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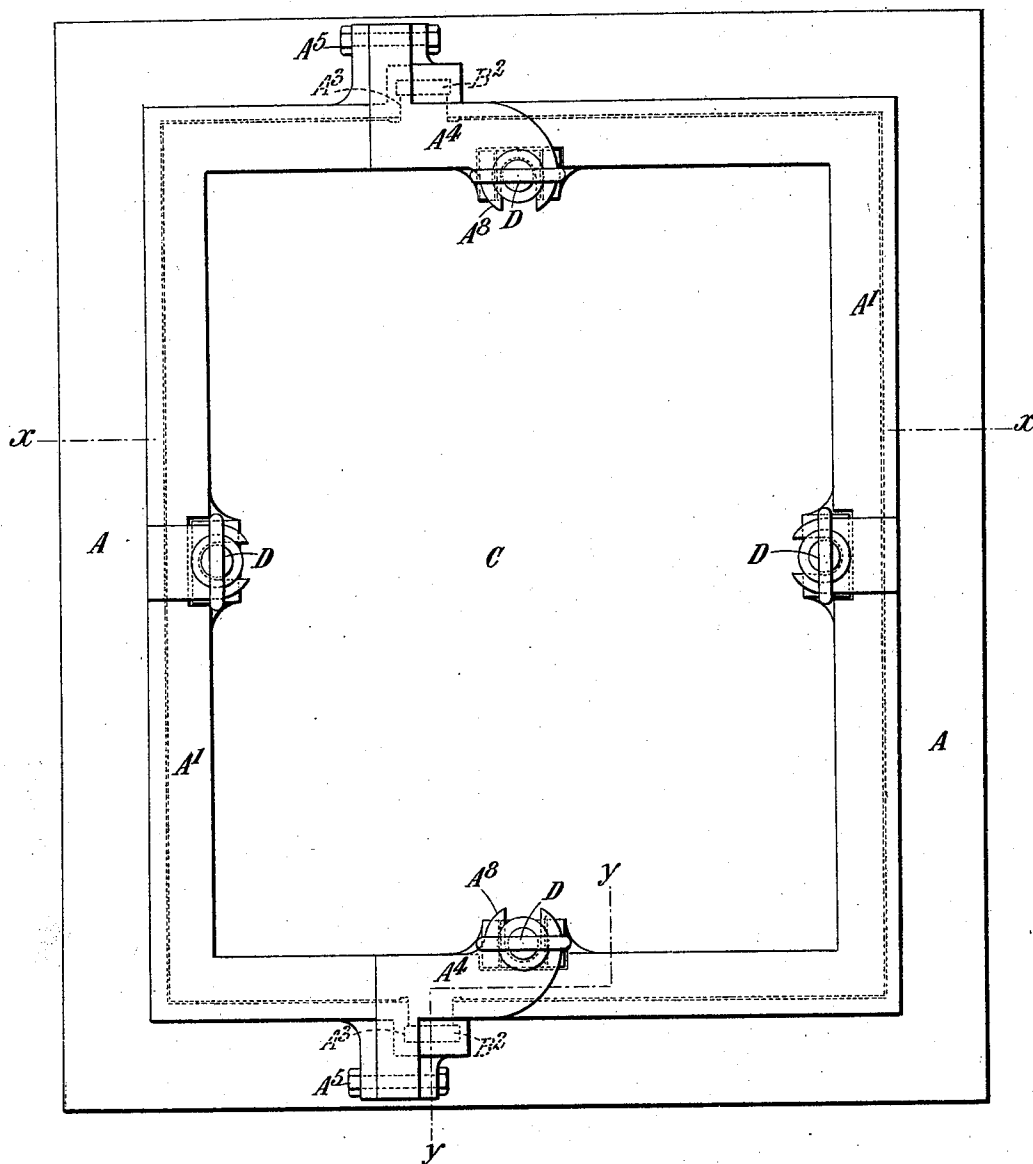
4 Sheets—Sheet 1.

T. UTLEY.
SHIP'S LIGHT AND AIR PORT.

No. 539,315.

Patented May 14, 1895.

Fig. 1.



Witnesses:
Thos. A. Guen
Robert Cruikshank

Inventor:
Thomas Utley.
By James L. Norris.
Atty.

