Sept. 23, 1958 F. J. BOMERSCHEIM 2,853,128

COMBINED STORM SHUTTER AND AWNING

Filed Jan. 3, 1955

FIG. 1

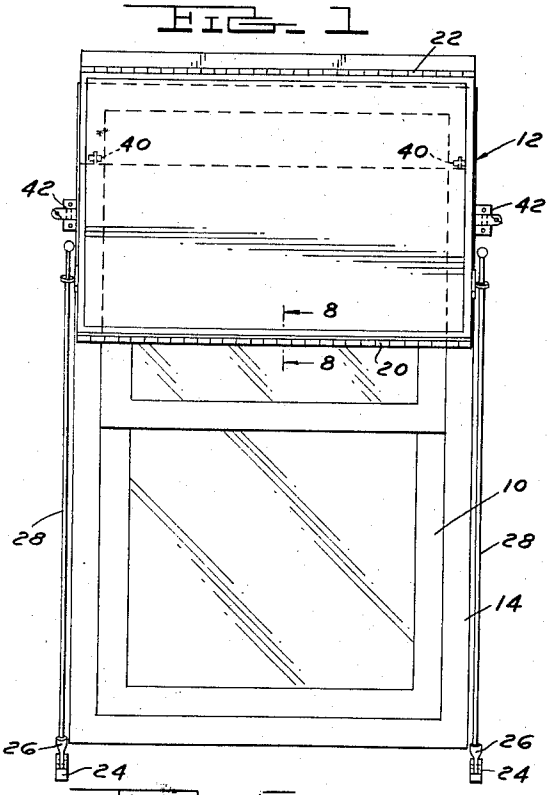


FIG. 2

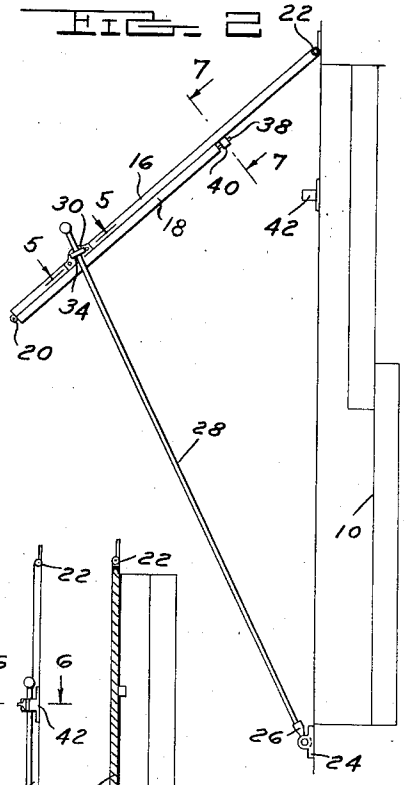


FIG. 5

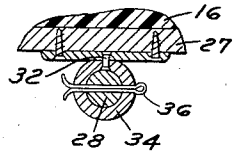


FIG. 8

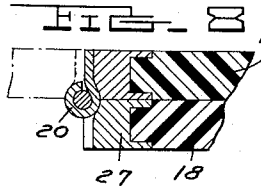


FIG. 3

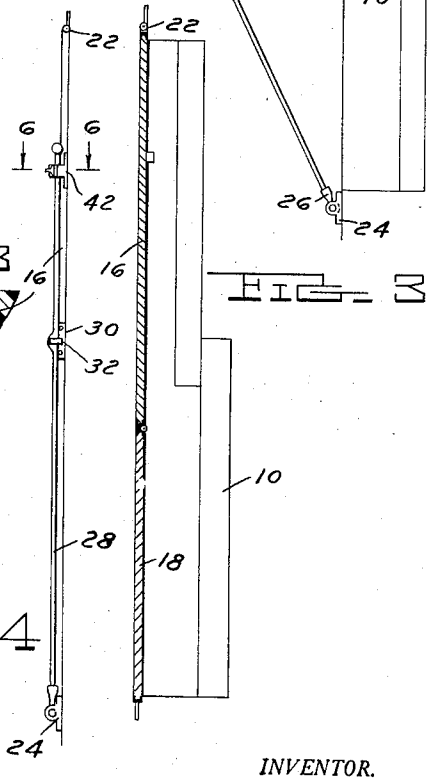


FIG. 6

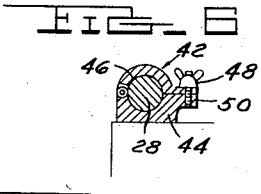


FIG. 7

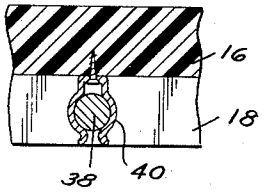


FIG. 4

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COMBINED STORM SHUTTER AND AWNING

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7 Claims. (Cl. 160—62)

This invention relates to a combined storm shutter and awning for a dwelling window. In regions of the country such as in Florida where the weather is unusually hot, awnings for windows are a practical necessity. At the same time, Florida is particularly susceptible to hurricanes and the like. Thus, storm shutters are also necessary.

It is an object of this invention to provide a unit which is adapted to be mounted on a dwelling and serve either as an awning or as a storm shutter.

A further object of the invention is to provide a device which can be very easily manipulated to either of two positions to serve as an awning or as a storm shutter.

A further object of the invention is to provide a device of the type described which effectively protects the window against damage when used as a storm shutter and which at the same time provides a pleasant appearance when used as an awning.

In the drawings:

Fig. 1 is a front elevation of the combined awning and storm shutter of this invention in the position it assumes when used as an awning.

Fig. 2 is a side elevation of the arrangement shown in Fig. 1.

Fig. 3 is a vertical section showing the device when used as a shutter.

Fig. 4 is a side elevation of the combined storm shutter and awning in the position it assumes when it is used as a storm shutter.

Fig. 5 is a sectional view along the lines 5—5 in Fig. 2.

Fig. 6 is a sectional view along the lines 6—6 in Fig. 4.

Fig. 7 is a sectional view along the lines 7—7 in Fig. 2.

Fig. 8 is an enlarged sectional view showing the manner in which the two panels of the device are hinged together.

