

Feb. 7, 1950

V. A. VICKSELL, SR
ADJUSTABLE WINDOW VENTILATOR

2,496,921

Filed June 6, 1945

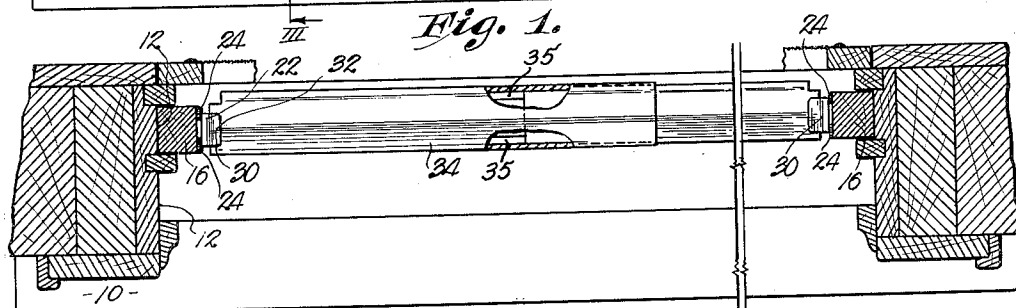
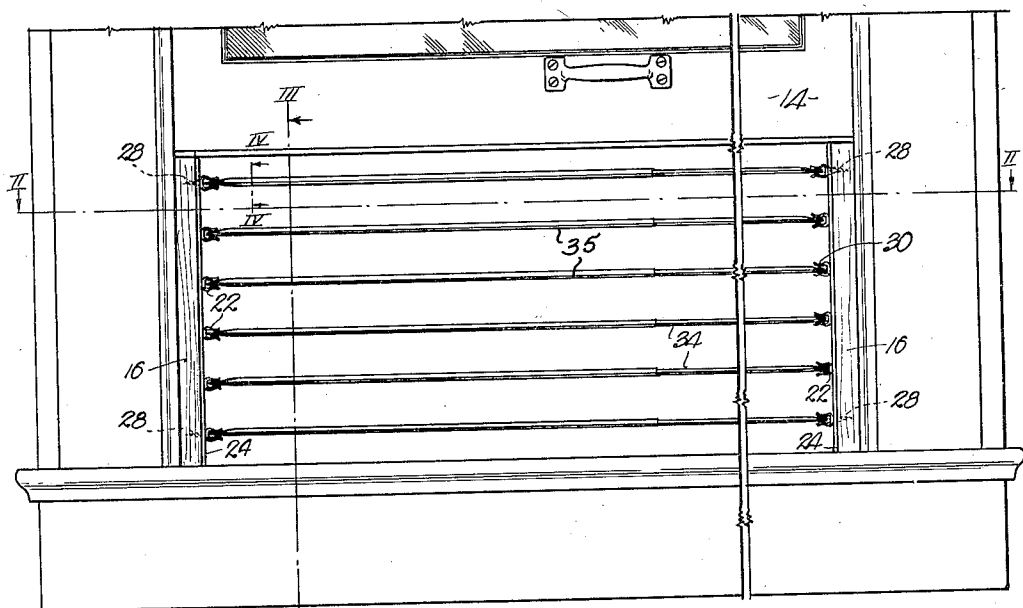


Fig. 2.

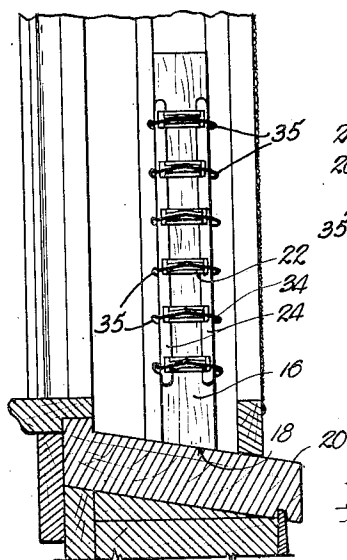


Fig. 3.

