T. J. BOYAN.

PORT SCREEN.

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Fig. 1.

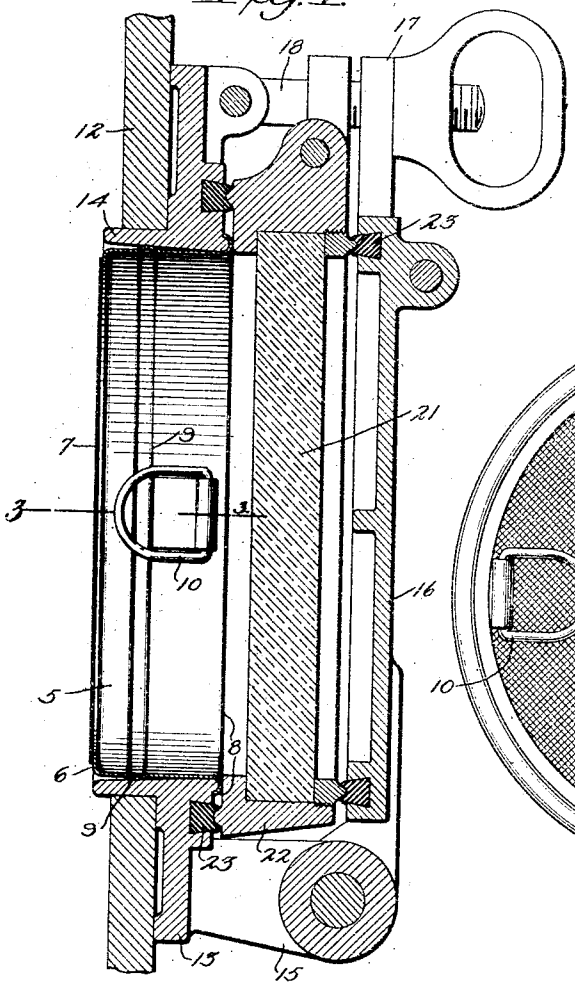


Fig. 2.

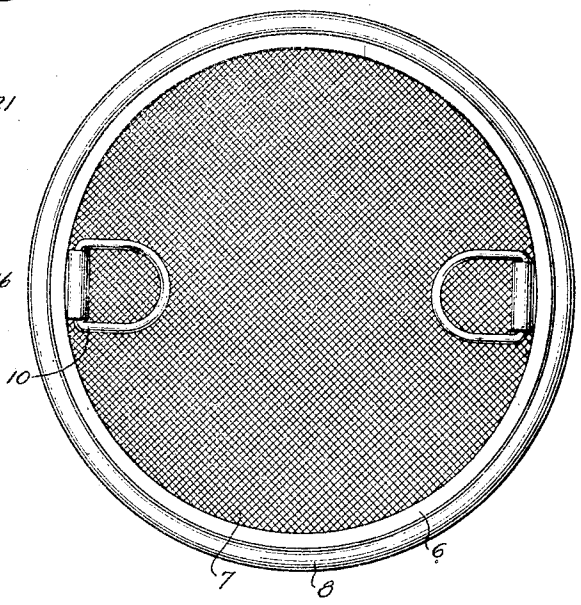
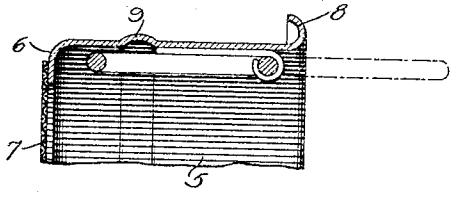


Fig. 3.



WITNESSES

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PORT-SCREEN.

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Application filed January 6, 1920. Serial No. 349,721.

To all whom it may concern:

Be it known that I, THOMAS J. BOYAN, a citizen of the United States, and a resident of Portsmouth, in the county of Rockingham and State of New Hampshire, have invented a new and Improved Port-Screen, of which the following is a full, clear, and exact description.

This invention relates to port holes or ventilating openings in ships, more particularly to screen closures used in a ship port hole to screen the air and prevent entrance of insects and rodents when the ship lies at dock.

The purpose of my invention is to produce a port-hole screen closure used in combination with a ship's port hole and port-hole cover so that the cover may be dogged down with the screen closure in position.

Furthermore, it is an object to make a removable screen insert constructed in the form of a plug capable of being easily inserted and removed from the ship's port hole.

With the above and other objects in view, the invention has relation to the construction of a screen closure, and has further relation to the screen closure used in combination with a port hole and cover as presented in the appended claims defining this invention, and one practical embodiment of which appears in the accompanying drawings, and described in the following specification.