In the drawings, a window of a dwelling is indicated at 10 and the combined storm shutter and awning is indicated generally by the numeral 12. Window 10 is surrounded by a frame 14. The combined storm shutter and awning of this invention includes two panels 16 and 18 which are hinged together along adjacent edges as at 20. Panel 16 comprises the upper panel which is hinged to the window frame or to a fixed part of the structure above the window frame 22. A flashing strip, not illustrated, may be employed for overlapping the hinge 22, if desired. The lower panel 18 is connected to the upper panel 16 by hinge 20 such that panel 18 may be folded from an extended position shown in Fig. 3 to a folded position, Fig. 2, where it underlies the lower portion of panel 16. Panels 16 and 18 are dimensioned such that in the extended position, they are arranged to overlie the window 10. For reasons described hereinafter, panel 18 is preferably shorter in vertical extent than panel 16.

At each side of the window and adjacent the lower edge thereof, there is provided a pair of brackets 24. Brackets 24 pivotally support a pivot fitting 26 at the lower ends of support rods 28. The arrangement is such that rods 28 can be pivoted on bracket 24 upwardly and downwardly toward and away from the plane of window 10. Panels 16 and 18 may be formed from any suitable material which presents an attractive appearance. For example, they may be stamped or rolled from sheet metal such as aluminum or the like or they may be formed of plastic. Each panel preferably includes a peripheral frame 27 on which the covering material, which may be in sheet form or in the form of louvers, is mounted. At each side of panels 16 and preferably adjacent the lower portion thereof, there is mounted a bracket 30 on which is swivelled as by a pin 32 a bushing or collar 34. Collars 34, one at each side of panel 16, are adapted to slidably receive support rods 28. Any suitable means may be employed for locking collars 34 in a fixed position on support rods 28. In the drawings, such means are illustrated as cotter pins 36 passing through registering openings in the bushings and rods; but it will be appreciated that other means such as detents or the like may be used if desired to adjustably lock collars 34 on support rods 28 in a plurality of different positions.

