This invention relates to improvements in windows and has particular reference to a combined window and ventilator. In my United States Patent No. 1,608,000, issued November 23, 1926, there is shown a ventilator adapted for use in connection with the usual construction of windows having two sashes and includes a screened frame mounted in juxtaposition to the lower sash of a window by means of triangular end brackets and having louveres for regulating the amount of air entering a room through the screen in said frame.

In accordance with the present invention, it is proposed to adapt this general type of ventilator to windows of various constructions, such as the casement type, and to mount the ventilator in position in a simple and effective manner so that it will, for all practical purposes, constitute a part of the window and, at the same time, be capable of adjustment to regulate the ventilation of a room when the window is closed. The conception herein involved is also applicable in its principles to what are known as double hung windows, in which case the ventilator portion occupies either all or part of one or both of the sashes, and also applies to center pivoted windows in which the latter may be swung about horizontal or vertical axes.

The inventive idea involved is capable of receiving a variety of mechanical expressions, some of which, for purposes of illustrating the invention, are shown in the accompanying drawing; wherein—

Figure 1 is a perspective view of a combined casement window and ventilator constructed in accordance with the invention;

Figure 2 is an enlarged fragmentary vertical section;

Figure 3 is a fragmentary top plan view, partly broken away and shown in section;

Figure 4 is a fragmentary perspective view of one of the end brackets forming a part of the ventilator; and

Figure 5 is a view similar to Figure 2, showing a slightly different form of mounting for the ventilator.

Although the invention is shown and described in connection with what is generally known as a casement window, it is not to be construed as limited in its adaptation to this type and may be employed with other kinds of windows such as previously mentioned. In the drawing, 10 indicates a casement window sash which, in Figure 1, is of the type which swings inwardly and has its upper portion above the ventilator divided to receive a number of small panes of glass, the lower edge of said portion being formed by the horizontal sash bar 11. It is to be understood that the construction shown herein is not limited in its application to in-swinging casements nor to sashes which contain a number of small panes of glass for, as will be seen in Figure 5 which will later be described in detail, the structure may be incorporated with a casement having only a single large pane.

The ventilator forming a part of the casement is shown as comprising a pair of complemenetal end brackets 12 each of substantially triangular shape and provided upon its forward or inclined edge with an interrupted flange 13 terminating short of the upper end of the bracket and against which one end of the pane of glass 14 is adapted to rest with the lower edge of the glass engaging the lower rail 15 of the casement sash and secured thereto by putty 16 or other suitable means. The rear or vertical edge of each bracket is provided with an outturned flange 17 also terminating short of the upper end of the bracket and adapted to engage the outer surface of the adjacent vertical stile 17 of the sash and be secured thereto by suitable fasteners 18 whereby to affix the bracket in position.

The ventilator further includes the frame 19 having the screen 20 covering its opening. Said frame is mounted in a horizontal position between the upper ends of the brackets 12, in a manner to presently appear, and has secured to the lower edges of the longitudinal sides thereof the opposed angular supporting strips 21. The vertical portions of said strips extend upwardly into the frame in spaced relation to said sides and form bearings for the turnions 22 of a plurality of louveres 23 arranged transversely of the frame beneath the opening therein and constituting a shut-
fter device by means of which the admission of air through the ventilator may be controlled. The various louvres are interconnec-
ted by a rod 24 and one of the trunnions of a louvre is extended through the front longitudinal side of the frame 19 and provided with a handle or knob 25 by means of which the louvres may be adjusted to open, closed or intermediate positions.

For the purpose of mounting the frame 19 in position, each bracket 12 is provided along its upper edge with an intumid flange 26 adapted to engage the upper surface of the adjacent end of the frame. The distance between said flange 26 and the upper end of flange 13 is equal to the thickness of the frame so that the lower surface of the latter will rest upon and be partially supported by said end of the flange 13. To further secure the frame in place, the forward portion of each bracket adjacent its upper end is formed with an opening 27 for receiving a screw or other fastener which is driven into the end of the frame. As a further securing means for the frame, there is provided the metal strip 28 extending the length of the back or outer longitudinal side of said frame and secured thereto by screws 29. The strip 28 is greater in width than the thickness of the frame and is bent longitudinally to provide the angular portion 30. Said portion extends along the lower angle in the cross bar 11 and after first inserting putty 31 in the space between said portion and corner of the angle, the strip is attached to the bar 11 by the screws 32. Finally, a quantity of putty 33 is inserted along the upper edge of the pane 14 and the lower surface of the front strip 21 to seal the space therebetween. Thus, the ventilator is securely mounted in and made a part of the casement sash.

Figure 5 illustrates the adaptation of the inventive idea to a casement having but a single pane of glass 34. The construction of the ventilator is precisely the same as that previously described, but in order to mount the same between the lower edge of the pane 34 and the bottom of the sash, a different form of securing strip from the strip 28 is used. Thus, a strip is bent to provide right angular portions 35 and 36 and folded upon itself, as indicated at 37, to form a ridge against which the pane 34 abuts when it is seated upon the portion 36 and secured thereon by putty 38. The portion 35 is fastened to the rear edge of the frame by screws 39.

What is claimed is:

In a combined window and ventilator, a sash having an opening therein, a ventilator mounted in said opening and including a frame extending inwardly from the upper edge of said opening, end brackets in which said frame is supported and having flanges formed along one edge for attachment to the vertical stiles of said sash, and an angular fastening strip having one portion extending along and secured to one side of said frame and its other portion fastened to the part of the sash forming said upper edge.

In testimony whereof I have affixed my signature.

FREDERICK EHRSAM.