

W. Robinson,

Ventilating Ships.

Nº 10 523,

Patented Feb. 14, 1854.

Fig. 2.

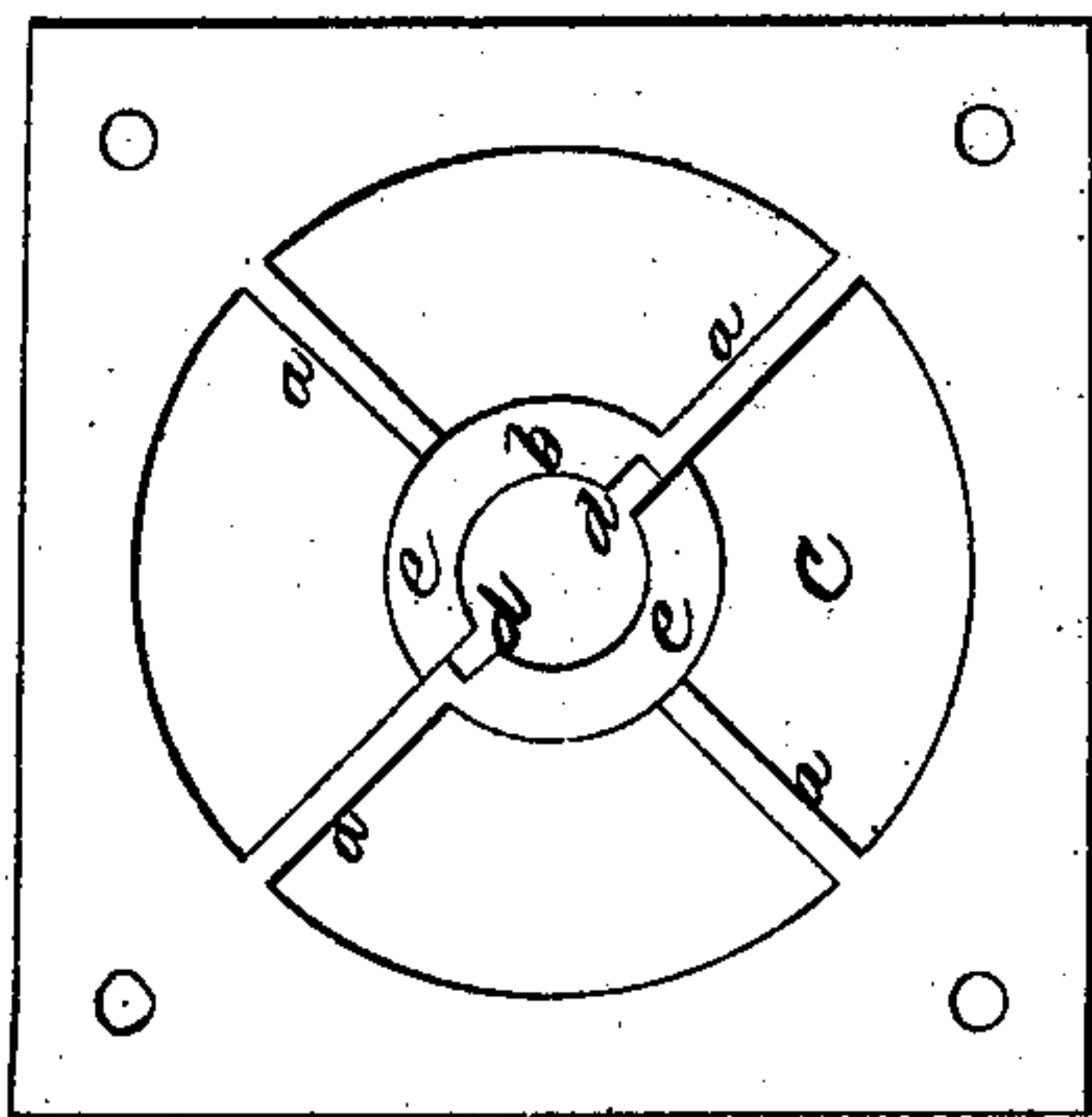


Fig. 3.

