Sept. 10, 1929. E. W. GUSTAFSON 1,727,595

PORT LIGHT

Filed Jan. 23, 1928

Fig. 1

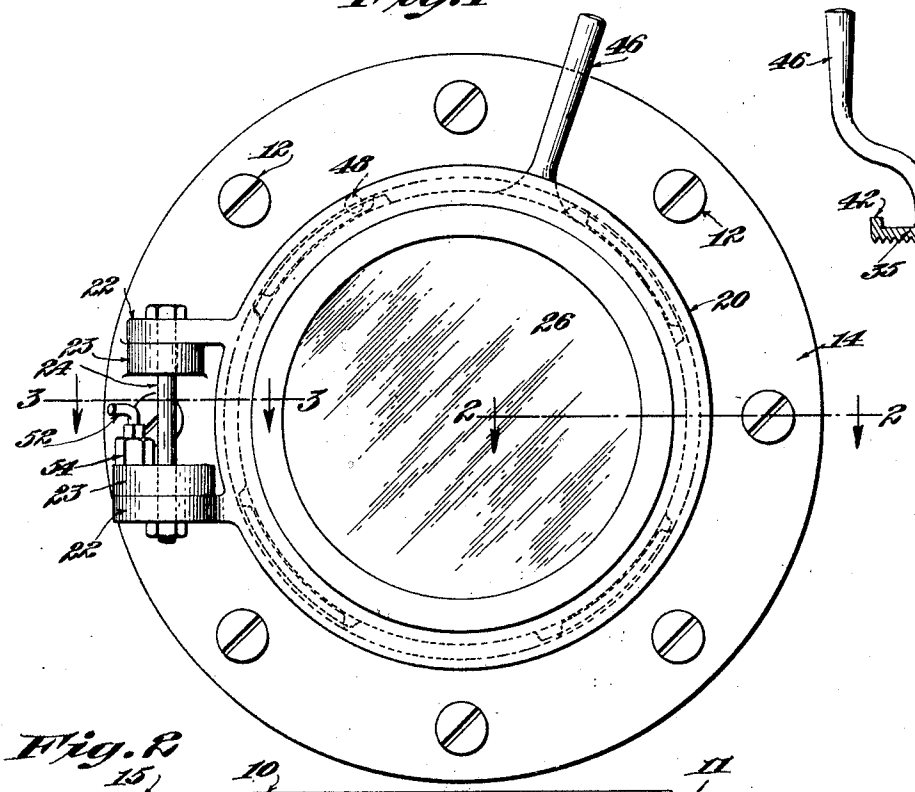


Fig. 5

Fig. 2

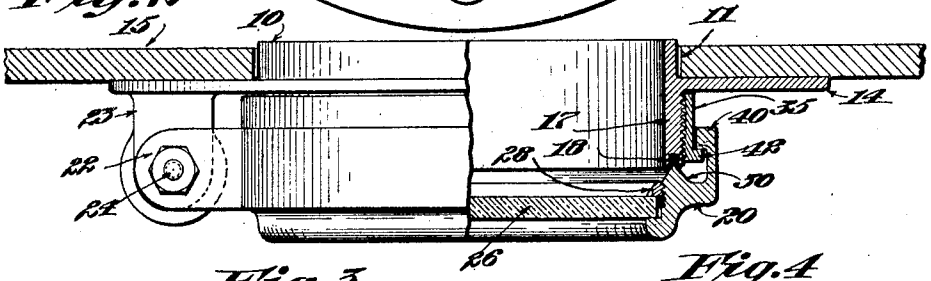


Fig. 3

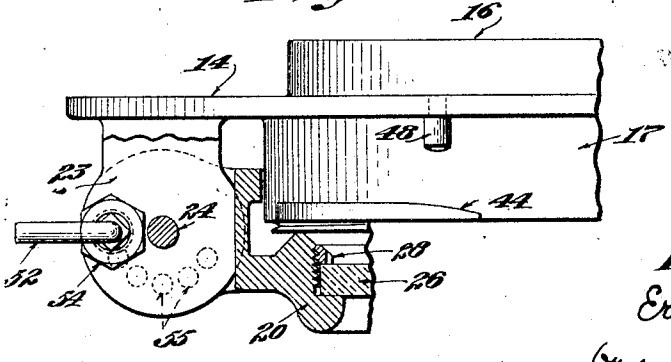
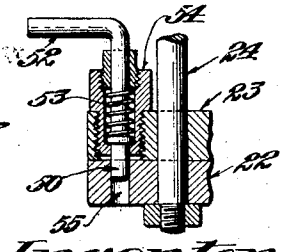


Fig. 4



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UNITED STATES PATENT OFFICE.

