

Oct. 27, 1936.

W. MUSCHEL

2,058,490

FOLDING AWNING

Filed Aug. 20, 1935

Fig. 1.

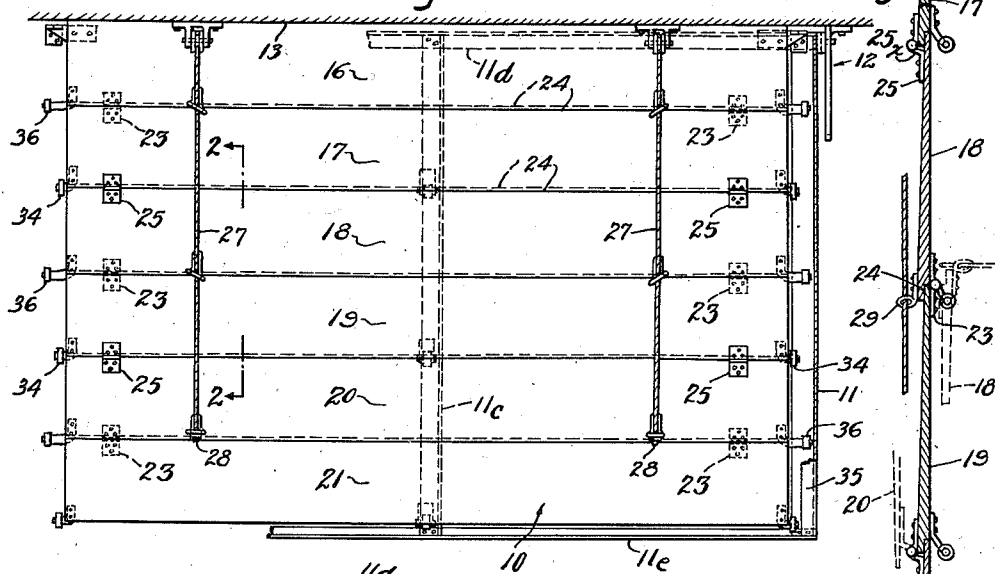


Fig. 2.

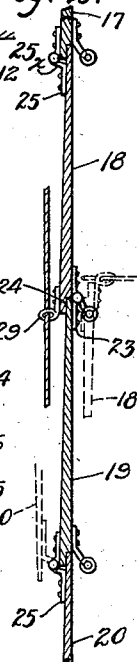
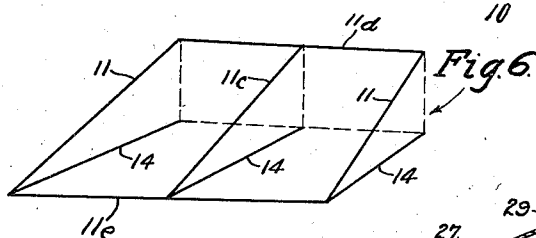


Fig. 4.

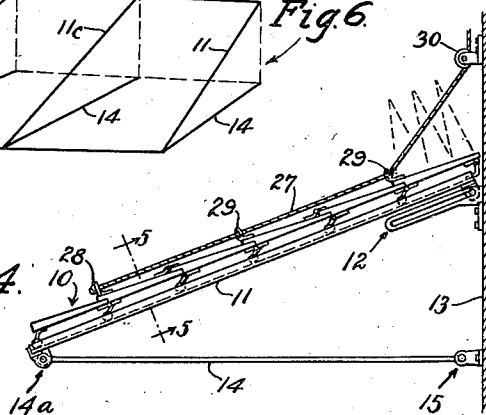


Fig. 3.

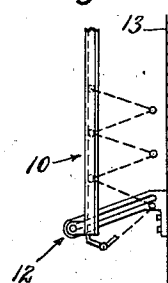
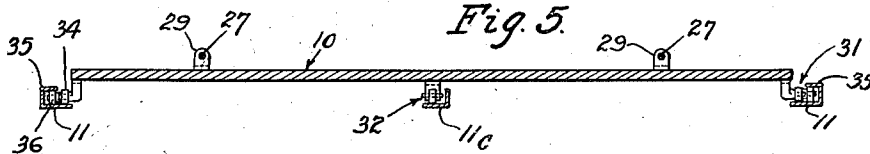


Fig. 5.



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2,058,490

FOLDING AWNING

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Application August 20, 1935, Serial No. 37,046

2 Claims. (Cl. 156—43)

The invention relates to a new type of folding awning used for a shield from the sun and weather. It may be operated with a rotating frame on pivots or on a stationary rigid steel frame.