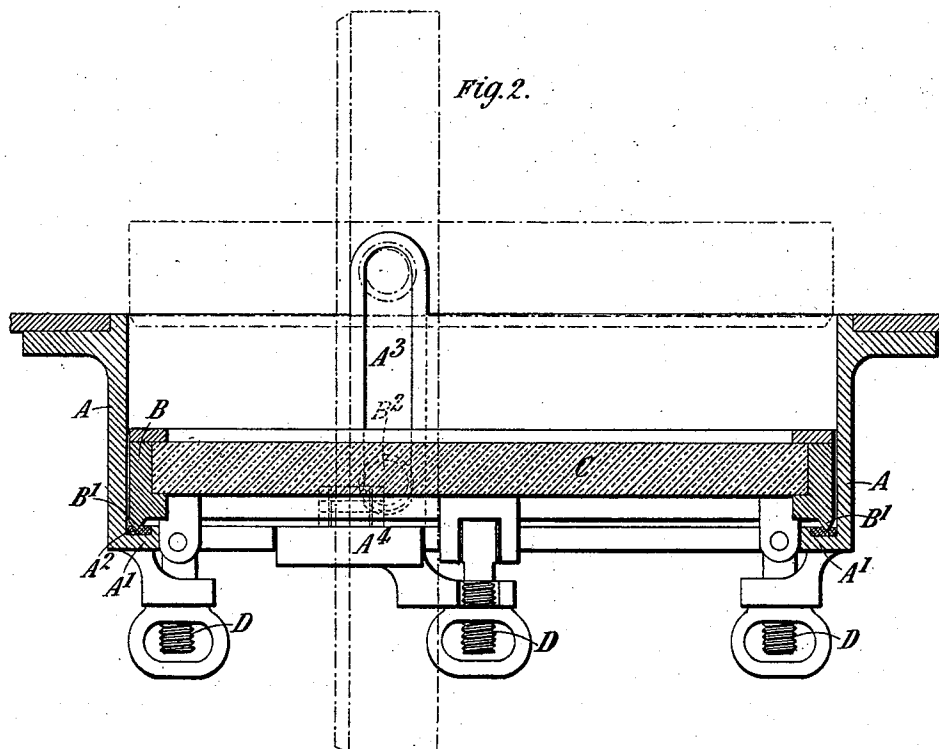
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T. UTLEY.
SHIP'S LIGHT AND AIR PORT.

No. 539,315.

Patented May 14, 1895.



Witnesses:
Thos. A. Green
Albert Emmett

Inventor:
Thomas Utley.
By James L. Norris.
Atty.