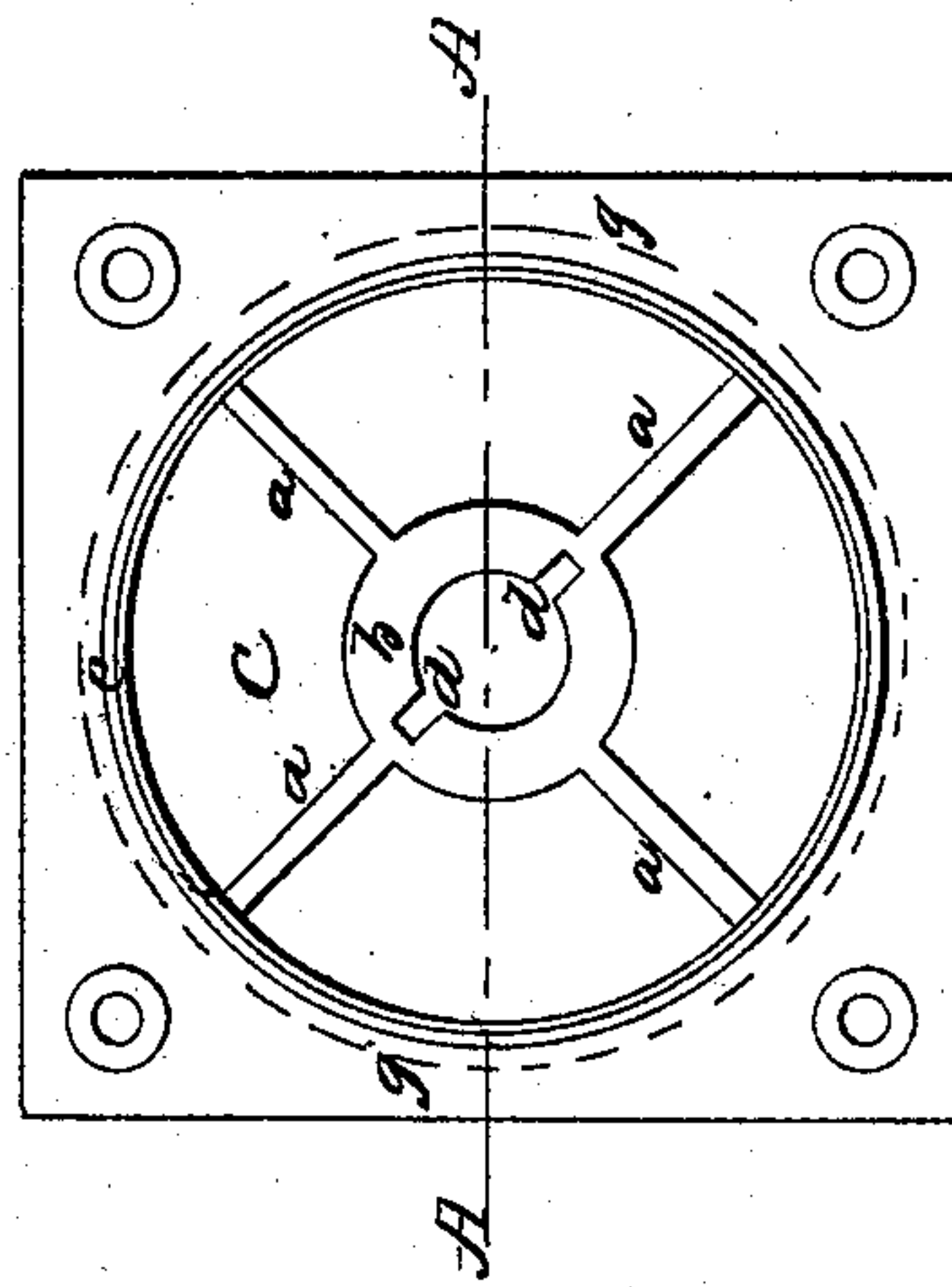


Fig. 1.

