

T. D. WILSON.
Air-Port for Vessels.

No. 222,111.

Patented Nov. 25, 1879.

Fig. 1.

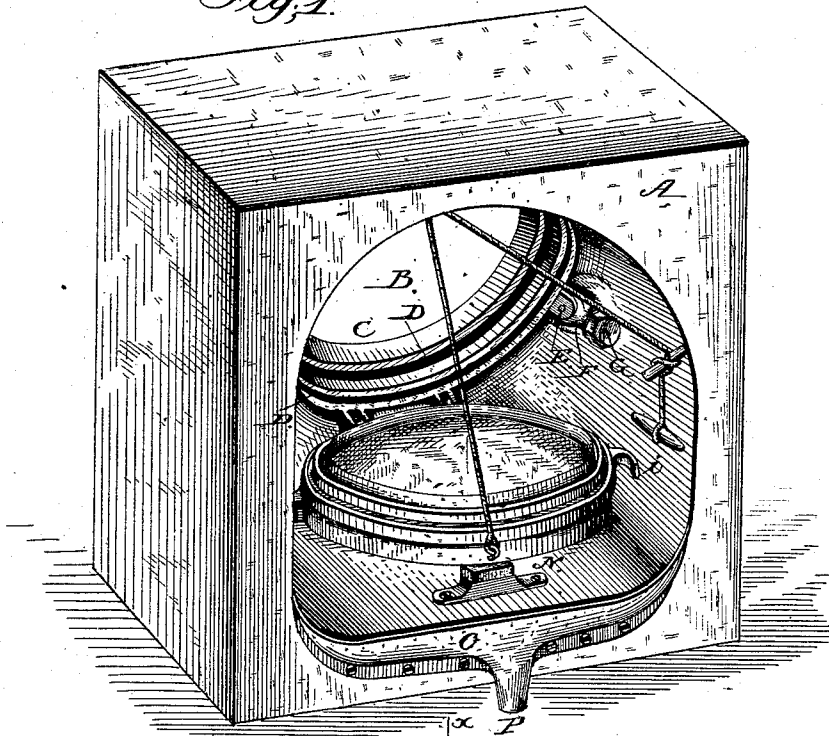
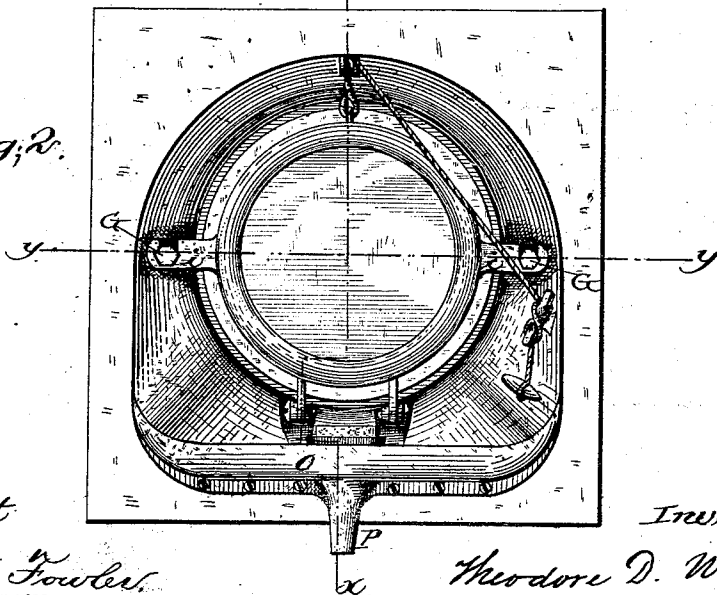


Fig. 2.



Attest

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Fig. 3.

