May 29, 1951 C. O. SORRELL 2,555,204

WINDOW STRUCTURE

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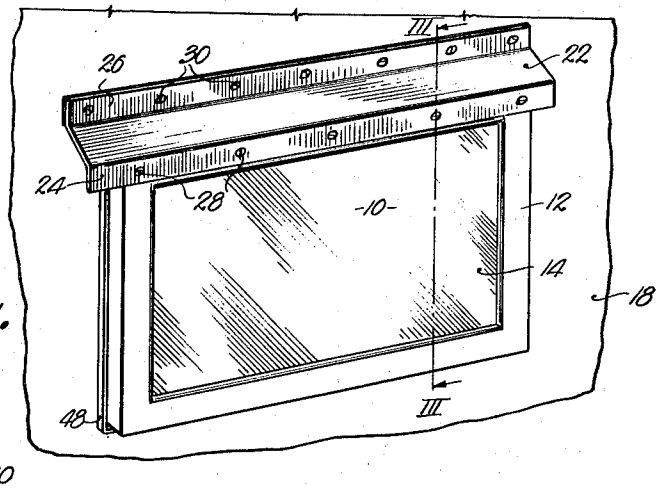


Fig. 1.

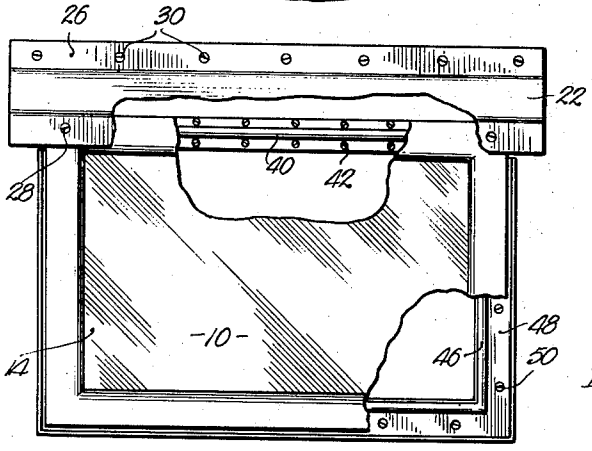


Fig. 2.

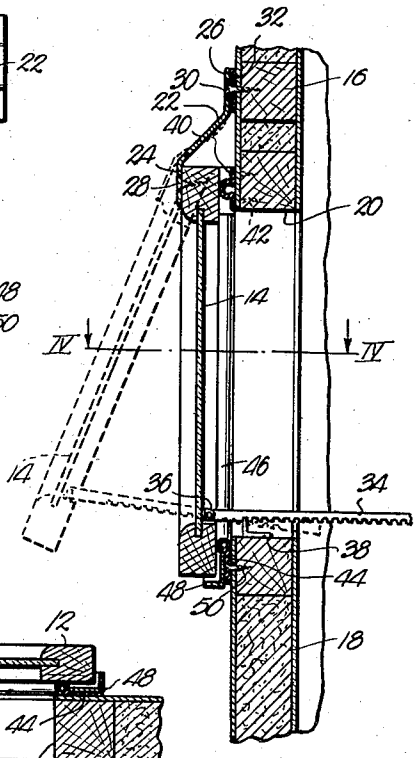


Fig. 3.

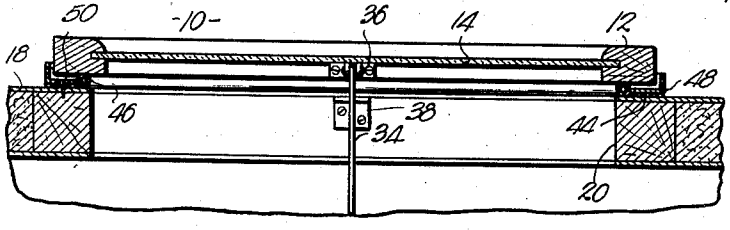


Fig. 4.

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WINDOW STRUCTURE

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1 Claim. (Cl. 20—53)

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This invention relates to window structure and has for its primary aim the provision of an unique hinging assembly for a casement swingable to and from a position closing an opening in a wall of a building or the like.

The most important object of this invention is to provide window structure having a casement swingable to and from a position closing a polygonal opening through the medium of a flexible strip of material extending the entire length of the uppermost edge of said casement and joining a frame or the like defining said opening to the end that said flexible hinge member also serves as a protection or cover for the casement against entrance of moisture thereto.

Another important object of this invention is to provide window structure having a casement swingable to and from a closed position through the medium of the above described continuous strip of flexible material provided with a resilient strip of material interposed between the casement and the frame defining the opening which said casement closes, said strip of resilient material having an offset bead engageable by the casement when the same is in the closed position for presenting a positive seal against entrance of moisture through said opening.

Another important object of this invention is to provide in window structure having the aforesaid beaded strip of sealing material as a part thereof, a flanged or L-shaped band for holding said material in place against the frame and having one leg thereof disposed in embracing relation with a portion of the casement to the end that the said casement is provided with a positive guide frame when in the closed position.

Other objects of this invention will be made clear during the course of the following specification, reference being had to the accompanying drawing, wherein:

Fig. 1 is a perspective view of the window structure made in accordance with my present invention.