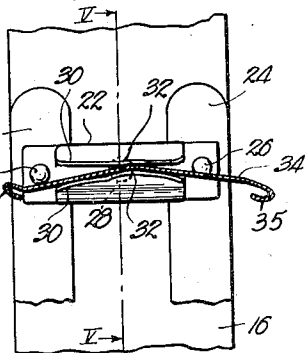


Fig. 4.

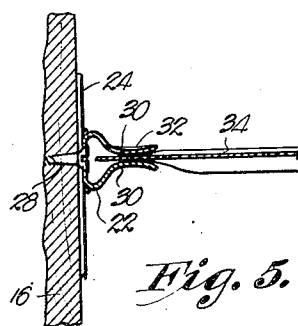


Fig. 5.

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UNITED STATES PATENT OFFICE

2,496,921

ADJUSTABLE WINDOW VENTILATOR

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Application June 6, 1945, Serial No. 597,834

3 Claims. (Cl. 98—99.8)

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This invention relates to window structures in general, and particularly to means for controlling the ingress and egress of light and air through the opening formed by a conventional window frame.

One of the primary aims of this invention is the provision of an adjustable window ventilator, the character whereof permits its being moved to and from a position in association with the window frame with the ability of accommodating itself to windows of various widths.

Other important objects of the instant invention are to provide a window ventilator that is capable of having the slats thereof disposed at desired angles without the employment of complicated and involved holding and manipulating mechanism; that has novel and unique elements for operatively supporting a number of substantially horizontal slats; that is capable of having all of the component slats of its assembly simultaneously moved; and that embodies details of construction allowing placement and removal of slats without the necessity of manipulating separate fastening elements, the said slats being frictionally held by clips designed for the purpose.

Other objects of the invention will appear during the course of the following specification, referring to the accompanying drawing, wherein:

Fig. 1 is a side elevational view of an adjustable window ventilator made in accordance with the present invention and mounted in a conventional window frame.

Fig. 2 is a horizontal sectional view taken on line II—II of Fig. 1, parts being broken away to reveal details of construction.

Fig. 3 is a fragmentary vertical sectional view through the ventilator.

Fig. 4 is an enlarged fragmentary detailed sectional view taken on line IV—IV of Fig. 1; and

Fig. 5 is a sectional view taken on line V—V of Fig. 4.

The conventional window frames with which the ventilator embodying my invention may be associated, is broadly designated by the numeral 10 and comprises grooves 12 within which the window sashes 14 are mounted for vertical sliding.

The frame per se, forms no part of this invention and is illustrated merely to indicate the manner in which the adjustable ventilator may be applied thereto.

The form of the invention chosen for illustration comprises a pair of vertical opposed side rails 16, each of which may be formed of a piece of wood or created from sheet material that will fit between the conventional stops forming a part of

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window frame 10. Since the ventilator has no tendency to shift vertically, it need not be supplied with means of securement other than the friction established between rails 16 and window frame 10. The lower ends of rails 16 are inclined as at 18 for the purpose of conforming to the angle of inclination of the top of sill 20 forming one of the elements of frame 10.

Each side rail 16 has a series of substantially U-shaped clips 22 adjacent thereto. These clips 22 are interconnected by tie bars 24, one of which is at the ends of the clips 24 forming the series thereof. Each clip 22 is wider at the bight thereof than at its legs for pivotally securing the same by pins 26 to the respective tie bars 24, and the clips are held in spaced apart relation to receive the hereinafter described slats.

While it may be desirable to pivotally mount each clip 22 upon rail 16, it is necessary to provide such mounting only for the upper and lowermost clip 22, as illustrated in Fig. 1. Accordingly, therefore, a screw 28 or other means for pivotally attaching the upper and lower clip 22 to rail 16, passes through an opening formed in the bight of clips 22 substantially midway between the pins 26.

