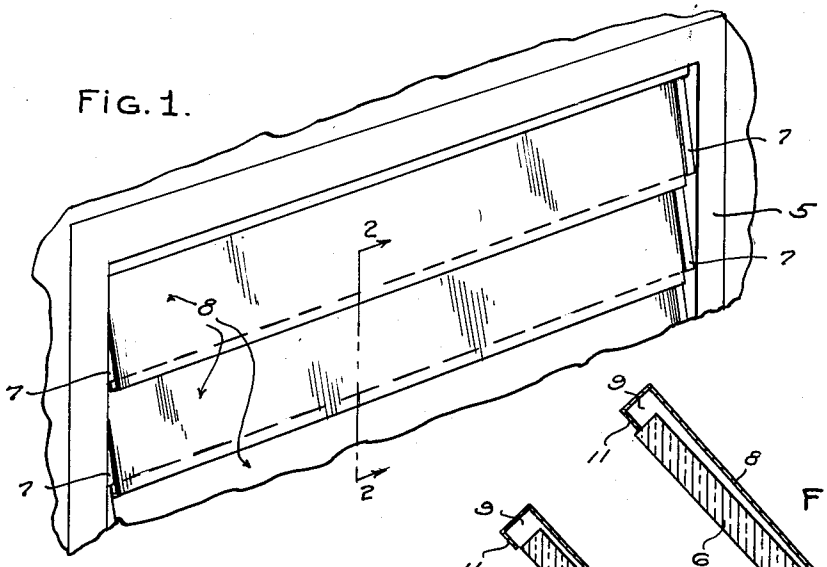
Feb. 10, 1953 L. J. MITCHELL 2,627,951

PROTECTIVE PANEL FOR JALOUSIE WINDOWS

Filed Jan. 2, 1952

Fig. 1.



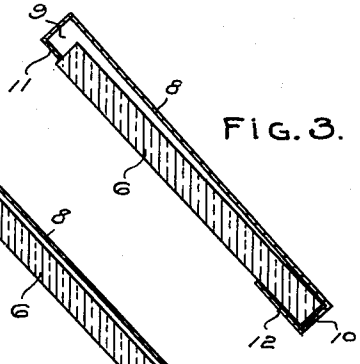


Fig. 3.

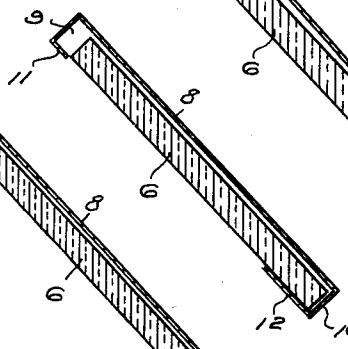


Fig. 4.

Fig. 5.

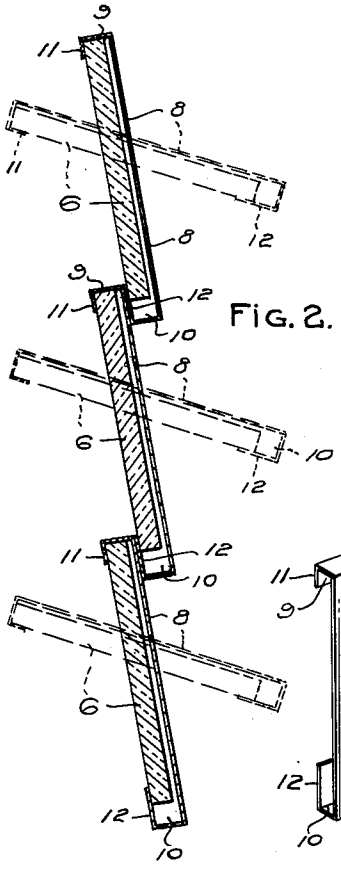


Fig. 2.