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PORT LIGHT.

Application filed January 23, 1928. Serial No. 248,609.

This invention relates to a port light for vessels.

The object of the invention is to provide a novel, simplified and attractive construction of port light which may be economically manufactured and in which the cover member or door may be easily and conveniently opened and closed and locked and unlocked in its closed position.

A further and more specific object of the invention is to provide a novel construction of port light in which provision is made for maintaining the cover member or door in different open positions in a novel and simple manner.

With these objects in view and such others as may hereinafter appear, the invention consists in the port light and in the structures, arrangements and combinations of parts hereinafter described and particularly defined in the claims at the end of this specification.

In the drawings illustrating the preferred embodiment of the invention, Figure 1 is a front elevation of the improved port light; Fig. 2 is a part section and part plan, the section being taken on line 2—2 of Fig. 1; Fig. 3 is a sectional detail on the line 3—3 of Fig. 1; Fig. 4 is a detail to be referred to; and Fig. 5 is a sectional detail of the sleeve and operating handle forming a part of the port light.

Various constructions of port lights have been heretofore proposed involving more or less complicated constructions with which the covers or doors could in practice be opened and closed, only with difficulty. The present invention contemplates a port light of a simplified construction which may be manufactured at minimum cost and in which the cover member may be opened and closed and also locked and unlocked in its closed position with much more convenience and ease than other prior constructions of port lights of which I am aware. Provision is made for maintaining an efficient watertight seal between the cover member and the body of the port light when the cover member is closed and locked. Provision is also preferably made for securing the door or cover member of the port light in different open positions in a novel and simplified manner.

Referring now to the drawings, in its preferred form, the present port light comprises a supporting hub member 10 which is adapted to fit into an opening 11 in the ship's plating, and which may be secured therein in any convenient manner as by screws or bolts 12 extended through holes in a flange 14 cast integrally with the hub 10, and into the ship's plating, a portion of the latter being indicated at 15. The hub 10 is formed with a rear portion 16 designed to fit into the hole 11 and also a forward portion 17 extending in front of the flange 14, and the end surface of the forward portion 17 of the hub is preferably provided with an annular recess therein for the retention of a body 18 of resilient waterproof material such as rubber, a strip of the latter preferably being inset and cemented in the recess.

The port light is further provided with a cover member 20 herein shown as a cast ring provided with ears 22, which cooperate with ears 23 formed upon and projecting forwardly from the surface of the flange 14 to pivotally support the cover member 20 upon the flange by means of a pivot bolt 24 as shown. The cover member 20 is provided with a glass plate 26 secured within the cover 20 by a threaded retaining ring 28 as illustrated in Fig. 2. The interior of the cover ring 20 is also preferably provided with a raised portion 30, whose opposite surfaces are tapered or beveled to enable it to engage the rubber strip 18 and to be drawn tightly against the same within the annular recess in the end of the forward portion 17 of the hub 10, by the action of a locking device to be described, thereby providing a water tight seal for the port light.

Provision is made for holding the cover member 20 in its closed position with the raised portion 30 within the cover ring, pressed against the rubber strip 18, as illustrated in Fig. 2, to render the port light water tight, and for this purpose as herein shown the interior of the cover member 20

is provided with a plurality of lugs 40 which are spaced at invervals around the cover member and at a sufficient distance from one another to permit corresponding lugs 42 upon the periphery of the sleeve 35 to pass through said spaces when the cover member is moved into a closed position. The adjacent surfaces of the lugs 40, 42 are beveled to provide cooperating cam surfaces, one of which is shown at 44, and which are arranged so that when the sleeve 35 is rotated by means of an operating handle 46 from a position in which the handle abuts a stop pin 48 in the flange 14, to a position such as is shown in full lines in Fig. 1, the corresponding pairs of lugs 40, 42 through the cooperating cam surfaces 44 cause the cover member to be drawn toward the flange 14 so that the portion 30 presses tightly against the rubber sealing ring 18, as shown in Fig. 2. The cooperating lugs 40, 42 upon the cover member and sleeve 35 respectively constitute locking members which effectively serve to retain or lock the cover in its closed position until such time as the handle 46 is again returned to a position abutting the stop pin 48.