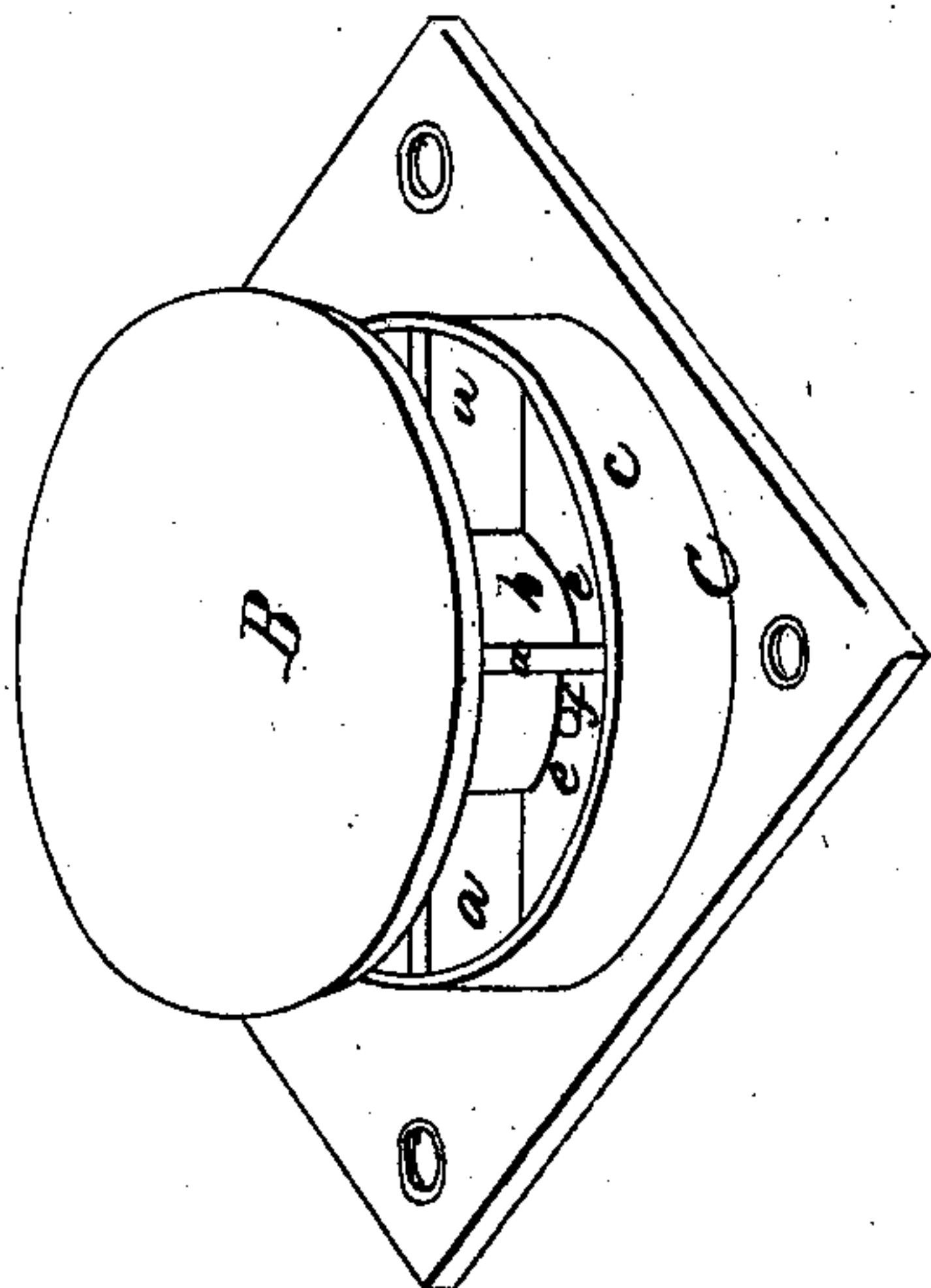
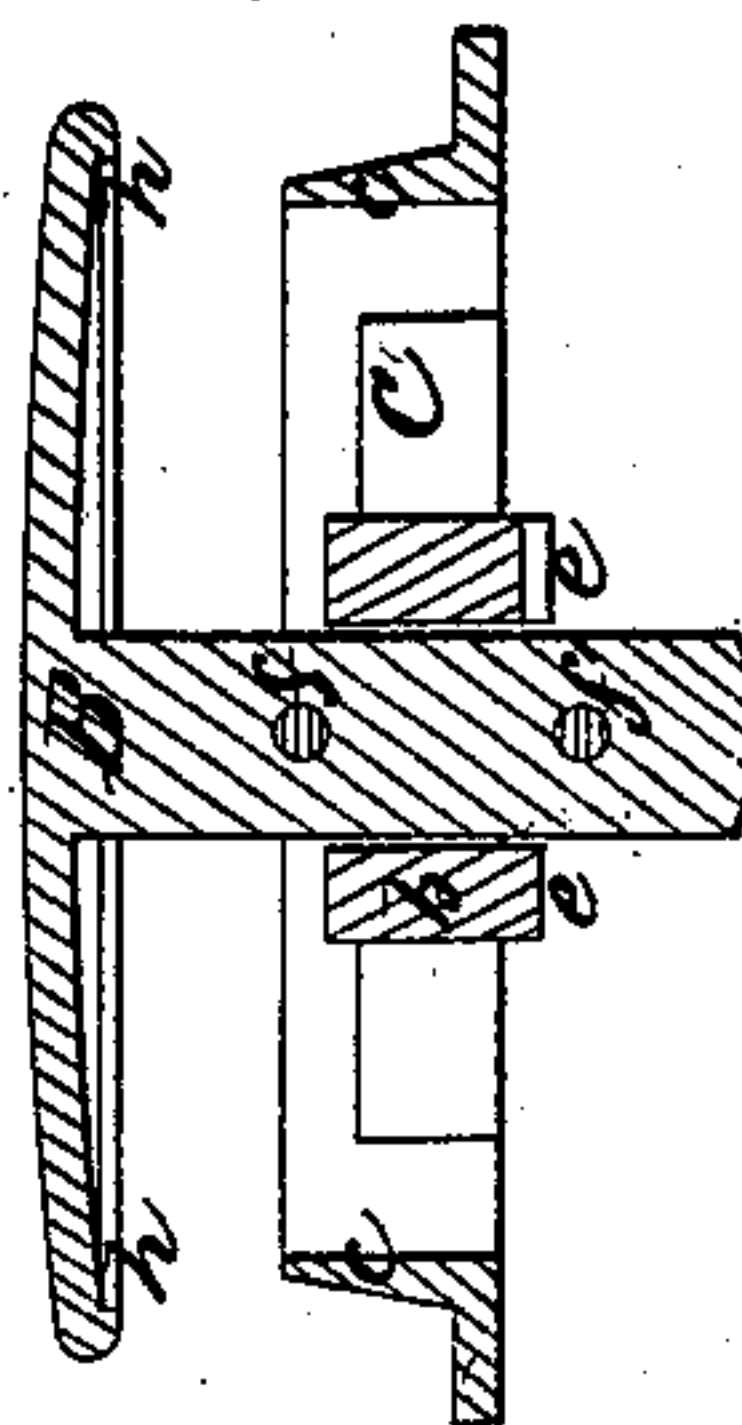


