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PIVOT FOR VENTILATOR WINDOWS

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His Attorney
This invention relates to cup pivots of the type used in ventilator windows as described in the Patent No. 1,821,442, granted to Henry D. Hope, and more particularly to improvements in the construction thereof.

In its preferred embodiment this invention consists of a cup pivot, formed from any suitable material, for ventilator windows and is provided with a braking and locking mechanism whereby to control the ease with which the window may be moved from one position to another as well as to lock it in any of its positions.

Prior to this invention, many devices have been produced by which to support and control the movement of pivotal windows but it is believed that none of these have in their structure included a braking and locking mechanism within or in conjunction with the pivotal members whereby to eliminate retaining cords or stops. The invention described in the following specification discloses a unit by which to suspend and control the movement of ventilator windows. A braking and locking mechanism is contained within the movable pivot cup, being adapted to act upon the fixed cup to retard or completely prevent any movement of the swinging window. Access to the control of this mechanism is had through an adjusting screw extending from the movable cup.

Through the use of applicant's construction it is possible to retard the free swinging movement of the window thereby preventing damage thereto from improper handling and also to lock the window in any desired position against its movement thereof by any one attempting to do so from the exterior of the building of which the window forms a part.

The principal object of this invention is the provision of cup pivots by which to hang ventilator windows, the ease with which the window may be manipulated being controlled by the operator.

Another object of this invention is the provision of cup pivoted windows which may be opened into any of their various positions to produce ventilation and held in the desired position through a brake mechanism controlled by the operator and contained within the pivot cups.

A further object of this invention is the provision of a cup pivoted window which may be opened and held firm in any one of its positions without the aid of retaining cords or stops.

A still further object of this invention is the provision of a cup pivoted window which may be locked against manipulation thereof from the exterior of the window.

Other and further objects of this invention will appear from the consideration of the following specification taken in connection with the accompanying drawing, and in which...

Fig. 1 is a fragmentary perspective view of a window provided with cup pivots in accordance with this invention;

Fig. 2 is a vertical sectional view taken substantially on the line 2—2 of Fig. 4 and illustrates the relative position of the inner and outer cups to the braking mechanism;

Fig. 3 is a view similar to Fig. 2 and illustrates the position occupied by the braking mechanism when in frictional engagement with the inner cup;

Fig. 4 is a sectional view further illustrating details of this construction, being taken on the line 4—4 of Fig. 2; and

Fig. 5 is a detail view of one of the braking elements.

Referring to the drawing and particularly to Figs. 2 and 3 thereof, this invention comprises an inner and fixed cup designated by the reference numeral 10 and outer and movable cup 11. The inner cup 10 is secured to the frame 18 which supports the window 18.

The frame 18, having flanges 14 formed at an angle to the central web 15 thereof, is cut away, in any suitable manner, through said flanges to provide a recess or pocket 16 into which the cup 10 is adapted to be placed. Rivets 17, by which the cup 10 is secured to the frame 18, extend through openings provided therefor in said cup into the web 15 of the frame 18 and are headed over against the face of said frame remote from the cup.

The window frame 18, being substantially identical in construction to the frame 18 has flanges 14 projecting outwardly therefrom.
which are cut away to provide a recess or pocket 20 in which the cup 11 is positioned. Rivets 21 secure said cup to the web 15 of the frame 18, the accomplishment of which is similar to that described in connection with the cup 10. While applicant shows and describes rivets 17 and 21 as being the means by which the cups 10 and 11 are secured to their respective frame, it is obvious that other securing means may be employed, namely, that of screws or by welding the flat base of the cup to the web of the frame.

The outer cup 11 is provided with an annular wall 22 substantially at right angles to the base 23 thereof. The wall 22 is of a depth sufficient to receive therewithin the cup 10, the base wall 24 of the cup 10 projecting slightly beyond the rim of the cup 11. The rim of the cup 10, formed by the annular wall 25, abuts the base 23 of the cup 11 when said cups are in engagement with each other.

Pivotedly secured, as by screws 27, upon and to the base 23 of the cup 11 are brake elements 28. These elements are each cut away at 30 to provide clearance for the heads of the rivets 21 by means of which the cup 11 is secured to the frame 18. The free and contacting ends 32 of the elements 28 are shaped to conform to the contour of the wall 22 of the cup 11 and are each provided with a small tapered recess 34 which, when the free ends of the elements are in a butting relation form together a conical pocket 36, the purpose of which will later be described.

The brake elements 28, when the cups 10 and 11 are in engagement with each other, lie within the space formed by the annular wall 25 of the inner cup 10. A tapped opening 37 provided in the wall 25 of the cup 11 lies directly in line with the conical pocket 35 formed in the face of the brake elements 28 adjacent the base 23. A screw 39, having a tapered end 40, threadably engages the opening 37. When the screw 39 is turned to more fully engage the base 23, the end 40 thereof moves into the pocket 35 of the brake elements spreading them apart (see Fig. 3). When the screw 29 has been turned until further turning thereof is impossible, it will be found that the brake elements 28 have become separated from each other to the extent that they closely and in a frictional manner engage the annular wall 25 of the cup 10. The action of the screw 39 upon the brake elements is such that said elements will so closely engage the cup 10 as to prevent any movement of one cup with respect to the other. By slightly withdrawing the screw, any variety of adjustments may be made whereby the frame 18 may be easily moved.

While only one modification of this invention has been shown and described, applicant does not intend to be limited thereto since it is obvious that other modifications or adaptations may be made without departing from the spirit and scope of this invention as set forth in the following claim.

Having thus set forth my invention what I claim is new and for which I desire protection by Letters Patent is:

A ventilator window construction comprising fixed and movable frame elements, cup pivots supporting said movable frame upon said fixed frame, said pivots comprising interengaging inner and outer cups, said inner cup being secured to said fixed frame and said outer cup to said movable frame, braking elements pivotally mounted upon the inner face of the base of said outer movable cup, an adjusting screw threadably engaging the base of said outer cup and adapted to separate and extend the free ends of said braking elements into contact with the circumferential wall of said inner cup whereby said braking elements will retard or prevent the rotation of one of said cups with respect to the other.

In testimony whereof I have affixed my signature.

FRANK GEORGE GARRATT.