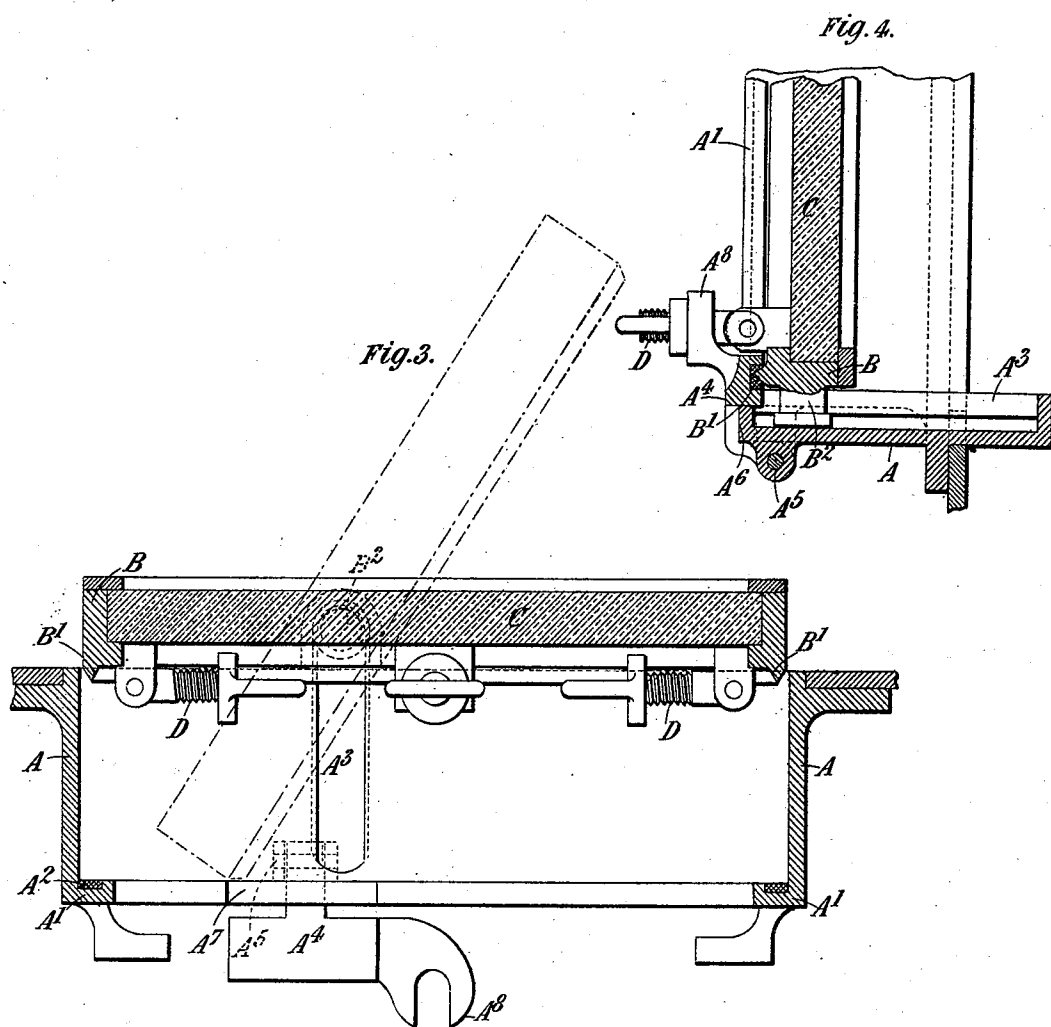
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T. UTLEY.
SHIP'S LIGHT AND AIR PORT.

No. 539,315.

Patented May 14, 1895.



Witnesses:
Thos. A. Green
Wm. C. Smith

Inventor:
Thomas Utley.
By
James L. Norris.
Atty.

(No Model.)

4 Sheets—Sheet 4.

T. UTLEY.
SHIP'S LIGHT AND AIR PORT.

No. 539,315.

