Jan. 27, 1925. 1,524,023

A. A. CRAIG

WINDOW VENTILATOR

Filed Dec. 2, 1920

Fig. 1

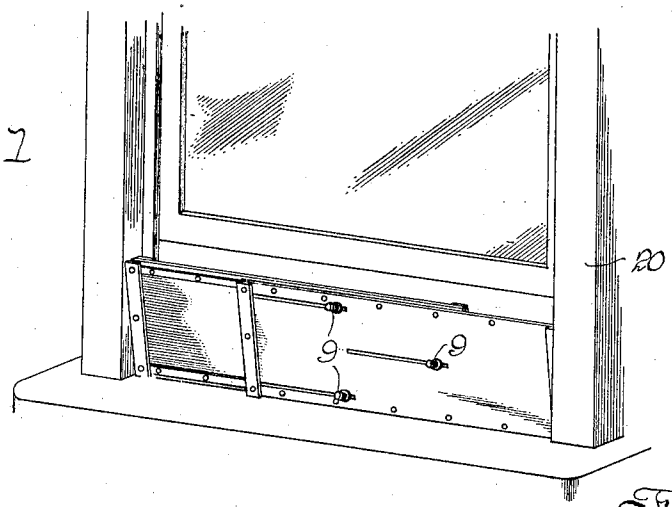


Fig. 2

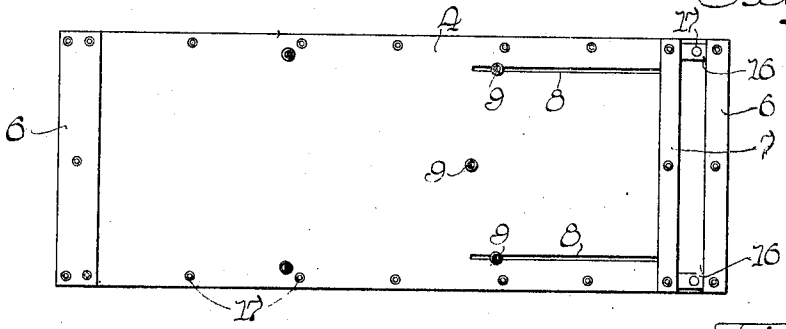


Fig. 3

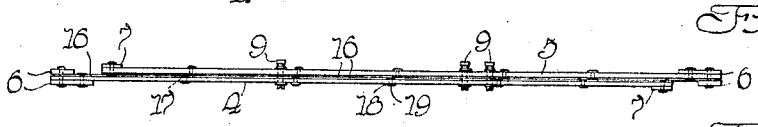


Fig. 4

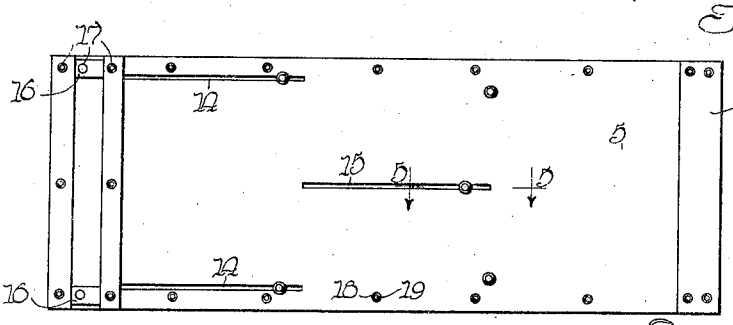
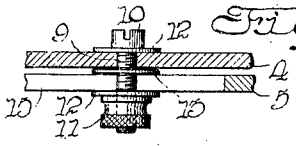


Fig. 5



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UNITED STATES PATENT OFFICE.

ARTHUR A. CRAIG, OF CHICAGO, ILLINOIS.

WINDOW VENTILATOR.

Application filed December 2, 1920. Serial No. 427,695.

To all whom it may concern:

Be it known that I, ARTHUR A. CRAIG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Window Ventilators, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to window ventilators. My improved device is intended mainly for use in window frames, though it will be apparent that the device has utility in any place where controlled ventilation is desirable.

The more important objects of my invention are: first, to provide a ventilator which shall be simple and inexpensive to construct, easily placed and retained in an angular position in a window casing without the requirement of additional securing members; second, to provide a ventilator which shall be so retained in relation to the sash members that the opening may be varied to control the ingress and egress of air without causing the ventilator itself to be disturbed; and third, to provide a ventilator the parts of which may be readily adjusted so as to fit windows of different sizes, thereby making it extensible.

Devices of the class described, as heretofore constructed, have employed latch members, hooks, chains, wing portions and other similar mechanisms to fasten the ventilator in the window frame, all of which tend to make the devices cumbersome, bulky and inconvenient to operate. In the present invention I obviate these disadvantages by providing the material of a compressible and resilient character, so as to retain frictionally the device in position whereby a cheaper, simpler and more efficient device is obtained.

