

UNITED STATES PATENT OFFICE.

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WINDOW-VENTILATOR.

1,170,648.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM LOUDEN, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented a new and useful Improvement in Window-Ventilators, of which the following is a specification.

My invention relates to ventilators applied to the windows of barns or other buildings, and it consists of the features hereafter described and more specifically pointed out in the claims.

In the accompanying drawings forming a part of this specification, Figure 1 is a perspective of a window embodying the features of my invention, the sash being closed. Fig. 2 is the same, the sash being opened at the top. Fig. 3 is the same, the sash being opened at the top and raised so it will be open at the bottom. Fig. 4 is a vertical section on line 4—4 of Fig. 2. Fig. 5 is an enlarged horizontal section on line 5—5 of Fig. 3.

Referring to the drawings, Figs. 1, 2 and 3 represent a window set in a wall, a portion of which is represented by A. B represents the inside head casing, B' the outside head casing, C the inner side casing, C' the outside casing and D the apron of the window frame. E is a single sash having nine panes of glass G. F represents the lintel, H the side jambs, I the stool, J the sill of the window frame, K the side window stops and K' the head window stop.

A pair of sheet iron shields L, cut wider at the top than at the bottom and having flanges on their opposite edges,—the flanges on the edges next the wall being turned outward and the flanges on the other edges being turned inward,—are secured to the inner side casings C preferably by screws *e* passed through holes in the adjacent flanges, as shown, and are further supported by braces *b* secured at one end to the shield and at the other to the wall. The sash is set in the frame so as to rest on its outer side against the window stops K and K' and is held in place on its inner side by a sash latch M at the top and the stool I at the bottom.

The edge of the stool adjoining the sash is beveled to correspond with the incline of the flanges *l* on the instanding edges of the shields L, and when the latch M is released the sash will be free to tilt inward and will rest against the bevel edge of the stool and against the inturned flanges *l* on the free

edges of the shields L, as shown most plainly in Fig. 4. When in this position there will be a free ingress of the outside air through the opening at the upper edge of the sash which will be deflected by the inclined position of the sash toward the ceiling, thus mixing the cool air in cold weather with the warmer air in the building and avoiding drafts upon the animals in the building.

To hold the sash in this position and prevent it from being dashed back and forth by the wind, I provide two dogs N, (one on each side) and pivot their outer ends to the sides of the window frame, preferably by means of screws S to the stops K, so that they will be free to drop against the side rails of the sash and hold it in position. The ends of the dogs which rest upon the sash are preferably bent upwardly at an angle to fit the incline of the sash when resting on the flanges of the shields, as shown in Fig. 4.

The dogs are made long enough so they will not drop down past the portion of the sash nearest the screws S, but will rest on the sash just above this point. The sash may be slid up the incline of the flanges *l* without any interference from the dogs, but they will prevent its downward movement and will hold it in elevated position at any point within the scope of the contact of the dogs with the sash as shown in Fig. 3.

To lower the sash it must first be slightly raised and, at the same time, pushed away from the flanges of the shields against the dogs and toward the stops K. This movement of the sash will raise the free ends of the dogs and will cause them to assume the position shown by dotted lines in Fig. 4. When the dogs are in this position the sash will be free to drop to its closed position as shown in Fig. 1. To prevent the dogs from tilting over away from the sash, long projecting pins or screws S' which will form projecting pins are set on the stops K above the screws S, as shown in Figs. 2, 3 and 4, whereby the dogs will be held so they will be free to drop against the side rails of the sash as soon as it is tilted against the flanges of the shields.

It is preferable that the shields be extended down only far enough to close the openings between the inner side facings C and the sash when it is tilted in against the flanges on the free edges of the shields L, as shown in the drawings. This is all that is

necessary and in this way the inward and outward flanges of the shields at the lower ends may be kept the thickness of the sash apart instead of being continued down until they run into each other or occupy the same plane, which, while not being needed, would make the shields harder to make. The latch M is adapted to engage a catch T on the edge of the lintel F from which it is released by a pull on a cord U. The sash may be removed from the window or replaced without having to remove or replace any of the parts.

By beveling the edge of the stool next the sash to correspond with the incline of the free edges of the shields L, the sash may be tilted against the flanges l without binding or being cramped between the stool I and the lower ends of the stops K. Also, when closed, any water that may happen to be on the inside of the sash—by the melting of frost on the insides of the window panes or otherwise—will run more freely out under the sash by reason of the opening between the sash rail and the upper edge of the stool than if it was fitted closely against the sash rail at its upper edge in the usual manner.

The entire arrangement is simple and inexpensive and is thoroughly effective in operation.

What I claim is:

1. In window construction a sash fitted in a frame so its upper end will tilt inwardly, a pair of shields cut wider at the top than at the bottom and having inwardly turned flanges on their free edges, the incline of the flanges corresponding approximately with the incline of the sash when

tilted in, and the sash being adapted to be slid up the flanges, and a pair of dogs pivoted at their outer ends to the sides of the window frame and their inner ends adapted to come in contact with the side rails of the sash and prevent it from tilting out as well as to hold it in raised position when slid up the flanges.

2. In window construction a sash fitted in a frame so its upper end will tilt inwardly, a pair of shields cut wider at the top than at the bottom and having inwardly turned flanges on their free edges to receive and hold the sash when tilted in, dogs pivoted to the sides of the window frame to hold the sash in this position, said dogs being adapted to stand in an approximately vertical position when the sash is tilted into closed position, and means to prevent the dogs from tilting over away from the sash.

3. In window construction a sash fitted in a frame so its upper end will tilt inwardly, a pair of shields cut wider at the top than at the bottom and having inwardly turned flanges on their free edges to receive and hold the sash when tilted in, and a stool on the bottom of the window frame adjoining the inner face of the lower sash rail, beveled on its adjacent edge to fit the incline of the sash rail when tilted in, and thus insure a close fit between the edge of the sash rail and the stool whether the sash is tilted in or tilted out.

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Witnesses:

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