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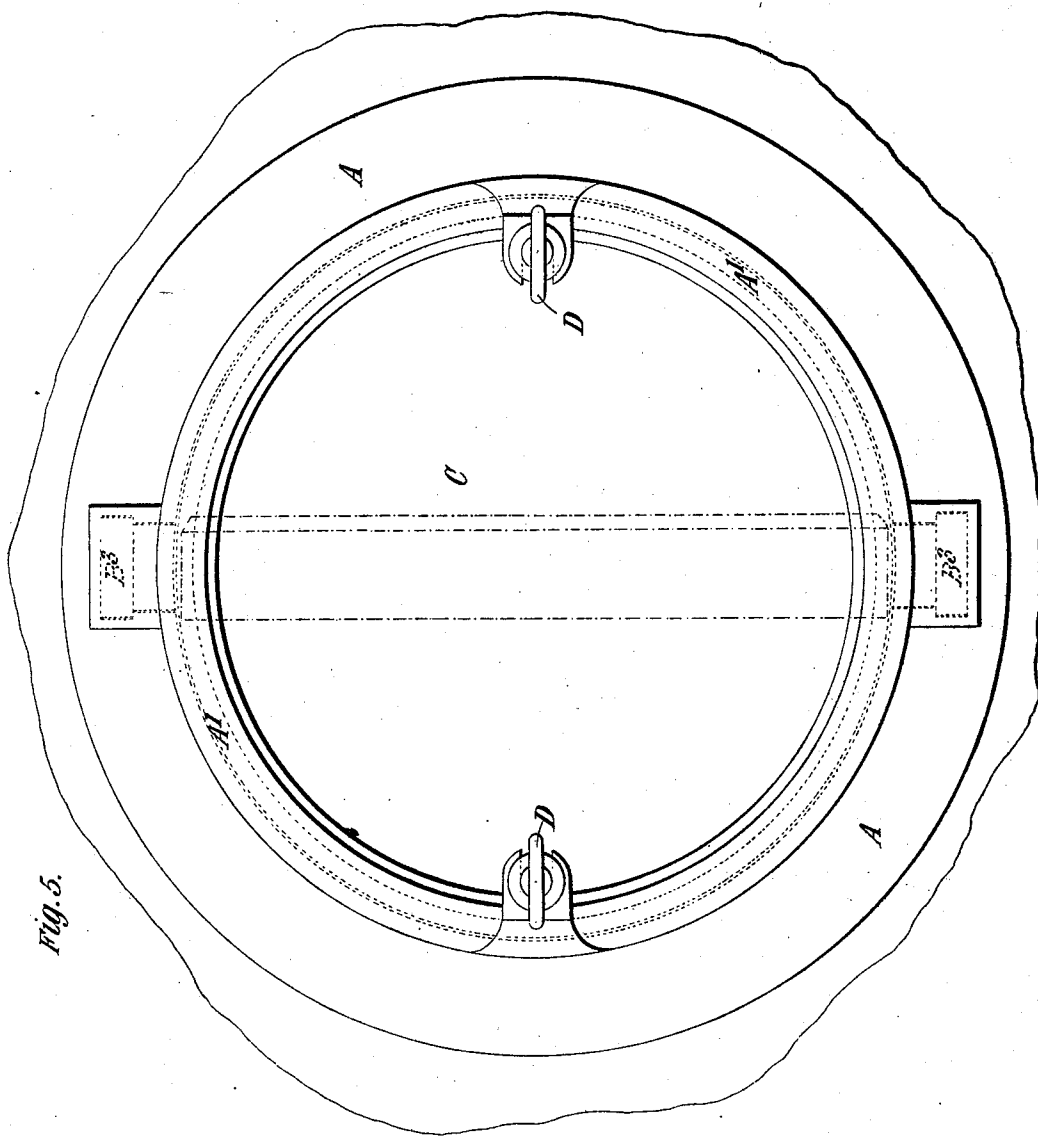


Fig. 5.

Witnesses,
Thos. A. Green
Robert Everett.

Inventor,
Thomas Utley.
By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

THOMAS UTLEY, OF LIVERPOOL, ENGLAND.

SHIP'S LIGHT AND AIR-PORT.

SPECIFICATION forming part of Letters Patent No. 539,315, dated May 14, 1895.

Application filed December 18, 1894. Serial No. 532,225. (No model.)

To all whom it may concern:

Be it known that I, THOMAS UTLEY, engineer, a subject of the Queen of Great Britain, residing at Sefton House, Crosby Green, West Derby, Liverpool, in the county of Lancaster, England, have invented certain new and useful Improvements in Ships' Lights and Ports, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to ships' side lights.

According to my invention I provide the glass holder with pivot pins about which it can be turned when desired into a position approximately at right angles to the ship's side. The said pivot pins are received in grooves or channels in the fixed casing of the side light and can slide therein to allow of the turning of the glass holder. The fixed frame is formed with an internal flange at its inner end to receive the packing ring against which the glass-holder bears when closed. In the said flange when applied to a rectangular side light, are gaps closed by hinged closing pieces as and for a purpose hereinafter fully explained.

An important feature of my invention is the attachment of the screw-retaining bolts to the glass holder.

In the accompanying drawings, Figure 1 is an elevation from inside the vessel of a rectangular side light constructed according to my invention. Fig. 2 is a horizontal section on the line $x x$, Fig. 1. Fig. 3 is a horizontal section showing an intermediate position of the glass-holder when opening. Fig. 4 is a vertical section on the line $y y$, Fig. 1, showing a channel hereinafter described. Fig. 5 is an elevation of a circular side light constructed according to my invention.

A is the fixed casing of the side light.

B is the movable glass-holder.

C is the glass.

The fixed casing A is made to project inboard a suitable distance and is furnished with an internally projecting flange A' to receive the usual packing or jointing ring A² for making a water-tight joint between the casing and the glass-holder. The latter is furnished with a projecting rim B' to bear against the aforesaid packing ring when the side light is closed.

