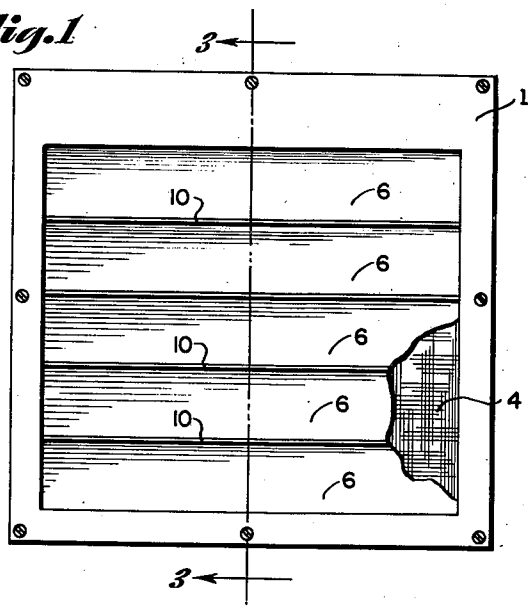
Aug. 30, 1949. J. M. EWING 2,480,562

WATER EXCLUDING VENT

Filed Nov. 6, 1946

Fig.1



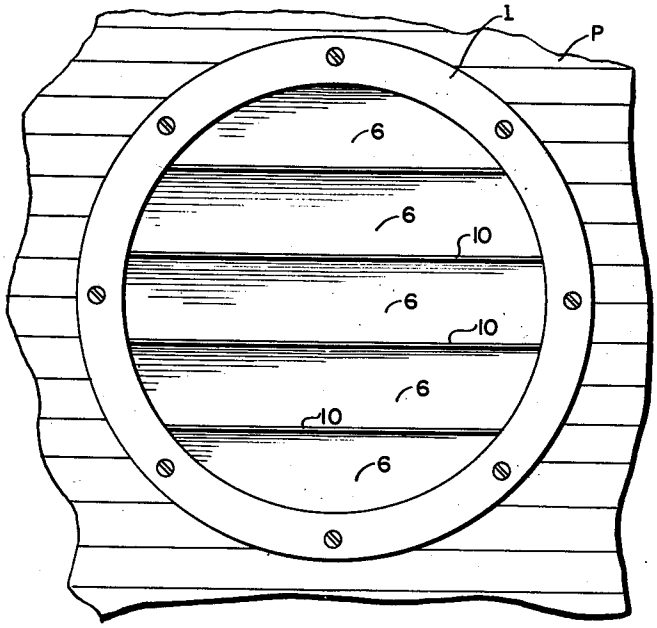


Fig.2

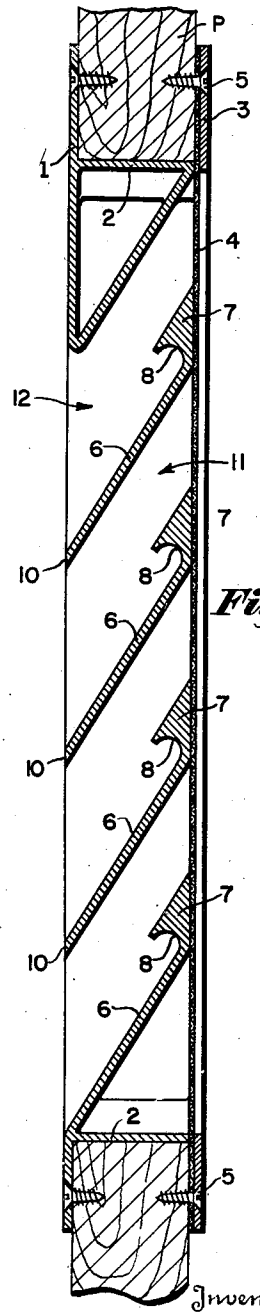


Fig.3

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WATER EXCLUDING VENT

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1 Claim. (Cl. 98—121)

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This invention relates to vents and more particularly to water excluding vents particularly useful in connection with boats, ships and buildings where adequate ventilation is required while at the same time it is important to exclude as much as possible of water, rain, splash and the like.

