in the room, making sensitive persons liable to take cold thereby. Also, if the window be opened by lifting up the bottom sash, the current of cold air thrown upon the floor and into the lower part of the room is likely to cause quite as disagreeable results as those referred to when the window was opened from the top; hence many people choose the possible lesser evils of bad ventilation rather than suffer the discomfort of having the windows opened at all.

By the use of my improved sashes and interior weather-strips the windows can be opened for the admission of fresh air into the rooms of a house by raising the lower sash so that the meeting-rails of the sashes are separated, allowing the air from outside to pass in between the glass of the upper and lower sashes, and in its passage the air is directed upwardly by the position of the upper end of the lower sash, as shown in Fig. 2, by the direction of the arrows.

It is obvious that the air from outside blowing against the window will be conducted into the room in the direction specified and shown by the interposition of the portion of the inside window, which rises like a shield above the lower end of the upper window-sash, and prevents the air from blowing directly into the room and down upon its occupants before its not unfrequent extreme coldness shall have been modified by its contact first with the warmest portion of the air in the upper portion of the apartment.

In Fig. 2, A, the bottom rail of the lower sash, is made sufficiently wide to allow of raising the window, so as to part the meeting-rails E E of the sashes, and to let the top end of the lower sash stand a sufficient distance above the bottom of the upper one to accomplish the object hereinbefore specified, and still keep the bottom rail A sliding tightly against the wide weather-strip D, so as not to admit air at the bottom of the window.

My invention therefore consists in permanently framing into or attaching to the jambs of a window-frame the wide weather strip or strips D, and in providing, to be used in a window-frame so fitted with said wide weather strip or strips, in combination therewith, a bottom window-sash with a wide bottom rail, or a top sash with a wide top rail, or both, for the purpose of securing ventilation between the meeting-rails of the sashes, the wide rails to the sashes and the weather-strips being so arranged that the inner face of said bottom or top rail shall, when a sash is raised or lowered, slide closely against the outer face of said weather-strip D, and thereby prevent the air from passing into the room between said sash-rails and the weather-strip D.

I arrange the width of my wide sash-rails so that the glass in the windows is not covered at all by the weather-strips; therefore the width

of the weather-strips and the wide sash-rails is nearly equal, the latter being a little the widest, if there is any difference.

I do not confine myself to the construction of the wide weather-strip D above the ordinary window-sill, and a wide bottom rail the bottom of which drops no lower than the sill of the window-frame; but the window-frame and sill may be so constructed as to permit the wide bottom rail of the sash to drop through an opening in it down below the level of the sill, projecting into a space left in the masonry or wood-work therefor.

Such an arrangement would obviate the necessity of inserting the weather-strip D above the window-sill; but for many obvious reasons I prefer to construct the different parts of my improvements so they shall act together, as hereinbefore specified, and shown in the drawings. Also, the same result may be obtained by making a wide top rail to the top sash, and placing the wide weather-strip D across the top of the frame, and so obtain the desired ventilation by dropping down the upper sash to part the meeting-rails.

Wide weather-strips might be built into the window-frame, so that the upper and lower sashes would, when closed, be on the inside of them, and in the case of the upper sash it might be the better mode of construction for the purpose of most effectually preventing rain from entering at the top of the window when the upper sash is let down slightly for the purpose of admitting air between the meeting-rails of the sashes, for, so arranged, there would be no chance for rain to drive against the inner face of the top weather-strip and the top edge of the sash-rail, and so drip down on the inside of the window, as might be the case with the weather-strip inside of the upper sash-rail.

Having thus described my invention, what I claim is—

1. In combination with a window-frame permanently constructed with a wide weather-strip, D, at the top or bottom, or at both top and bottom, a window sash or sashes having upon the lower or upper one, or on both, a wide bottom or top rail, A, corresponding nearly in width to the width of said weather-strip D, substantially as and for the purpose set forth.

2. The combination of a window-frame made with the weather strip or strips D therein with a window sash or sashes, which weather strip or strips D are wide enough to allow the sash or sashes to be moved vertically against the inner or outer face of said weather strip or strips in being lowered or raised, and so part the meeting-rails of the upper and lower sashes as to admit air between them without permitting air to enter at either the top or bottom of said window.

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