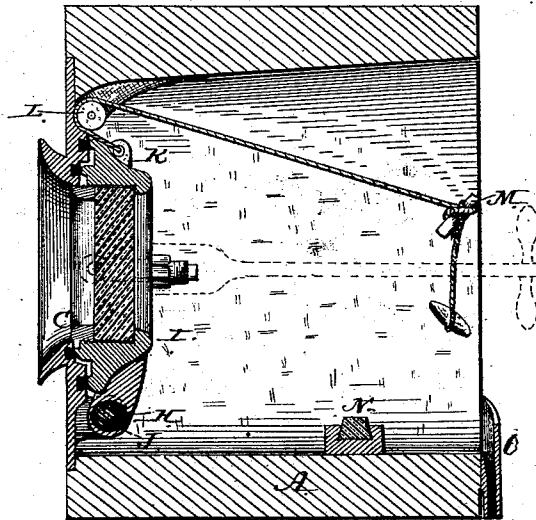
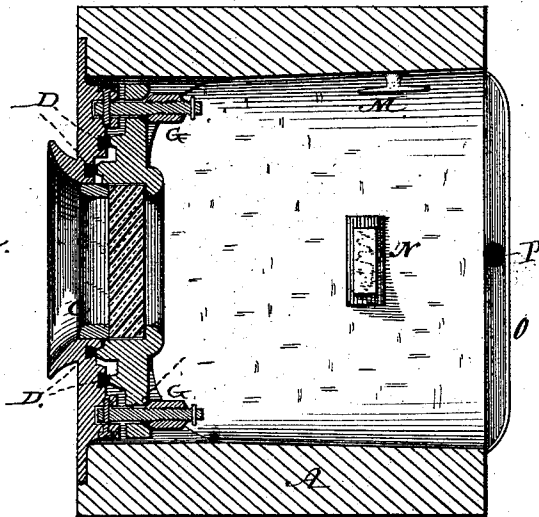


Fig. 4.



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UNITED STATES PATENT OFFICE.

THEODORE D. WILSON, OF UNITED STATES NAVY.

IMPROVEMENT IN AIR-PORTS FOR VESSELS.

Specification forming part of Letters Patent No. **222,111**, dated November 25, 1879; application filed October 9, 1879.

To all whom it may concern:

Be it known that I, THEODORE D. WILSON, a naval constructor in the Navy of the United States, have invented a new and useful Improvement in Air-Ports for Steamers and Sailing-Vessels, of which the following is a clear, full, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of an air-port with my improvements attached, the port shown open. Fig. 2 is a front elevation of the same with the port closed. Fig. 3 is a vertical section through *x x*. Fig. 4 is a horizontal section through *y y*.

My invention relates to that class of devices designed to admit air and light into the hulls of vessels; and it consists in the combination of elements hereinafter described and claimed.

In the drawings, A represents the section of the side of a vessel, and B the air-port made through the same. C is the circular frame-work secured thereto, and provided with two rubber packing-rings, D D, to afford additional security against leakage, as in case one ring becomes damaged there is the second ring to depend on. On each side of the frame-work C are secured the ears E, to which are loosely pivoted the catch-pins F, provided with the nuts G for screwing up and securing the shutter in position when desired.

The catch-pins F are allowed to fall not below a horizontal position when at rest, and are raised by the cam-latches *i* on each side of the shutter when the shutter is raised for closing. After the latches pass the screw-nuts the catch-pins drop into the notches in the latches, and the port is closed. If desired, the nuts are then screwed up on the catch-pins, and the shutter is firmly secured in position.

In closing all air-ports at present in use the shutter strikes on the rubber packing-ring before it is entirely closed, and when screwed up it brings an uneven leverage on the rubber packing, throwing it partially out of the groove, and hardening and destroying its elasticity, causing the port to leak. One object of my present invention is to overcome this difficulty.

The ear H of the port-shutter I is provided

with an oval opening for the pin J, as is shown in Fig. 3, and by this construction the shutter is allowed to lie square upon the face of the rubber packing-rings before it is screwed up, the bearing being equal upon all parts of the rings, and when the shutter is screwed up with a port-wrench the port-shutter is equally forced on all points of the rubber packing-rings, and with the same bearing—an improvement which will be readily appreciated by those accustomed to the handling of vessels at sea.

My port I propose to close by means of a small lanyard made fast to the eye K and rove through an eye inside the shutter-frame or over a pulley, L, as shown in Fig. 3, and belayed on cleat M. By this means any desired opening of the port may be had; and if desired to close the shutter quickly, it can be done by simply pulling on the lanyard, and the catches will automatically raise and catch the shutter, when it may be screwed up with the wrench.

When the port-shutter is down, as shown in Fig. 1, it rests on the rubber bumper N, and should the shutter accidentally fall at any time no damage can result, as the bumper N would catch and break the force of the fall.

Along the lower inside edge of the port I construct the lip O, provided with a suitable drain, P, for the purpose of catching and leading off any water which may accidentally enter the port.

My improved ports can be put anywhere fore and aft a vessel's length, as from the manner of dropping down the shutter, instead of swinging it fore or aft, the vessel is not cut away.

I am aware that ports hinged at the bottom are not new; nor is it new to slot the hinges. These I do not claim as my invention.

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

The air-port constructed as described, in combination with the bumper N and lip O, provided with the pipe P, substantially as and for the purpose set forth.

THEODORE D. WILSON.

Witnesses:

DAVID B. MACOMB,
JOHN PENDER.