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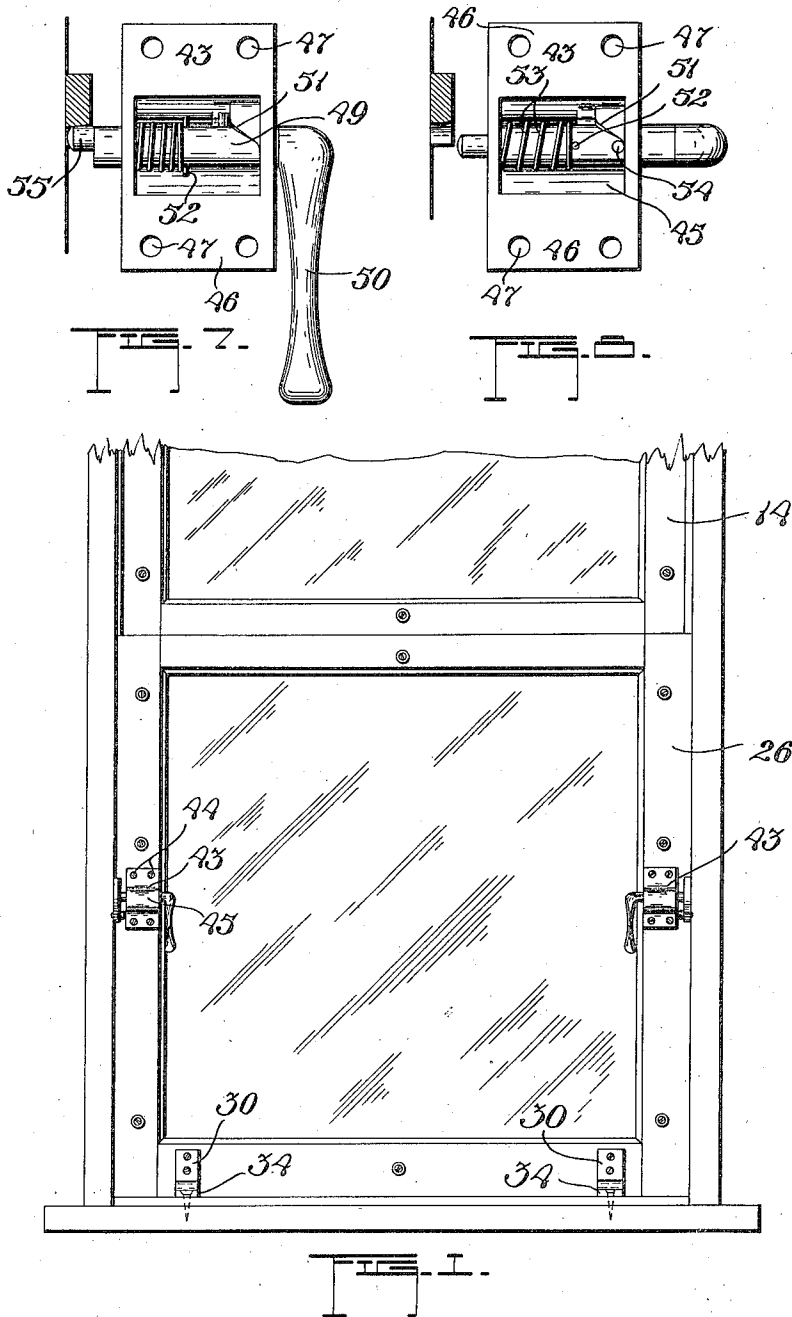
A. T. WILSON

2,113,753

WINDOW ATTACHMENT

Filed Dec. 27, 1935

2 Sheets-Sheet 1



INVENTOR  
A. T. WILSON  
BY *Hetherington & Co.*  
ATTYS.

April 12, 1938.