The free end of panel 18 is provided with one or more projecting studs 38; and on the underside of panels 16, there are mounted clips 40 suitably positioned to resiliently engage and hold pins 38 when panel 18 is folded to the position underlying panel 16 as shown in Fig. 2. In such position, panel 16 may be swung outwardly about the hinge 22 to the desired inclination with respect to the plane of the window to serve as an awning. It will be appreciated that when panel 16 is pivoted outwardly from the position shown in either Figs. 3 and 4 to that shown in Fig. 2, support rods 28 slide through bushings 34; and at the same time, the bushings 34 pivot on brackets 30. The panel 16 may be locked in the desired position of inclination by the cotter pins 36 or the like.

When the device is used as a storm shutter, the studs 38 are released from the spring clips 40 and the panel 18 is swung downwardly to the extended position shown in Figs. 3 and 4. Hinge 20, it will be observed, is in the nature of a limited hinge which limits the outward pivoting movement of panel 18 to a position wherein the panels 16 and 18 are in coplanar relation, Fig. 8. When in this position, the panels may be swung inwardly about hinge 22 to a position wherein they overlie the window. During such pivotal movement, bushings 34 slide downwardly on rods 28 and rods 28 pivot upwardly towards the window frame. In the vertical position, support rods 28 may be engaged with brackets 42 to retain the shutter in the closed position with a base portion 44 to which is hinged a strap 46; and between these members, the upper ends of rods 28 are adapted to be engaged. A wing nut 48 may be employed for locking the hinge strap 46 about the rod 28. If desired, in place of the wing nut assembly shown in Fig. 6, the laterally extending portions 50 of members 44 and 46 may be provided with a through opening for receiving a lock. In the position illustrated in Fig. 4, it will be observed that the shutter is effectively locked in the closed position.

Thus it will be seen that I have provided a unitary device which is adapted to be used either as a storm shutter or as an awning. I have found that by dimensioning panel 16 slightly greater in vertical extent than panel 18 and by supporting these panels in the manner shown in Fig. 2, an attractive awning is provided. At the same time, the device can be readily and quickly manipulated from the position shown in Fig. 2 to that shown in Figs. 3 and 4 to provide a shutter which effectively protects the window in case of hurricanes or the like.

I claim:

1. A combination awning and shutter for a window comprising a panel dimensioned to overlie and completely close the window opening, said panel being hingedly con-

nected at its upper end adjacent the upper end of the window frame on the outer side thereof and being swingable outwardly and upwardly from a closed position overlying the window to a position inclined downwardly and outwardly from the upper end of the window, a pair of support rods pivotally mounted at one end thereof, one at each side of the window opening in a position adjacent the lower end of the window and on the outer side thereof, said support rods extending upwardly from their pivotal supports and having their opposite ends free, means spaced above said pivotal supports when said panel is in said closed position and interconnecting said support rods and said panel for holding the panel in said inclined position to serve as an awning for the window and means engageable with said support rods for interlocking said support rods and panel when the panel is in said position overlying the window and said support rods are in a generally upright position to thereby prevent the panel from being swung upwardly and outwardly to said inclined position.