The glass-holder is provided at top and bottom with pivot pins B², B² which are received and can slide in grooves or channels A³, A³ provided in the fixed casing A. The said grooves or channels extend in a direction at right angles to the ship's side, so that when the retaining screws D, D, D which are hinged to the glass-holder are unfastened and disengaged from the jaws of the fixed casing the said glass-holder can be moved bodily outboard to the position shown in Fig. 3, that is to say, until the pivot pins arrive at the ends of the channels. The side-light can then be turned about its pivot pins into a position at right angles to the ship's side. An intermediate position of the glass-holder while turning is shown by dotted lines in the said figure.

The retaining bolts or screws are as above indicated hinged to the glass-holder and can engage with jaws on the fixed frame. When the nuts of the retaining bolts are screwed up the rim B of the glass-holder is pressed very tightly against the packing ring A² and a perfectly water tight joint is thereby insured. If a sea strikes the glass it serves merely to increase the pressure of the holder against the flange and so makes the joint more tight.

In order that the glass-holder may not when open project outboard too far I provide for allowing it to be drawn inboard, as follows, that is to say, I provide a gap A' in the top and also in the bottom of the flange A' of the casing in line with the pivot pins of the glass-holder, and I close said gaps by pieces A⁴, A⁴ which are hinged to the casing. A⁵, A⁵ are the hinge pins of the said pieces. The jaws A⁸ with which the top and bottom screw-retaining bolts D engage are formed on the said pieces A⁴ so that when the side light is closed and screwed home tight by its bolts D the pieces A⁴ are kept tightly pressed against the part A⁶ of the fixed casing. When the bolts D are unscrewed to open the side light, these pieces A⁴ can be turned back and the glass-holder can then be drawn inboard through the gaps A' in the flange A'.

In some instances the fixed frame of the rectangular light is made so deep (the grooves or channels being correspondingly lengthened) that the glass-holder will turn without hindrance and without projecting outboard too far, and in such a case it becomes unnec-

essary to provide the gaps and closing pieces in the flange.

My improved construction of side-light may obviously be applied to those lights that have
5 a ventilator in the fixed frame.

The side light shown in Fig. 5 is circular, and is pivoted at top and bottom in channels in the fixed frame in the same manner as the rectangular light above described. It is shown
10 with two retaining bolts D, D, but it may have four such bolts if desired. With a circular light it is not necessary to provide gaps in the flange of the fixed frame to allow the glass-holder to be drawn inboard when turned
15 at right angles to the ship's side as is the case with the rectangular light.

What I claim is—

1. In a ship's side light the combination of an inwardly flanged fixed frame, a jointing
20 ring in the flange, a glass holder furnished with pivot pins, guide channels in the fixed frame to receive the said pivot pins, and screw retaining bolts hinged to the glass-holder and engaging with jaws on the fixed
25 frame, substantially as described.

2. In a ship's side light the combination of an inwardly flanged fixed frame, a jointing
30 ring in the flange, a glass-holder furnished with pivot pins, guide channels in the fixed frame to receive the said pivot pins, screw retaining bolts hinged to the glass-holder and

engaging with jaws on the fixed frame, and a rim on the glass-holder to bear against the jointing ring when the light is closed, substantially as described.

3. In a ship's side light the combination of an inwardly flanged fixed frame, a jointing
ring in the flange, a glass holder furnished with pivot pins, guide channels in the fixed
40 frame to receive the said pivot pins, and removable portions in the flange to admit of the projection of the glass-holder through the frame when turned at right angles thereto, substantially as described.

4. In a ship's side light, the combination of
45 an inwardly flanged fixed frame, a jointing ring in the flange, a glass-holder furnished with pivot pins, and with screw retaining bolts, guide channels in the fixed frame to receive the said pivot pins, gaps in the flange
50 opposite the pivot pins, hinged pieces to fill said gaps and thus complete the flange, and jaws on said hinged pieces to engage with the screw retaining bolts of the glass-holder, substantially as described, and for the purpose
55 specified.

In testimony whereof I have hereunto set my hand this 7th day of December, 1894.

THOMAS UTLEY.

Witnesses:

JOHN HAMER KENION,
OWEN WILLIAM OWEN.