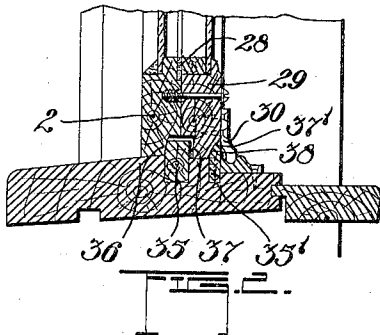
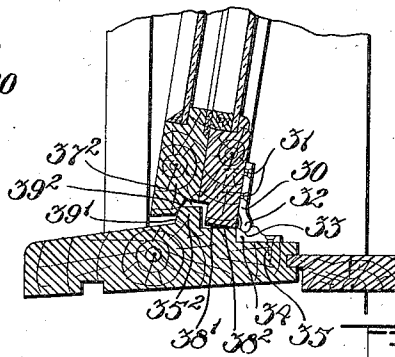
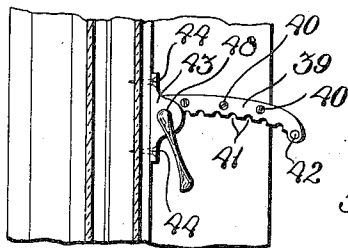
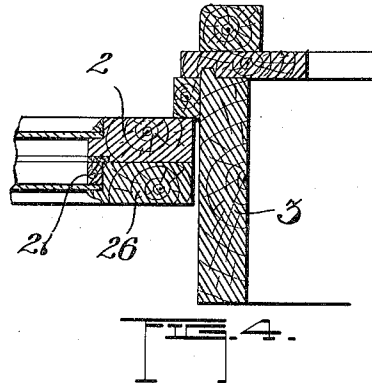
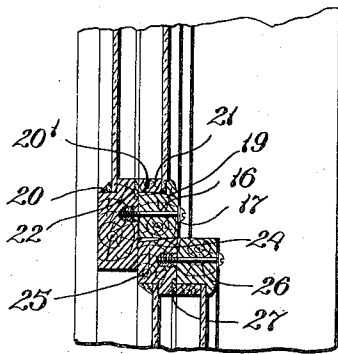
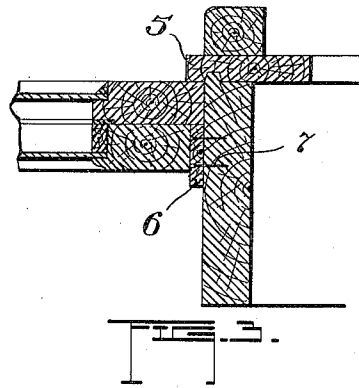
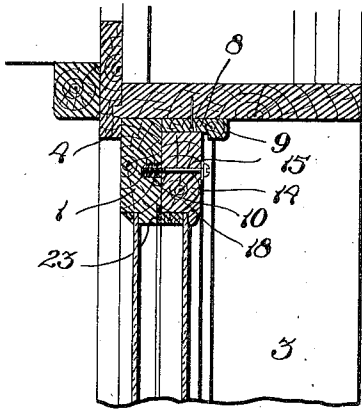
A. T. WILSON

2,113,753

WINDOW ATTACHMENT

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2 Sheets-Sheet 2



INVENTOR  
A. T. WILSON  
BY *Ketchen & Co.*  
ATTYS.

# UNITED STATES PATENT OFFICE

2,113,753

## WINDOW ATTACHMENT

Andrew Thomas Wilson, St. Boniface, Manitoba,  
Canada

Application December 27, 1935, Serial No. 56,372

### 1 Claim. (Cl. 20—53)

This invention relates to improvements in window attachments and an object of the invention is to provide a device of the character herein described which will allow the lower sash of a window to be inwardly inclined about pivotal mountings at the lower edge thereof for the purpose of ventilating the room.

A further object of my invention is to provide a device of the character herein described which prevents drafts from entering along the lower edge of the inclined sash.

A further object of my invention is to provide a device of the character herein described provided with double window panes which eliminate the necessity of the usual storm windows.

A further object of my invention is to provide a device of the character herein described which may be inwardly inclined in several different angular positions to vary the amount of ventilation desired.

A further object of my invention is to provide a device of the character herein described in which the inner window thereof can be conveniently removed for cleaning, etc.

A further object is to provide a device of the character herein described in which the inclined or vertical window is designed to fit snugly and prevent rattling thereof by wind, etc.

A still further object of my invention is to provide a device of the character herein described which is simple to install, is durable and will not easily become out of order.

With the above more important objects in view and such other minor objects as may appear as the specification proceeds, my invention consists essentially in the arrangement and construction of parts all as hereinafter more particularly described, reference being had to the accompanying drawings, in which:—

Fig. 1 illustrates an elevational view of my invention.

Fig. 2 is a central sectional elevation of my invention, the lower section thereof indicating one method used to prevent the entry of drafts of air beneath the bottom edge of the lower sash.

Fig. 3 shows a fragmentary view of a horizontal section taken across the upper sash.