Fig. 4.



UNITED STATES PATENT OFFICE.

WARREN ROBINSON, OF NEW HAVEN, CONNECTICUT.

SHIP'S VENTILATOR.

Specification of Letters Patent No. 10,523, dated February 14, 1854.

To all whom it may concern:

Be it known that I, WARREN ROBINSON, of the city of New Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Ventilators for Ships, &c.; and I do hereby declare that the following is a full, clear, and exact description of the construction, character, and operation of the same, reference being had to the accompanying drawings, which make a part of this specification, in which—

Figure 1, is a perspective view of the ventilator as it will appear when fitted into the ship's deck, or elsewhere, and open for ventilating. Fig. 2, is a plan view of the stationary part of the ventilator as seen from the lower side, showing the slots through which the pin passes, and the inclined planes on which the ends of the pins work to secure the movable part in its proper position, either open or closed. Fig. 3, is a plan view of the same as seen from the upper side, showing the same slots. Fig. 4, is a view of a section of Fig. 1, cut through the line A, A, Fig. 3, showing the shaft, or spindle, as it passes through the hub, or nave, the two pins which serve to secure it in its proper position, and a part of one of the inclined planes.

My improvement consists in so constructing the ventilator that the movable part may be raised up to ventilate the ship by turning the top part, or cap, from right to left one fourth (or less) part of a turn and raising it vertically to the proper height, and again turning the top, or cap, from left to right, the same distance as before, when it will be firmly secured in that position, and will remain so until the cap is turned back, and so that by again turning the cap from right to left the movable part will, by its own weight, drop down vertically to the position of closing, when it may be firmly secured in that position, water-tight, by means of the pin working on the inclined plane on the lower side or end of the hub, or nave, and not be liable to be moved, except by the hand, intentionally.