According to my invention, I provide a pair of panel members arranged in adjustable relation with each other so as to obtain within a certain range any desired size of ventilator to be fitted in the window frame by forcing the ends outwardly which results in compressing that portion adjacent thereto and obtaining a suitable frictional engagement.

In the accompanying drawings in which I have illustrated one embodiment of my invention:

Figure 1 is a fragmentary isometric view of a window frame having a ventilator embodying my invention inserted therein;

Figure 2 is an elevational view of one side of the ventilator;

Figure 3 is a top edge view of the same;

Figure 4 is a view similar to Figure 2, but illustrating the opposite side; and

Figure 5 is a fragmentary sectional view taken on line 5—5 of Figure 4.

The ventilator comprises the extensible frame consisting of the panel members 4 and 5 which are made of material such as cardboard, pressed or otherwise, having a compressible character, and yet resilient enough to return to former position after being compressed. Reinforcing strips 6 are provided on each face at the outer ends thereof so as to stiffen the panels and provide a greater frictional surface at this point. The inner ends of the panels 4 and 5 are provided with a reinforcing strip 7 on the outer face only which permits the two panel members to lie close to each other, and thereby prevent currents of air from circulating therebetween.

As is shown, the panel members 4 and 5 are so arranged that relative movement is permitted, thereby making it possible to adjust the ventilator to various size window frames. To this end slots 8 are provided in the panel 4 preferably adjacent the inner end and in these slots ride tension screws or bolts 9. The bolts 9 are secured in the opposite panel 5 and project through to the outer face of the panel 4, terminating into a slotted head 10. On the other end of the bolt 9 a thumb nut 11 is provided which allows the degree of engagement of the two panel members to be suitably adjusted. Wearing of the slots 8 is prevented by the washers 12, and binding of the panels about that area is prevented by means of the washer 13.

Likewise, the panel 5 is provided with the slots 14 disposed at the inner end, and the slot 15 disposed centrally. As before, tension bolts 9 having the slotted heads 10 and thumb nuts 11 ride in the slots 14 and 15 for the purpose described. It will be noted that the slots 8 and 14 serve to hold together the adjoining ends, while the slot 15 serves to retain together the middle portion of the panel members. This arrangement prevents bulging or warping, and increases the ease with which the panel members may be adjusted.

In order to facilitate this adjustment and

obviate any possibility of the two panel members from frictionally binding so as to result in locking, engaging strips 16 are provided upon each inner face at the upper and lower ends. These strips are so arranged that they space the panel members apart, allowing only the strips themselves to engage. Rivets 17 have been provided to secure the strips 16 to the respective panel members, the rivets being provided with a washer 18 at the outer end over which a head 19 is formed. It will be apparent from Figure 3 that the heads of the rivets 17 are flattened sufficiently against the strips 16 to avoid any possibility of interference during movement of the panel members. The strips 16 preferably extend end to end of each panel, the reinforcing strips 6 at this point lying over the ends so as to prevent the same from curling or otherwise becoming loose.

I have shown in Figure 1 the ventilator employed in a window frame 20. Its position in relation to the sash members is such that the opening may be varied without disturbing the ventilator. To insert the device it is adjusted so that it is smaller than the window span. It is then extended lengthwise to forcibly engage with the window frame members which results in compressing the edges of the panels. This adjustment is retained by tightening the tension bolts 9. It is to be noted that the slots 8, 14 and 15 are out of registry with each other to prevent the currents of air from circulating therethrough and produce an undesirable draft. The ingressing currents of air are caused to take an upward path, passing over the top of the ventilator which eliminates the usual draft caused by outside openings.

It is apparent that I have provided a very simple and practical window ventilator which is capable of insertion by friction in view of the compressible character of the material employed. Any angular position of the ventilator in the window frame may be had, as the edges may be compressed to such a degree as to insure a suitable frictional engagement with the window frame. I do not intend to be limited to the details shown, but consider that various modifications may be had without departing from the scope of my invention.

I claim:

1. In combination, a plurality of panel members adapted to form an extensible ventilator frame, said panel members lying face to face and having sliding relation with each other, engaging strips provided on the inner face of and spacing said panels apart to permit the same to freely slide, said panels having slots therein, said slots being out of registry with the slots of the opposite panel, bolts in said panels riding in said slots, said bolts serving to tighten the engagement of the opposite engaging strips so as to retain the panels in extended position.

2. A ventilator comprising, in combination with a window casing, two flat panels of solid fibre board, means interconnecting the panels for expanding said panels, said means including fastening means for fixedly holding the panels in expanded condition under compression stress with their end edges in frictional engagement with the window casing, whereby the ventilator may be entirely supported and held in place by friction on the ends of the panels maintained by the resilience of the panels themselves.

In witness whereof, I hereunto subscribe my name this 27th day of November, 1920.

ARTHUR A. CRAIG.