Fig. 4 is a fragmentary view of the horizontal section taken across the lower sash.

Fig. 5 shows a detail view of the pivoting arrangement used for my device and a further method of rendering the lower edge of the sash draft proof.

Fig. 6 illustrates a detail view of the method used for attaching the window sashes together.

Fig. 7 indicates a rear view of the locking devices used with my invention when in a closed position.

Fig. 8 shows the same when in an open position.

In the drawings like characters of reference indicate corresponding parts in the different figures.

My invention consists of upper and lower outer sashes 1 and 2 respectively inserted within a window frame 3. The upper sash 1 is restrained from moving outwardly by means of a parting strip 4 extending along the upper edge and 5 down both sides thereof. Further inner parting strips 6 are attached to the frame by means of nails 7 or by other convenient means to maintain the device in a rigid vertical position.

Along the top edge of the upper sash is fastened a still further parting strip 8 having a flange 9 at the inner edge thereof for a purpose presently to be explained.

A plurality of internally threaded sockets 10 are provided around the inner side of the sash 1 and into each of these sockets are screwed externally and internally threaded bushings 11.

Each of these bushings, it should be noted, is provided with a slot 12 extending diametrically across the face thereof to facilitate insertion into the sockets 10 by means of a screw driver or other similar tool. After the bushings have been inserted within the sockets, they are prevented from being accidentally removed by means of pins 13 driven between the face of the slot 12 into the sash. A second sash 14 is attached against the sash 1 by means of bolts 15 passed through orifices 16 within the sash, each orifice being in alignment with one of the internally threaded orifices within the bushings 11. Washers 17 are provided adjacent the heads of the bolts to prevent them from sinking within the sash.

The upper cross piece 18 of the sash it will be seen, fits within the channel formed by the flange 9 and the outer sash 1 and the lower cross piece 19 of the same sash extends only about two-thirds of the distance down the face of the lower cross piece of the outer sash. The foremost reason for providing the flange 9 is to prevent the sash 14 from revolving inwardly about the lower edge thereof during its removal from the sash 1. Such an accident might seriously injure the workman engaged in this procedure. It should here be mentioned that the outer pane of glass is fastened within the frame 1 in the usual manner by

inserting it within channels 20 cut within the sash and maintaining it in position by means of putty, etc.

However, the inner pane is attached within the sash by placing it within similar channels 20' around the sash but the space left after the insertion of the pane is filled by means of wooden strips 21. A further small channel 22 is cut around the inner face of the sash 1 and into the groove produced by this channel and the face of the strip 21 is inserted a gasket 23 of felt, cork or any other suitable material to provide a dead air space between the two panes and prevent any leakage of air therefrom or thereinto.

The top surface 24 of the upper cross piece 25 of the aforementioned lower sash 2 is cut in a slightly arcuate configuration in order that the sash may be outwardly rotated along the lower edge thereof. An inner lower sash 26 is attached to the outer sash 2 in a similar manner to the method of attaching the upper two sashes, that is, by inserting internally and externally threaded bushings 11 into sockets 10 and attaching the inner sash by bolts passing therethrough and screwed into the said bushing, a gasket 27 being also interposed in a slot 28 therebetween.

On either side of the inner face of the lower cross piece 29, pivotal brackets 30 are attached by means of wood screws 31 passing therethrough. The lower portion of these brackets consists of a downwardly and outwardly extending bearing portion 32 which fits into a transverse socket 33 within a seating 34 attached to the sill of the window by wood screws 35. This device in conjunction with the arcuate configuration of the upper surface of the sash 24 allows the two lower sashes to be inwardly tilted.

In order to prevent drafts entering between the window sill and the lower edges of the sash, I have inserted a crosswise extending strip 35 having an arcuate face 36 and a complementarily formed groove 37 also possessing an arcuate face, is cut along the bottom of the sashes to receive the strip 35. The center of the circle of which the arcuate face 36 forms a part, is the fulcrum or pivoting point of the bearing portion 32 within the seating 34.

A further smaller strip 35' is also inserted in the window sill and also possesses an arcuate face 38 which engages with a complementarily formed channel 37' within the lower cross piece 29. The circle of which this arcuate face forms a portion, also centers at the fulcrum point of the bearing portion 32 within the seating 34.