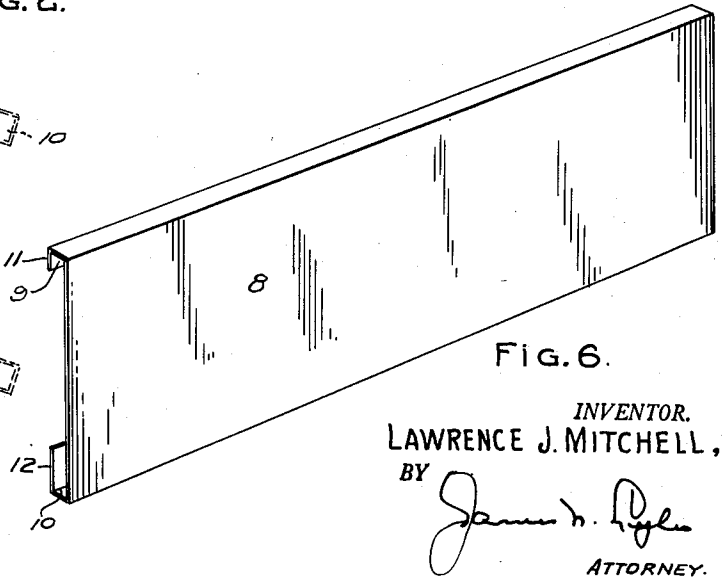


Fig. 6.

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PROTECTIVE PANEL FOR JALOUSIE WINDOWS

Lawrence J. Mitchell, Miami, Fla.

Application January 2, 1952, Serial No. 264,361

1 Claim. (Cl. 189—64)

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This invention relates to an improvement in protective panels for closure devices, such as the conventional jalousie window equipped with transparent louvers.

In the recognized areas of the country where relatively severe storms are encountered having winds of high velocity, it has become the practice to provide protective shutters, panels and the like to protect the windows against excessive pressures from without and against flying or wind driven objects and, such shutters, panels or the like have usually been made of a size to completely cover the window opening, resulting in shutters that are heavy and difficult to handle and creating a considerable storage problem when not in use.

The old and well known shutters have various serious objections, being comparatively expensive and, when in use, completely destroying the use of the window from the standpoint of light and air and require special brackets, screws and the like set in the surrounding wall area as a means to prevent displacement of the shutter. This is particularly objectionable in buildings over one story in height, since it necessitates the operator carrying the shutter up a ladder with the attendant danger, especially in the presence of wind and it so frequently happens that an operator hesitates to install his shutters prior to the storm, in view of the fact that air and light is excluded.

The primary object of the present invention is the provision of a quickly and easily attachable and detachable protective panel for glass or other transparent louvers, requiring no fastening devices, may be installed from either the inside or outside of the window, provides an individual panel for each louver that overlies the exterior area and the longitudinal edges of the louver for its entire exposed length and permits the uninterrupted operation of the jalousie for the control of light and air.

A further object of the invention resides in a protective panel for jalousie louvers that is formed of a suitably rigid form that may be quickly and economically shaped, requires a minimum of storage space, has no moving parts to become worn or misplaced and provides a highly successful protection for the louvers that may be installed in a minimum of time and remain in position upon the louvers throughout the period of storm threat without interfering with the normal operation of the jalousie.

In the accompanying drawings, wherein has been illustrated a preferred embodiment of the invention and wherein like characters of reference are employed to denote like parts throughout the several figures:

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Figure 1 is a fragmentary perspective view of a conventional jalousie window showing the invention applied thereto and with the louvers in the closed position,

Figure 2 is a vertical sectional view through a plurality of louvers, with the invention applied thereto and with the louvers in the closed position, taken on line 2—2 of Figure 1,

Figure 3 is a vertical sectional view of a single louver illustrating the initial operation of installing a protective panel,

Figure 4 is a similar view with the panel swung to overlying covering engagement with the louver,

Figure 5 is a similar view with the panel shifted to fully installed engagement over the edges of the louver, and

Figure 6 is a perspective view of one protective panel.

Referring specifically to the drawings, the numeral 5 designates the frame of a conventional jalousie window, supporting a plurality of horizontally swinging and overlapping glass louvers 6, having their ends supported in conventional end brackets 7, as is customary. The louvers 6 are here described as being of glass, although it will be apparent that other types of louvers, such as plastic, metal or wood may be employed or combinations of metal and glass louvers may be employed as shall be found desirable, but it is contemplated that the invention shall be applied only to those types of louvers as are likely to be fractured or broken by high winds or flying objects.

The protective panel, indicated as a whole by the numeral 8, embodies a preferably metallic sheet that has a length corresponding to the exposed length of the glass louver between the end brackets. As clearly shown, the longitudinal edges of the panel are rolled or die formed to provide an upper channel 9 and a lower channel 10. The channels have a width slightly greater than the thickness of the louver, also clearly illustrated. The upper channel 9 terminates in a relatively short flange 11, parallel to the body of the panel, while the lower channel 10 terminates in a relatively longer flange 12, parallel to the body of the panel 8 and spaced from the body of the panel a distance identical to the spacing of the flange 11. The spacing of the flanges from the body of panel 8 a distance slightly greater than the thickness of the louver, permits sufficient clearance to permit the panel to be swung laterally for engaging the channels alternately over the bottom and top edges of the louver.