The legs of each clip 22 are resilient and form a pair of jaws 30, slightly shorter in length than the overall length of the clip 22. This resiliency of the jaws 30 easily permits access to the screws 28 by a screw driver or other tool to drive the same into the rails 16 before the slats 34 are placed in the clips 22. Cooperating detents 32 in the opposed jaws 30 of each clip, are provided to engage the ends of slats 34, one of which extends between each pair of opposed clips 22. These slats are sectional and telescoped, as clearly shown in Fig. 2. Thus, when window openings of various widths are encountered, the length of slats 34 may be varied accordingly, without affecting the manner in which the ends of slats 34 are frictionally engaged between jaws 30 of the clips.

Each slat 34 is transversely arched as shown in Fig. 4, to not only stiffen the same but to increase the frictional engagement between jaws 30 and that portion of the slat 34 clipped therebetween. The lowermost leg of the clips 22, forming one of the jaws 30, is arched to conform to the contour of the slats 34, while the other jaw 30 thereof is substantially straight. Therefore, with the detents 32 formed substantially midway between the ends of the jaws 30, slats 34 are firmly held against displacement.

One of the slats 34 has marginal flanges 35 for

slidably receiving its corresponding slat and the outermost ends of the slats are flat.

Since the lowermost slat 34 is the one usually engaged by the operator when the series of clips and their supporting slats are to be adjusted, this lowermost slat 34 has rebent portions along its longitudinal edges. A balance is established because of the use of tie bars 24 in the position shown in Fig. 4. The frictional engagement established between upper and lower clips 34 and their pivotal supports 28, is such as to hold the several slats 34 in an angled or inclined position to increase or decrease the size of the opening in window frame 10, which the ventilator occupies.

The material from which the component parts of the ventilator are constructed, should be weather-proof for the ventilator assembly is subjected to the elements when in the operative position. Lightweight metal, such as aluminum has proven effective but protected wood is satisfactory where a less expensive ventilator is to be produced.

The widths of each slat 34 is greater than the length of jaws 30 on clips 22, and this relation of parts together with the detents 34 and the straight form of jaws 30, insures a tight, frictional engagement between clips 22 and the ends of slats 34. These slats may be moved into place by forcing the edges thereof between the ends of opposed jaws 30, and such manipulation can be accomplished by those not skilled in the art—all to the end that the ventilator assembly may be mounted with ease and dispatch by those quite unfamiliar with mechanics.

It is realized that ventilators having physical characteristics different from those illustrated and described, might be made without departing from the spirit of the invention or scope of the appended claims.

Having thus described the invention, what is claimed as new and desired to be secured by Letters Patent is:

1. In a ventilator of the character described, pairs of opposed, pivotally mounted, substantially U-shaped clips each having a pair of legs forming inwardly directed jaws; and a slat extending between the clips of each pair thereof, said slats being wider than the length of the jaws and transversely arched to increase the frictional interengagement between the jaws and the slats when the ends of the latter are between the jaws, one of said jaws being arched to conform to the contour of said slats, the outer jaw being substantially straight for clamping the slats against said arched jaw.

2. A window ventilator comprising a pair of spaced apart substantially parallel rails; a plurality of spaced slats between the rails and perpendicular thereto; and a mounting assembly for the slats secured to each rail respectively, said assemblies each including a pair of spaced tie bars and a number of clips pivotally joining the tie bars, there being a clip for each slat, said clips having means for frictionally engaging the slats, certain of the clips of each assembly being pivotally connected to a corresponding rail, said means comprising a pair of laterally projecting resilient jaws on each clip respectively, said jaws being biased toward each other and having a slat gripped therebetween.

3. A window ventilator comprising a pair of spaced apart substantially parallel rails; a plurality of spaced slats between the rails and perpendicular thereto; and a mounting assembly for the slats secured to each rail respectively, said assemblies each including a pair of spaced tie bars and a number of clips pivotally joining the tie bars, there being a clip for each slat, said clips having means for frictionally engaging the slats, certain of the clips of each assembly being pivotally connected to a corresponding rail, said means comprising a pair of laterally projecting resilient jaws on each clip respectively, said jaws being biased toward each other and having a slat gripped therebetween, said slats being arcuate in cross sectional contour, at least one of the jaws of each pair thereto conforming to said slat contour.

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