I make the ventilator of brass, bronze, or any other suitable metal, by casting it in two pieces, as represented, in section, B, C, Fig. 4, and also in Fig. 1. I make the stationary part in a square, or any other shape, with a circular opening, with four arms, or spokes, *a, a, a, a*, and a hollow hub, or nave,

b, in the center, all as shown in Figs. 2 and 3, and with a raised curb on the upper side, around the circular opening, as shown at *c*, in Fig. 1 and in section at *c, c*, Fig. 4. Through this hub, or nave, *b*, I make two vertical slots, *d* and *d*, as seen in Figs. 2 and 3, and on the under side of this hub, or nave, I make two inclined planes, as seen at *e* and *e*, Figs. 1, 2, and 4, on which the pins, *f* and *f'*, Fig. 4, to secure the movable part, B, firmly in its position, either when open or when closed, one of which pins is seen at *f'*, Fig. 1. I make the movable part, B, with a cap, or cover, as seen in Fig. 1, somewhat larger than the circular curb, *c*, as indicated by the dotted circle, *g, g*, Fig. 3, with the edge projecting downward, as represented in section at *h, h*, in Fig. 4, so as to close the top water tight, and a shaft, or spindle, as shown in section at *f* and *f'*, Fig. 4, which passes downward through the hub, or nave, *b*, to an extent sufficient to hold it always steady while open. Through this shaft, or spindle, I insert two pins, as indicated at *f* and *f'*, Fig. 4, at such distance from each other that when the ends of the lower one, *f'*, press on the inclined planes, *e* and *e*, the ends of the upper one, *f*, will rest on the upper surface of the hub, or nave, *b*, so as to hold the whole perfectly firm; but instead of these pins, *f* and *f'*, any other kind of projections may be used that will serve the same purpose or produce the same result. Having thus constructed the parts, I insert the pin, *f*, through the shaft, or spindle, *f, f'*, and pass the spindle downward through the hub, *b*, and then insert the lower pin, *f'*, below the hub, all as indicated in Fig. 4. The pin, *f'*, must be long enough to extend beyond the extent of the slots, *d* and *d*, so that the movable part may never be detached from the stationary part by accident. Then by turning the cap, B, about one-fourth of a turn, from left to right the pin *f'*, will be forced downward by the inclined plane, *e* and *e*, as seen at *f'*, Fig. 1, so as to press the cap, B, closely upon the upper edge of the collar, or curb, *c*, and close the ventilator water tight, and should it ever be deemed necessary there may be a strip of india rubber, or any other kind of packing, fitted into the recess, *h, h*, Fig. 4, in the cap, B, to insure its perfect tightness.

The requisite number of these ventilators are to be fitted into the deck of the ship, or other vessel, in the usual way, when they

may, at any time, be opened for use by simply turning the cap, by hand, from right to left till the pin *f*, Fig. 4, will pass up through the slots, *d* and *d*, Figs. 2 and 3, and then raise up the cap, B, until the pin *f*, strikes the lower end of the hub, (which pin is too long to pass through the slots,) and then turn the cap, B, from left to right, when the pin, *f*, will be forced downward by the inclined planes, *e* and *e*, to the position seen at *f*, Fig. 1, and the pin *f*, (having passed away from the slots, *d* and *d*,) will be pressed onto the upper end of the hub, *b*, and thus secure the movable part so firmly that no accident can change its position, and when it is desired to close the ventilator turn the cap, B, from right to left till the pin *f*, comes over the slots again, when the cap, B, will descend, by its own weight (the pin *f* passing through the slots, *d* and *d*) and rest on the upper edge of the curb, or collar, *c*, and then by turning the cap, B, from left to right the pin, *f*, will be forced downward (as before described) by the inclined planes and press the cap so closely upon the upper edge of the collar, *c*, as to close the ventilator water tight, and will hold it so firmly in that position that no accident can disturb it or cause it to leak even though under water.

The advantages of my improvement consist, in part, in the simplicity of its struc-

ture and its not being liable to get out of order, and in the very small expense for which it may be manufactured and the readiness and dispatch with which it may be opened and closed, as either can be done in less time than would be required to give a single turn to a screw, and this might often be of the greatest importance on ship-board in the event of a sudden squall, gale, or storm, at which time the time of every one on board is most precious, and in the certainty of closing it water tight, it not being liable to error, as might be the case by the binding of a screw.

I am aware that a patent was issued to Enoch Hidden, of New York, dated June 21, 1853, for side lights and ventilators for ships. I therefore do not claim any part, or process, or other matter claimed by said Hidden in his said patent.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination of the movable part, B, with the two inclined planes (*e* and *e*) when the whole is constructed, arranged, and combined, substantially as herein described.

WARREN ROBINSON.

Witnesses:

WALES HOTCHKISS,
R. FITZGERALD.