It is contemplated that the panels shall be die or otherwise formed in relatively long sections and then subsequently cut transversely to

the desired length for a particular length of louver. There are relatively few variations in the transverse width of standard louvers of glass jalousies and it is also contemplated that the panels shall be formed and stocked for such standard sizes. Jalousie windows do vary considerably in width, being fabricated for a particular opening and it thus becomes necessary to stock the preformed lengths of panels to be later cut for a particular length. The panels are formed of suitable metal, such as aluminum, steel or galvanized metal and of a suitable gauge that will facilitate forming and yet have sufficient rigidity to withstand abnormal wind forces.

In the use of the device, individual panels having been cut for each louver of the jalousie, the operator moves the louvers to substantially the position indicated in dotted lines in Figure 2. As before stated, the panels can be installed from either the inside or outside of the window. The operator then grasps a panel and engages the lower channel 10 over the lower longitudinal edge of the louver, as shown in Figure 3, with the panel shifted upwardly until the lower edge of the louver engages the lower or bottom of the channel. The upper edge of the panel is then swung inwardly or toward the louver until the flange 11 passes over the upper edge of the louver, shown best in Figure 4. The panel is then shifted downwardly to fully engage the upper edge of the louver in the channel 9, as in Figure 5 and in this position, the bottom of the channel 10 is positioned below the lower edge of the louver with the flange 12 overlying the inner face of the louver. In the fully engaged or installed position, the panel is successfully held upon the louver against lateral movement. The terminal ends of the panel are cut square and lie parallel to and slightly spaced from the louver end brackets and thus entirely cover the outer exposed area of the louver. The operation is continued until each of the louvers is covered by a panel. The type of panel here employed offers no resistance to the normal operation of the jalousie window and when in the closed position, the louvers and panels are in overlapping relation, shown clearly in Figure 2. The panels are removed by first swinging the louvers to an open position and then shifting the panels upwardly until the flanges 11 are clear of the upper edges of the louver, after which they can be swung outwardly and the lower channel disengaged from the louver. The channels normally form a very rigid edge to the panels and when the louvers are shifted to closed position, the overlapping of the panels, coupled with the overlap of the louvers, present a rigid joint that will resist exceptional pressures and absorb blows from flying objects with danger of fracturing the glass louvers. The slight spacing of the body of the panel from the outer face of the louver when in the closed position, also offers a very effective cushioning against danger to the louver from most flying objects.

It will be apparent from the foregoing, that a very effective form of protective panel has been provided for the conventional glass jalousie windows. The device is cheap to manufacture, is extremely strong, light in weight, easily installed or removed and requires a minimum of storage space. The panel further permits normal operation of the window to control light and air, offers a very effective protection against burglary when closed, serves as a means to deflect the intense rays of the sun and will last indefinitely.

While a preferred embodiment of the invention has been shown, changes may be made as readily fall within the spirit of the invention or the scope of the subjoined claim.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

In a jalousie window having a plurality of glass louvers pivotally supported at their opposite ends in overlapping relationship on substantially horizontal axes, removable protective panels for said louvers, the said panels each comprising a metallic sheet having a length greater than the length of a louver and adapted to overlie the exposed outer face of a louver, opposed longitudinal edges of the sheet being angularly bent to provide opposed channels having a width greater than the thickness of a louver and terminating in flanges for engaging the inner face of a louver to prevent lateral displacement of the panel, the lowermost of the flanges being longer than the uppermost of the flanges to provide the said channels, the lowermost of said channels being thus relatively deeper than the uppermost of said channels so that when the panel is applied to a louver the said lowermost channel may engage the lowermost edge of the louver, the uppermost channel passed over the uppermost edge of the louver and the panel then shifted downwardly whereby fully to engage the uppermost channel with the uppermost edge of the louver, the width of said channels being sufficiently greater than the thickness of a louver so that when the panel is so applied and shifted and the louver is closed the exposed overlying length of the panel is spaced from the outer face of the louver a slight distance sufficient to absorb the impact of objects normally tending to break the louver.

LAWRENCE J. MITCHELL.

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