In the drawings the Figure 1 illustrates a vertical cross-sectional view taken through the side of a ship and diametrically through the port hole to illustrate the screen closure in section, and to illustrate the cover or port-hole door in section.

Fig. 2 shows an inside face view of the screen closure removed from the port hole.

Fig. 3 shows a sectional view taken on the line 3—3 of Fig. 1.

A screen closure constructed in accordance with the plans of my invention employs a solid metal rim having a peripheral rim, and is also provided with a screen to prevent ingress of insects and to screen the air ventilating through the ship's port hole. The closure screen is used in combination with the cover and may be left in position when the cover is closed.

In presenting a more detailed description of my invention, there is pointed out in the drawings a metal rim 5 having the outer edge 6 turned inwardly to securely hold the screen 7. An interior peripheral ring flange 8 is formed on the inner edge of the rim 5 to act as a stop to limit the position of the screen closure when it is inserted in the port hole. The rim 5 also has a ring 9 radially spun in the rim which acts to engage the interior wall of the ship's port and center the screen closure in proper position. Handles 10 are fixed to the rim for removing and inserting the screen closure.

In placing the screen closure in position, the seaman grasps the handles 10 and presses the screen forward until the peripheral ring flange 8 engages the cover frame. The radial ring 9 frictionally engages the wall of the flange of the cover frame, acting to hold the screen closure in immovable and positive position.

The above-described screen closure is adapted for use in connection with the ordinary port hole and cover of a ship, and in order to present a more comprehensive understanding of this combined screen closure and port-hole cover, there will follow a description of the port-hole cover.

The shell of the ship or sides 12 has the port hole usually cut therein to form a circular opening. A frame 13 with a flange 14 is placed in position as shown in the drawings. Lugs 15 are integrally cast with the frame 13 and project therefrom to pivotally support a cover plate 16. The cover plate is provided on the upper end thereof with an ear 17 through which a clamp screw 18 is passed, the clamp screw being pivotally mounted on the frame 13.

A heavy port glass 21 is interposed between the frame 13 and cover plate 16. The port-glass window 21 is usually mounted in a ring 22 and carried on a support. In this instance the window is supported on the clamp screw 18 and depends therefrom in position to cover the port opening. Heavy gasket washers 23 are secured in the frame 13 and in the cover 16 and compressibly engaged by the ring 22 so as to form a weatherproof joint between the outer ship shell and the inner cover plate 16.

It is characteristic of this combination screen closure and waterproof port-hole cover that the window 21 and port-hole cover 16 may be dogged down with the screen closure in position. This facility is made possible by constructing the screen closure in the form of a plug, which is entirely in-

closed in the flange 14 of the frame 13. The peripheral ring flange 8 is all that projects from the flange 14, and this is negligible since the material forming the rim 5 is of comparatively light gage. The ring 22 is made to closely abut the peripheral ring flange 8 to hold the screen closure in fixed position.

The use of this form of screen closure greatly improves the living conditions in the ship and screens the air from coal dust, and provides against the entrance of insects when the ship is at port.

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

1. A port screen comprising an annular rim having an inturned flange at its outer end, a screen fixed thereto, said rim having an outpressed annular bead adapted to contact with the interior surface of a porthole frame, and an outturned curved flange at its inner end, designed to engage the inner end of said frame to prevent and limit outward displacement of the rim relative thereto.

2. The combination with the ring of a port light having a flange provided with an inwardly tapering bore and an inner convex projection; of a port screen comprising a rim, said rim being adapted to fit within the ring, a projection on the rim engaging the inner face of the ring, a screen at the outer end of the rim, the inner end of the rim being formed with an out-turned concavo-convexed flange adapted to engage the inner projection of the ring, and handles attached to the rim at the inside thereof.

3. A port screen to close port holes in ships, comprising a metal rim, a screen fixed thereon, in combination with a ring mounted on the interior of a ship and fitting in the port hole to receive said rim therein, said rim having means coöperating with said ring to limit the outward displacement of the rim, a second ring on the interior of the ship to abut the metal rim of the screen closure and the first named ring to retain the rim in position and form a water-proof joint, a glass window mounted in the second named ring, means for applying and removing the rim, means coöperating between the rim and the first named ring to close the straight line of escape therethrough and retain the said rim in position within the first named ring, and a port-hole cover arranged to be dogged down against the window.

THOMAS JAMES BOYAN.