An object of the invention is to supply an awning constructed of materials which will give a long-lived service and which may have its surface preserved and renewed by painting. The definition of a wood awning here will be understood to be one constructed with wooden boards and joined with iron hinges, and a metal awning will be understood to be one which is constructed of sheet metal plates joined by iron hinges.

This folding awning may be constructed of wood or metal in the manner illustrated in the drawing, consisting of a plurality of sections, each section connected with a plurality of hinges fastened with rivets, the hinges are placed alternately on opposite faces of the awning, so that it will fold in the manner commonly termed "accordion folding".

Referring to the accompanying drawing, which illustrates what is at present deemed to be a preferred embodiment of the invention,

Fig. 1 is a plan view showing the awning in an extended condition, with parts removed.

Fig. 2 is a cross section of a portion of the awning on a larger scale than Fig. 1, the line 2—2 on the latter view indicating the plane of the section.

Fig. 3 is a diagrammatic representation of the awning in the folded condition.

Fig. 4 is an end elevation of the awning.

Fig. 5 is a sectional view of the awning taken on line 5—5 of Fig. 4.

Fig. 6 is a perspective diagram of the frame to support the foldable portion of the awning.

Referring in detail to the drawing, in Fig. 4 the foldable cover portion 10 of the awning is shown resting upon a supporting means consisting of the inclined side bars 11, inclined central bar 11c, the upper cross bar 11d, lower cross bar 11e, and the three bottom brace rods 14 each of which is detachably connected with the wall 13 at 15, and has its opposite end pivoted to the frame at 14a.

Said foldable awning portion 10 is made up of a series of plates hinged together, six being shown by way of example, in Fig. 1, where said plates are consecutively numbered 16, 17, 18, 19, 20 and 21. The upper plate 16 is shown slidably pivoted to the wall 13 at 12. The plates 16 and 17 are secured together by hinges 23 the pivots of which are located at the lower or inner face of

the lap-joint 24. The plates 17 and 18, however, are fastened together by hinges 25 located at the upper or outer face of another joint 24. Likewise, speaking of five hinges shown near each end of the awning, all the hinges 23 are arranged in the same way, and the hinges 25 are also all positioned alike. This construction affords the opposite, alternate, folding desired as illustrated in Figs. 3 and 4.

When the portion 10 of the awning is in its extended inclined position the plates 16, 17, etc., thereof form an inclined cover structure wherein the lower edge portion of each plate except the lowest overlaps the adjacent portion of the plate next below in a rain proof manner. This is due to the joint constructions wherein each plate except the lowest has a recess along the under side of its lower edge, within which recess the upper edge portion of the plate next below extends. This construction makes it necessary that the upper or outer hinges 25 (see Fig. 2) each have a leaf deflected at 25x as shown in order to conform to the offset face of the joint.

The awning is shown to be retractable by means of a rope or cord 27 having its lower end secured to the awning at 28, said rope being led loosely through eyes 29 and passing under a pulley 30 secured to the wall 13.

An antifricition bearing structure 31 is provided at each side of the awning, and a similar structure 32 at the center thereof. These bearing structures are shown associated with conventional angle irons and channel irons. At each side of the awning at the upwardly folding joints (having the hinges 23) bearing rollers 34 are furnished which will clear the guard portion 35 of the channel iron, while the intervening joints have bearing rollers 36 at all times confined to the channel of the iron.

Preparatory to folding up the awning the three bottom brace bars 14 will have their inner ends detached from the wall and then traction applied to the rope 27 will cause the movable portion of the structure to collapse and swing upwardly to the position shown in Fig. 3.

I claim:

1. In an awning structure of the kind described, a series of elongated substantially rectangular plates foldably hinged together according to the "accordion" plan, and means to support said series in a position wherein the plates thereof form an inclined plane, each plate except the lowest having a recess along the under side of its lower edge within which recess the upper edge of the next plate below extends thus making a rain

proof joint from end to end of said plates, and hinges joining the contiguous plates of said series together, said hinges having each a leaf which is furnished with a deflected end portion to follow
5 the course of the joints adjacent said recesses.

2. An awning having a series of plates hinged together, means to support said plates in a position wherein they form an inclined structure in which the lower edge portion of each plate except

the lowest overlaps the adjacent portion of the plate next below in a rain proof manner, said supporting means including an anti-friction roller bearing located at each juncture of adjacent plates, and means to cause said series of plates
5 to flex where hinged together thus to retract or extend the structure as a whole.

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