In order to hold the cover member 20 of the port light in different open positions, provision is preferably made for locking the cover in various open positions, and as herein shown a locking pin 50 having an operating handle 52 is normally urged by a spring 53 within a fitting 54 screwed into a hole in one of the ears 23, into one of several holes 55 formed in the lower ear 22. In opening the port light the operator pushes the handle 46 to the left until it engages the stop pin 48, and then with the other hand may conveniently raise the pin 50 from engagement with the proper hole 55 and thereby is permitted to swing the port light open. The operator may release the pin 50 at any stage in the opening of the port light to permit the pin to thereafter drop into the next hole corresponding to the particular position to which it is desired to open the port light.

From the description thus far it will be observed that the present port light presents a very attractive appearance, adding considerably to the appearance of the stateroom or other portion of the vessel in which it may be located, and that the port light door or cover may be opened or closed in a minimum time and with minimum effort. The construction of the port light is such that an efficient water tight seal is provided when the cover or door is closed and locked, and in addition the relatively few parts entering into the design of the port light facilitates the economical manufacture thereof.

While the preferred embodiment of the invention has been illustrated and described, it is to be understood that the invention may be embodied in other forms within the scope of the following claims.

Having thus described the invention what is claimed is:—

1. A port light comprising a supporting member adapted to be secured to the ship's plating and provided with an opening, a cover member for closing the opening, and means for securing the cover member in its closed position including a locking member upon the interior of the cover, a second locking member for cooperating therewith, a threaded connection between the second locking member and the supporting member whereby upon rotation the second locking member is moved into engagement with the first and in a direction toward the supporting member.

2. A port light comprising a supporting member adapted to be secured to the ship's plating and provided with an opening and a hub surrounding the opening, a cover member pivoted to the supporting member and adapted to close the opening, and means for securing the cover member in its closed position including a locking member upon the interior of the cover member, a rotatable sleeve screwed upon said hub and provided with a locking member adapted to engage the locking member upon the cover when the sleeve is rotated in one direction and to thereby draw the cover member into engagement with the hub to close the opening.

3. A port light comprising a supporting member adapted to be secured to the ship's plating and provided with an opening and a hub surrounding the opening, a cover member pivoted to the supporting member and arranged to close the opening, a rotatable sleeve screwed upon said hub and provided with a plurality of spaced apart locking members, an operating handle projecting from the sleeve, and a plurality of locking members upon the interior of the cover for cooperation with the locking members upon said sleeve.

4. A port light comprising a cast metal hub and supporting member provided with a flange and with screw threads upon the hub, a cover member pivoted to the supporting member, and means for securing the cover in its closed position including a sleeve in threaded engagement with the threaded hub, and locking members upon the sleeve and the interior of the cover arranged whereby upon rotation of the sleeve the locking members cooperate to draw the cover with the sleeve in a direction toward the supporting member.

5. A port light comprising a supporting member adapted to be secured to the ship's plating and provided with an opening and an externally threaded hub surrounding the opening, a gasket supported upon the end of

said hub, a cover member pivoted to the supporting member and adapted to close the opening and provided with a ring portion adapted to engage said gasket on the end of the hub to form a water-tight joint, a threaded member upon the outside of the hub and cooperating with the threads thereon, and a connection between the cover member and said threaded member for drawing the cover member into a position where said ring engages said gasket upon rotary movement of said threaded member in one direction.

6. A port light comprising a supporting member adapted to be secured to the ship's plating and provided with an opening and a hub surrounding the opening, a cover member pivoted to the supporting member and adapted to close the opening, a rotatable sleeve threaded upon the outside of said hub, said cover member being provided with a rim portion surrounding said sleeve, and locking members upon the adjacent surfaces of said sleeve and rim portion operative to draw the cover member into engagement with the hub to close the opening upon rotation of said sleeve.

In testimony whereof I have signed my name to this specification.

ERNEST W. GUSTAFSON.