These arcuately faced strips and complementarily formed channels allow the lower sashes to be tilted inwardly upon the brackets 30 without parting at any time the lower sash from the strips 35 and 37 and thus no drafts are able to enter beneath the lower sash.

A further method of preventing the entry of drafts between the lower edges of the sash and the sill is shown in Figure 5. In this figure, an upwardly extending ridge 35<sup>2</sup> is provided along the length of the sill having a configuration as indicated in Figure 5 and possessing flat faces on all sides. A groove 37<sup>2</sup> is provided substantially centrally between the two sashes and is complementarily formed to receive the ridge 35<sup>2</sup>. Tilting of the sashes using this embodiment will cause only the very slightest crack to appear between the edge 33' of the sill and the lower surface 38<sup>2</sup> of the sash and the outer face 39' of the ridge and the inner face 39<sup>2</sup> of the groove will be forced together at each setting of the window,

thereby sealing the sash and the sill and preventing draft from entering therebetween as presently described.

In order to inwardly tilt the lower sashes in several angular positions, I have attached a rack 39 to the side frame of the window by means of wood screws 40 passing therethrough. This rack has a slightly arcuate configuration and is provided with a series of recesses 41 along the lower edge thereof and a stop 42 at the outer end thereof.

A casing 43 is attached to the inner lower sash by means of wood screws 44. This casing I provide with a hollow semi-cylindrical central portion 45 from either side of which extend flanges 46 having orifices 47 therein for the reception of the screws 44. The ends of the semi-cylindrical portion 45 are closed and bearings 48 are drilled therein to receive a shank 49. A lever arm 50 designed to act as a handle is attached to the outer end of the shank 49 and adjacent the arm 50 within the semi-cylindrical portion 45 is a stationary cam 51 made integral with the casing. A pin 52 is passed diametrically through the shank 49 and a helical spring 53 is inserted between this pin and the end of the casing. This spring tends to move the shank 49 to the right as shown in Figures 7 and 8 and a stud 54 inserted within the shank 49 is brought to bear against the stationary cam 51 so that rotative movement of the shank caused through the lever arm 50 will shift the shank inwardly and outwardly through the casing 43. At the outer end of the shank 49 and integral therewith, is an eccentric cylindrical lug 55. This lug is so designed that when the handle is in a vertical position, it is at the upper side of the shank and engages with one of the recesses 41 within the rack 39. However, rotating the handle to a horizontal position and thereby retracting the shank into the casing will cause the lug to move rotatively and downwardly to a position adjacent the window sash to which the device is attached.

The lug 55 is eccentrically positioned in order to exert upward pressure against the recess within which it is inserted in the rack and thereby press the lower edge 38<sup>2</sup> of the sash against the sill 38' and providing a sealed joint along the lower edge of the sash structure indicated in Figure 5 of the drawings accompanying this application.

The casing 43 is attached to the sash in such a position that when the handle is in a vertical position the lug 55 of the shank 49 will engage with any one of the recesses 41. However, turning the lever arm to a horizontal position will retract the lug and cause it to move inwardly and thereby disengage it from the recess. In this manner the inner sashes may be inclined into the desired angular relationship with regard to the frame of the window and locked in that position by means of the rack and locking device just described.

From the foregoing description, it will now be evident that I have provided a novel and useful method of ventilating a room by means of a window, as this device causes air to move upwardly as it enters the room and not to flow to the floor as is the case when windows are opened from the bottom. The window may also be adjusted for various degrees of ventilation, is easy to install and is not likely to become out of order.

Since various modifications can be made in the above invention, and many apparently widely different embodiments of same, made within the

scope of the claim without departing from the spirit and scope thereof, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense and I desire only such limitations placed thereon as are specifically expressed in the accompanying claim.

What I claim as my invention is:—

In combination, a window frame and a sash, said sash being pivotally mounted upon the sill of said frame, means upon the vertical sides of said sash and upon the vertical sides of said frame for locking said sash in an upright position within said frame or in any selected one of a plurality of inclined positions, said locking means

being designed to cause said sash to exert downward pressure against said sill when in said upright position or in any of said plurality of inclined positions, an upwardly projecting strip extending across said sill, a channel formed upon the lower surface of the lower horizontal edge of said sash, said strip being designed to be received within said channel, said strip extending partially into said channel irrespective of the inclination of said sash, said strip and said channel co-acting with said pressure to produce a sealed junction between said sash and said sill irrespective of the inclination of said sash.

ANDREW THOMAS WILSON. 15