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CASEMENT FOR PORTHOLES AND THE LIKE

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Fig. 1.

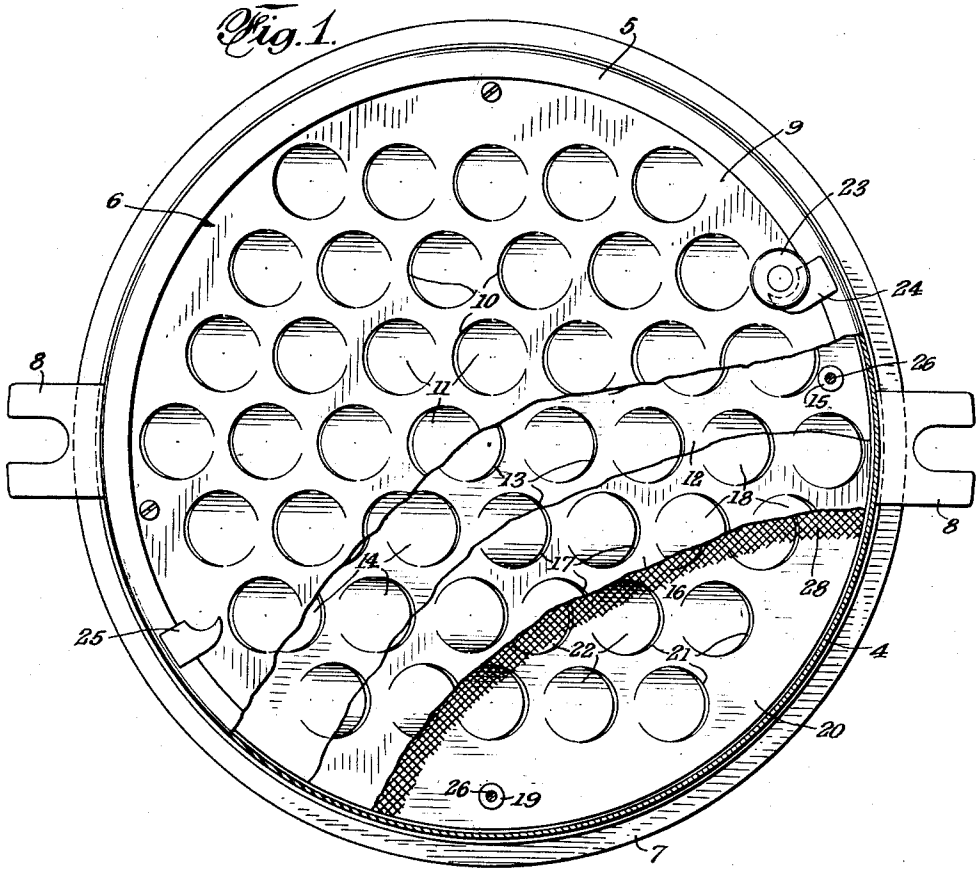
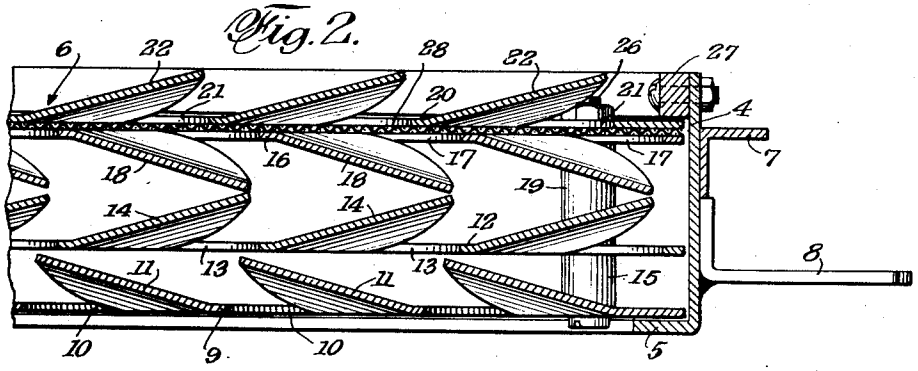


Fig. 2.



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CASEMENT FOR PORTHOLES AND THE LIKE

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6 Claims. (Cl. 98—121)

This invention relates to casements and more particularly to casements for portholes in seagoing vessels.

The primary object of the invention is to provide a porthole casement by means of which complete darkening of a ship may be obtained as viewed from the outside thereof and yet providing for proper air circulation in the various rooms and cabins thereof.

A more specific object of the invention is to provide a porthole casement which will completely prevent leakage of light from the interior of the ship and which will simultaneously serve to control the ventilation of the rooms or cabins to the portholes of which said casement is applied.