The object of the invention is to provide an improved water excluding vent simple and economical in construction and operating with efficiency to exclude water from the exterior while providing adequate ventilation.

The invention consists in the novel construction, arrangement and combinations of parts as hereinafter more particularly described and claimed.

One sheet of drawings accompanies this specification as part thereof, in which like reference characters indicate like parts throughout.

In the drawings:

Figure 1 is a front view of one embodiment of the present invention suitable for buildings, with parts broken away;

Figure 2 is a front elevation of a modified form of the invention suitable for application to port-holes on boats or ships; and

Figure 3 is a vertical transverse cross section taken on line 3—3 of Figure 1.

In accordance with the present invention a suitable escutcheon plate 1 is provided conforming in shape and size to the orifice in which the vent is to be seated, with which plate is associated a flange 2 substantially of the depth of the wall to which the vent is to be applied and supported by the side portions of the flange 2 are a plurality of horizontally disposed vertically spaced inclined louvers 6 of a construction hereinafter more particularly described in detail.

Preferably these louvers are of sufficient width to extend when in position from the forward edge of the flange 2 to the rear edge of said flange and the forward and rear edges of these louvers are shaped to lie in planes of said edges.

When desired, a screen 4 cut substantially to the dimensions of the frame 1 is positioned against the rear face of the vent, and a second peripheral plate 3 conforming in shape and size with the particular vent is attached to overlie the marginal edges of the screen 4. The vent assembled as above indicated is secured in position by means of screws 5 passing through the plates 1 and 3 and engaging the marginal portions of the wall P surrounding the orifice in which the vent is positioned.

The present invention is directed particularly

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to the improved shape of the louvers 6 which, it will be noted, comprise relatively thin portions extending from the forward edges 10, the major portion of the width of each louver, the rear portions 7 of each louver being substantially thicker than the forward portion. The forward edge of the rearward thicker portion 7 is formed as a groove 8 extending longitudinally of each louver, which groove 8 is of arcuate cross section and of a curvature not less than 180 degrees. This groove 8 it will be noted connects smoothly with the outer or upper surface of the thin portion 6 of each louver and by reason of its 180 degree curvature has its upper edge substantially perpendicular with respect to the upper surface of the thin portion 6 and the junction of said upper surface of the portion 6 with the groove.

By reason of this specific structure of the louver it will be observed that rain or splash impelled in a more or less horizontal direction against the vent will impinge on the upper or outer surface of the thin portion 6 of each louver and if driven with sufficient force by the wind will contact the groove 8, which by reason of its 180 degree curvature will completely reverse the direction of travel of such water and cause same to drop back aginst the thin portion 6 of the louver to drain off from the louver in a downward direction.

As illustrated, the louvers of the particular structure described are arranged in the supporting frame so that the lower portion of the thin part 6 of each louver will substantially mask the thickened portion 7 of the louver immediately below it and the louvers thus arranged combine to provide through slots, the forward portions of which indicated by 12, are substantially wider than the rear portions, indicated at 11, so that the areas immediately in front of and below the narrow portions 11 are substantially shielded and provide relatively quiet areas within which this reversal of the direction of the water can effectively operate.

It will be apparent that the vents embodying the present invention may be constructed of various materials, and the louvers can be made either removable or integral with the flange and frame structure, as desired, the gist of the invention lying in the specific arrangement and shape of the louvers by means of which water carried by the wind is effectively excluded from the interior.

Having thus described my invention, I claim:

Rain excluding vent comprising, a frame with a plurality of horizontally disposed louvers supported in the frame, each of said louvers comprising a slat having its rear and upper portion

substantially thicker than the lower forward portion, both of said portions of each louver formed with parallel planar faces, the forward edge of the rear thicker portion of each louver formed with an arcuate groove of not less than 180° merging smoothly into the upper surface of the thinner portion and said louvers arranged in the frame in parallel inclined relationship, whereby the lower thinner portion of each louver masks the upper thicker portion of the louver next below it thereby creating through-passages of greater area at the front than at the rear.

JOHN MINOR EWING.

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