Fig. 2 is an elevational view thereof.

Fig. 3 is a cross sectional view taken on line III—III of Fig. 1; and

Fig. 4 is a cross sectional view taken on line IV—IV of Fig. 3 and looking in the direction of the arrows.

It is contemplated that the window structure about to be described be primarily adaptable for use on trailers or the like usually formed from a light weight material such as aluminum presenting a difficult problem of mounting suitable window opening means therefor.

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Referring more specifically to the drawings, the numeral 10 represents broadly a casement provided with a frame portion 12 for mounting a pane of glass 14 or other transparent material. This casement 10 is of conventional character and may be formed in various of the usual forms and is hingedly mounted to a frame 16 forming a part of a side wall 18 and defining a polygonal opening 20 in the side wall 18.

The means for hingedly securing the casement 10 to the frame 16 to the end that the said casement is rendered swingable to and from a closed position overlying the opening 20 comprises an elongated strip of flexible material 22 extending the entire length of the casement 10 and a short distance beyond each end thereof as is clear in Fig. 1. This hinge member may be formed from any of many types of material and it is contemplated that aluminum be used to conform with the same type of material forming a part of the said walls 18 of the structure to which this assembly is to be used.

Fig. 3 clearly illustrates the manner in which this member 22 has a pair of offset portions 24 and 26 at each longitudinal edge thereof respectively and when so formed these portions 24 and 26 are in substantially parallel relation and screws or the like 28 and 30 constitute means for securing portions 24 and 26 respectively to the uppermost edges of the casement 10 and the frame 16. Prior to securing portion 26 to the frame 16 through the medium of its screws 30, a strip of resilient material such as rubber or the like 32, is interposed between this portion 26 of the member 22 and the frame 16 or the outermost face of wall 18 previously secured to the frame 16.

It is clear from the foregoing that casement 10 is thereby rendered swingable to and from the open position shown by dotted lines in Fig. 3 and that rain or other moisture will not enter and come into contact with the uppermost edge of casement 10 or the wall 18 adjacent thereto.

A tooth bar 34 pivotally secured to the lowermost member of frame 12 through the medium of a bracket 36 provides means for adjustably holding the casement 10 in any number of open positions by the teeth of bar 34 engaging an L-shaped bracket 38 on the lowermost edge of the frame 16. Interposed between the frame 12 of casement 10 and extending the entire length thereof, is a strip of resilient material 40 which is beaded as is clear in Figs. 2 and 3 and this strip 40 is rigidly secured to the wall 18 by a number of screws or the like 42 and disposed with the

bead thereof in engagement with casement 10 when the same is in the closed position. As frame 12 of casement 10 depresses this strip 40, a positive seal against moisture entering at the ends of the hinge member 22 is presented. The remaining three edges of the casement 10 and the opening 20 is provided with a strip of rubber or other resilient material 44 molded to present an offset bead 46 along the innermost longitudinal edge thereof. This strip 44 is held in place against the frame 16 through the medium of a band 48.

This band 48 extends continuously along each of the sides of casement 10 and along the lowermost longitudinal edge thereof and is substantially L-shaped in cross sectional contour. One leg of this band 48 has a number of openings therethrough for receiving screws or the like 50 extending through the material 44 and into the proximal lengths forming frame 16. When so positioned, the bead 46 of the strip of material 44 is disposed inwardly from the innermost edge of the band 48 and when the casement 10 is in the closed position, this bead 46 is interposed between frame 12 and the side wall 18.

The other leg of this band 48 which extends laterally outwardly from the leg having screws 50 therethrough, circumscribes a portion of the outermost edge of the casement 10 and further assures a sealing of the opening 20 against entrance of external moisture.

The foregoing description of the window structure forming a part of this invention makes it clear that through use of the strip 40, the strip of material 44 having bead 46 as a part thereof, the flange-like band 48 and the hinge member 22 with its resilient material 32 presents a closure assembly which is virtually air-tight and positively moisture proof.

While this structure is particularly adapted for use on trailers having light weight metal bodies as above set forth, it is understood that the same may well be used in other types of building structures and it is therefore, desired to be limited only by the spirit of the invention and scope of the appended claim.

Having thus described the invention, what is

claimed as new and desired to be secured by Letters Patent is:

Window structure comprising a frame defining a polygonal opening; a channel member on one face of the frame along the sides and lowermost edge of the opening and provided with a bead; a resilient member on the face of the frame along the normally uppermost edge of the opening and having a bead, said beads being arranged in end-to-end relationship in conformity with the shape of the opening; a casement normally partially embraced by said channel member and bearing against all of said beads; a hinge for the casement, said hinge comprising a single, elongated, strip of flexible, non-elastic, material and having an elongated upper marginal edge portion secured to the frame directly above said resilient member, an opposed elongated lower marginal edge portion secured to the outermost face of the casement adjacent the uppermost edge of the latter and an elongated, transversely inclined central portion integral with the marginal portions and overlying the uppermost edge of the casement, said strip being horizontal longitudinally and the marginal edge portion thereof being normally vertical transversely; and a rubber gasket interposed between said upper edge portion and the frame.

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