Another object of the invention is to provide a light-sealing casement in which means are incorporated to intercept insects from ingress into a cabin or like compartment.

A further object of the invention is to provide a light intercepting casement for portholes adapted to be arranged to either gather and thus supply air to a cabin or compartment or exhaust air therefrom, depending upon the direction of movement of the ship.

With the foregoing and other objects, features and advantages in view, reference is made to the accompanying drawing in which an exemplary form of the invention is illustrated and to the following specification in which the invention is described in detail.

In the drawing:

Fig. 1 is an inner face view of a casement for portholes as contemplated herein, said casement being shown broken in successive stages to reveal the inner structure thereof.

Fig. 2 is an enlarged fragmentary cross-sectional view thereof.

In that form of the invention which is illustrated, the porthole casing comprises a frame 4 and a light-intercepting ventilating unit 6 disposed in said frame.

The frame 4 in the present instance, is shown as comprising a circular member having a flange 5 formed on the side thereof disposed on the inside of a ship. Said frame may be provided with a flange 7 designed to engage the inner wall of the ship adjacent the porthole opening thereof in the usual manner. In a conventional manner, bifurcated lugs 8 may be provided to serve as means for engaging screws or studs, by means of which the casement may be secured in position. These lugs may be varied to suit special conditions, the fastening means being temporary or permanent, as desired. In the above connection, it may be stated that the casement as contemplated herein, may serve as the only unit in the porthole opening or may be used together with the usual transparent porthole window, as can be well understood.

The unit 6 may comprise a plurality of plates each formed with louvered openings and in the present instance four such plates are shown. The innermost plate 9 is preferably formed with louvered openings 10 having louver vanes 11 directed outwardly with respect to the inside of the ship. In spaced relation with the plate 9 a second plate 12 is arranged, said latter plate having louvered openings 13 having louver vanes 14 also outwardly directed with respect to the inside of the ship, but oppositely directed with respect to the direction of the openings 10 of the plate 9. The louver vanes 14 are also offset laterally with respect to the vanes 11 as may best be seen in Fig. 2. The spacing means between the plates 9 and 12 may comprise a plurality of posts or collars 15.

The unit 6 may include a third plate 16 formed with louver openings 17 having louver vanes 18; these vanes are preferably disposed in opposition to the vanes 14, that is toward the inside of the ship, and extend in the same direction as said vanes 14. The plate 16 may be suitably spaced from the plate 12 as by a plurality of posts or collars 19.

A fourth plate 20, in this instance being the outer plate of the unit 6, may be formed with louver openings 21 having louver vanes 22, the latter vanes being disposed in the same direction as the vanes 14, but opposed laterally thereto and outwardly directed with respect to the inside of the ship.

It will be noted that the vanes 14 and 18 are preferably aligned and extend toward a plane parallel to the plates and above the unit as shown in Fig. 2, and that the vanes 11 and 22 are preferably aligned but each of the mentioned pairs of vanes are laterally offset with respect to each other. In this manner, light impinging upon the vanes 11 is in greater part intercepted thereby, any leakage of said light being further intercepted by the vanes 14, 18, and 22 successively. By this arrangement, complete interception of light is effected in accordance with the purposes of the invention. However, the interior of the ship is suitably ventilated because free access for the passage of air is afforded through the louver openings in the various plates of the unit 6.

Because of the directional arrangement of the louver vanes, the unit above described may be made to serve the purpose of either gathering air from the outside of the ship into the interior thereof or to exhaust air from the interior, according to specific needs. Either of these conditions may be obtained by properly positioning the unit 6 so that the vanes 22 of the outer plate 20 are suitably directed with respect to the movement of the ship. Thus, assuming that the ship is moving toward the right, the disposition of the vanes 22 serve to gather air from the outside and to force the same through the unit 6 into the interior of the ship. Assuming the same direction of movement of the ship, the interior air thereof may be exhausted by 180° rotation of the unit 6 to dispose the vanes 22 in the opposite direction from that shown in Fig. 2. Such a change may be readily effected by bodily rotation of the entire unit 6, and for this purpose, a handle 23 on said unit is provided, said handle having cooperative engagement with either of the stops 24 and 25 carried by the frame 5.

The various plates of the unit 6 may be held together in any suitable manner. In the present instance, through bolts 26 are employed, said bolts preferably passing through the spacing collars 15 and 19.

To complete the assembly of the device, means such as the ring 27 may be secured to the frame 4 to hold the unit 6 confined between the frame flange 5 and said ring 27. The flange 5 and the ring 27 also are so arranged as to prevent light leakage around the peripheral edge of the unit 6 as can be well understood. As contemplated herein, the casement may be provided with insect intercepting means such as a screen 28. It is preferred to arrange said screen between the plates 16 and 20, as shown, said screen serving as an effective barrier especially to insects and to other foreign matter which may seek its way into the interior of the ship.