2. A combination awning and shutter for a window comprising a panel dimensioned to overlie and completely close the window opening, said panel being hingedly connected at its upper end to the upper end of the window frame on the outer side thereof and being swingable outwardly and upwardly from a closed position overlying the window to a position inclined downwardly and outwardly from the upper end of the window, a pair of upwardly extending support rods, one at each side of said panel, said support rods being pivotally connected at their lower ends adjacent the lower portion of the window on the outer side thereof, brackets mounted at each side of the panel intermediate the upper and lower ends thereof and slidably engaging said support rods, said brackets being spaced above said pivotal connections when the panel is in said closed position, means for locking said brackets on said support rods with the support rods in an upwardly and outwardly inclined position and said panel in an outwardly inclined position whereby to provide an awning for the window, said brackets being arranged to slide downwardly on said support rods when the support rods are pivoted upwardly to a generally vertical position to swing the panel to a position overlying the window and thereby providing a shutter and means disposed at a level above said brackets for locking said support rods in said last mentioned position to thereby prevent the panel from being swung outwardly to said inclined position.

3. The combination called for in claim 2 wherein said panel comprises an upper portion and a lower portion, means for selectively arranging said portions in end-to-end relation when in said position serving as a shutter and for arranging said lower portion in a position overlying at least a portion of the upper portion when in said inclined position serving as an awning.

4. The combination called for in claim 2 wherein said brackets each include an annular member having a through opening which corresponds in shape with the cross section of the support rods and through which the support rods slidably project, said annular member being pivoted on said panel for movement about a horizontal axis.

5. The combination set forth in claim 2 wherein said last mentioned locking means comprises a pair of locking members secured one at each side of the window frame adjacent the upper end thereof and engageable with the upper ends of said support rods.

6. A combination awning and shutter for a glazed

window comprising a panel dimensioned to overlie said glazed window and form a closure for the window opening, said panel being hingedly mounted at its upper end adjacent the upper edge of the window opening on the outside thereof and being swingable outwardly and upwardly from a closed position overlying the window to a position inclined downwardly and outwardly from the upper end of the window, a pair of upwardly extending support rods, one at each side of said panel, said support rods being pivotally connected at their lower ends adjacent the lower portion of the window on the outer side thereof, brackets mounted at each side of the panel intermediate the upper and lower ends thereof and slidably engaging said support rods, said brackets, in the closed position of the panel, being located above said pivotal connections, means for locking said brackets on said support rods with the support rods in an upwardly and outwardly inclined position and said panel extending outwardly from the window to provide an awning therefor, said brackets being arranged to slide downwardly on said support rods when the support rods are pivoted upwardly to a generally vertical position to swing the panel to a position overlying the window and thereby providing a shutter and means disposed at a level above said brackets for locking said support rods in said last mentioned position to thereby prevent the panel from being swung outwardly to said inclined position.

7. A combination awning and shutter for a glazed window comprising a panel dimensioned to overlie said glazed window and form a closure for the window opening, said panel being hingedly mounted at its upper end adjacent the upper edge of the window opening on the outer side thereof and being swingable outwardly and upwardly from a closed position overlying the window to a position inclined downwardly and outwardly from the upper end of the window, a pair of upwardly extending support rods, one at each side of said panel, said support rods being pivotally connected at their lower ends adjacent the lower portion of the window on the outer side thereof, brackets mounted at each side of the panel intermediate the upper and lower ends thereof and slidably engaging said support rods, said brackets, in the closed position of the panel, being located above said pivotal connections, means for locking said brackets on said support rods with the support rods in an upwardly and outwardly inclined position and said panel extending outwardly from the window to provide an awning therefor, said brackets being arranged to slide downwardly on said support rods when the support rods are pivoted upwardly to a generally vertical position to swing the panel to a position overlying the window and thereby providing a shutter and means positioned above the pivotal supports for the support rods for association with said rods for locking said rods in said generally vertical position to thereby prevent the panel from being swung outwardly from the plane of the window.

References Cited in the file of this patent

UNITED STATES PATENTS

1,139,008	Abraham	May 11, 1915
1,662,721	Schneider	Mar. 13, 1928
1,668,938	Bucknam et al.	May 8, 1928
1,771,669	Brandt et al.	July 29, 1930
1,841,226	Van Buren	Jan. 12, 1932
2,136,012	Jones	Nov. 8, 1938
2,352,029	Soule	June 20, 1944
2,781,834	Woodard	Feb. 19, 1957