The louver vanes may be formed in any usual manner. In the present instance, they comprise curved offset stamped portions formed integrally from the respective plates. These plates are preferably painted or otherwise treated to be light-absorbent, and for this purpose they may be merely painted black, as can be well understood.

From the foregoing it may be seen that an efficient, simple and relatively inexpensive casement has been provided for "blacking out" the portholes of ships. It is evident, however, that the specific disclosure herein may be varied within the spirit and scope of the invention as claimed. Hence, no limitation in the language of the foregoing description is intended because of the realization that the invention may be practiced in various other ways.

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

1. A ventilator comprising a frame adapted to be mounted in an opening, a unit comprising two outer circular plates and at least one intermediate circular plate and means rigidly securing said plates together, said plates having openings therein arranged in staggered relation and louvers thereon over said openings, the louvers on one of the outer plates extending in substantially the opposite direction to the direction in which the louvers on the other outer plate extend and the louvers on both outer plates extending toward a plane parallel to said plates and spaced from said unit, said louvers on said intermediate plate extending in the same direction as the louvers on one of the outer plates, and means to mount said unit rotatably in said frame.

2. A ventilator comprising a frame adapted to be mounted in an opening, a unit comprising two outer circular plates and at least one intermediate circular plate and means rigidly securing said plates together, said plates having openings therein arranged in staggered relation and louvers thereon over said openings, the louvers on one of the outer plates extending in substantially the opposite direction to the direction in which the louvers on the other outer plate extend, with the louvers on the other outer outer plates also extending toward the other outer plate and the louvers on the other outer plate extending away from said one of said outer plates, said louvers on said intermediate plate extending in the same direction as the louvers on one of the outer plates, and means to mount said unit rotatably in said frame.

3. A ventilator comprising a frame adapted to be mounted in an opening, a unit comprising two outer circular plates and at least one intermediate circular plate and means rigidly securing said plates together, said plates having openings therein arranged in staggered relation and louvers thereon over said openings, the louvers on one of the outer plates extending in substantially the opposite direction to the direction in which the louvers on the other outer plate extend and the louvers on both outer plates extending toward a plane parallel to said plates and spaced from said unit, said louvers on said intermediate plate extending in the same direction as the louvers on one of the outer plates, means to mount said unit rotatably in said frame, and a screen disposed between the outermost plate and the intermediate plate adjacent thereto.

4. A ventilator comprising a frame adapted to be mounted in an opening, a unit comprising two outer circular plates and at least one intermediate circular plate and means rigidly securing said plates together, said plates having openings therein arranged in staggered relation and louvers thereon over said openings, the louvers on one of the outer plates extending in substantially the opposite direction to the direction in which the louvers on the other outer plate extend and the louvers on both outer plates extending toward a plane parallel to said plates and spaced from said unit, said louvers on said intermediate plate extending in the same direction as the louvers on one of the outer plates, means to mount said unit rotatably in said frame, and means for limiting the rotation of said unit to obtain selective direction of the louvers thereof.

5. A ventilator comprising a frame adapted to be mounted in an opening, a unit comprising two outer circular plates and at least one intermediate circular plate and means rigidly securing said plates together, said plates having openings therein arranged in staggered relation and louvers thereon over said openings, the louvers on one of the outer plates extending in substantially the opposite direction to the direction in which the louvers on the other outer plate extend and the louvers on both outer plates extending toward a plane parallel to said plates and spaced from said unit, said louvers on said intermediate plate extending in the same direc-

tion as the louvers on one of the outer plates, means to mount said unit rotatably in said frame, spacing collars interposed between said plates, bolts passing through the spacing collars and plates to form a rigid unit, and means for limiting the rotation of said unit to obtain selective direction of the louvers thereof.

6. A ventilator comprising a frame adapted to be mounted in an opening, a unit comprising two outer circular plates and at least one intermediate circular plate and means rigidly securing said plates together, said plates having openings therein arranged in staggered relation and louvers thereoin over said openings, the louvers on one of the outer plates extending in substantially the opposite direction to the direction in which the louvers on the other outer plate extend and the louvers on both outer plates extending toward a plane parallel to said plates and spaced from said unit, said louvers on said intermediate plate extending in the same direction as the louvers on one of the outer plates, means to mount said unit rotatably in said frame, a handle on said unit whereby rotation of said unit in the frame is afforded, and stop means on said frame for engaging said handle to limit the rotational position of said unit whereby the direction of the mentioned louvers may be selected.

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