

(No Model.)

E. H. L. PETERSEN.
SIGNALING LANTERN FOR VESSELS.

No. 508,972.

Patented Nov. 21, 1893.

Fig. 2.

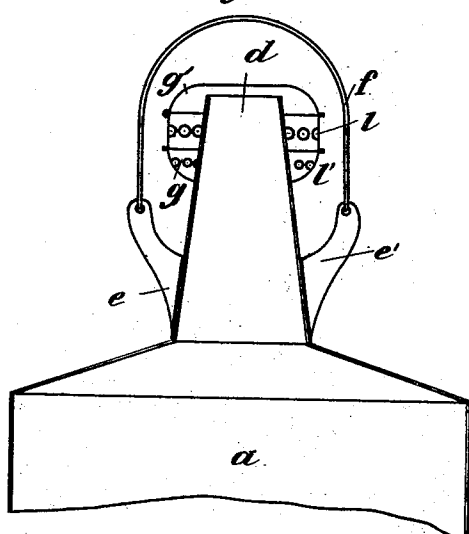


Fig. 1.

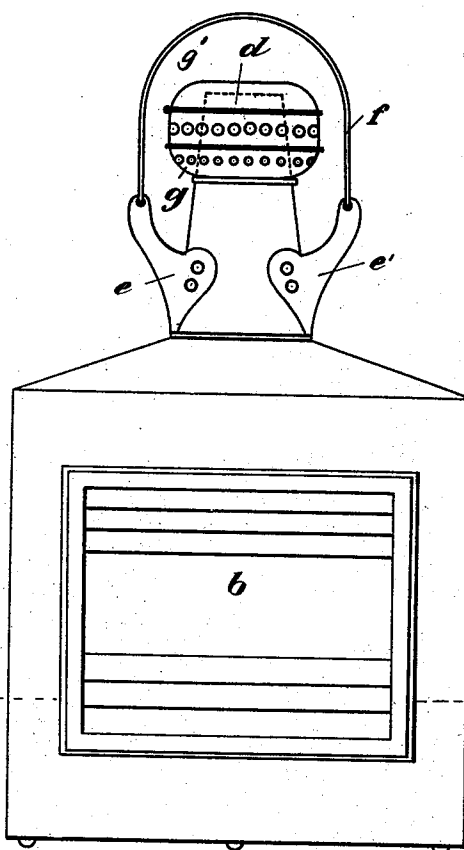


Fig. 4. v-v.

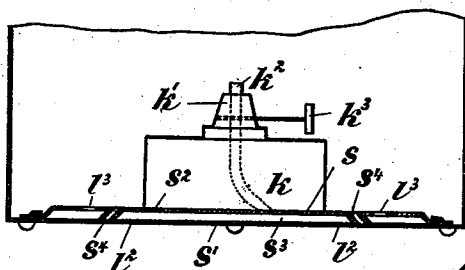
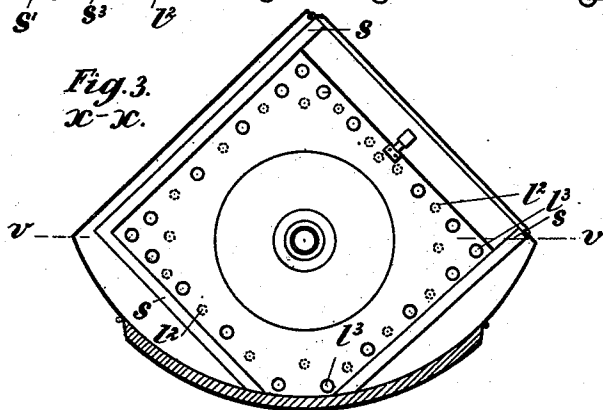


Fig. 3.
x-x.



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SIGNALING-LANTERN FOR VESSELS, &c.

SPECIFICATION forming part of Letters Patent No. 508,972, dated November 21, 1893.

Application filed May 11, 1893. Serial No. 473,895. (No model.)

To all whom it may concern:

Be it known that I, ERNST HEINRIG LUDWIG PETERSEN, a citizen of the free state of Hamburg, residing at Hamburg, in the German Empire, have invented certain new and useful Improvements in Signaling-Lanterns for Vessels and other Craft, of which the following is a specification.

My invention relates in general to signal lanterns adapted for use on vessels and other craft, and more particularly to the construction and arrangement of such lanterns.

The principal objects of my present invention are, first, to provide a comparatively inexpensive, durable and effective signal lantern adapted for use on vessels and other craft; second, to provide a signal lantern in which the ingress and egress of air to the lantern will be maintained with due regularity under such conditions as atmospheric changes, storms and gales, without affecting the area or extent of flame of the lantern; third, to provide a signal lantern so constructed and arranged as to permit of a regulated supply and discharge of air to the light producing appliance thereof, in order to prevent the flame from smoking, blacking or charring the chimney or other parts thereof, and, fourth, to provide a signal lantern in which the ingress and egress of air thereto will be maintained under all conditions without extinguishing or affecting the flame of the lantern or producing flickering thereof.

My invention consists of the improvements in a signal lantern as hereinafter described and claimed.

The nature, scope and characteristic features of my invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, and in which—

Figure 1, is a front elevational view of a signal lantern embodying features of my invention. Fig. 2, is a vertical central section through the chimney of the lantern showing a perforated dish-shaped device with an imperforate cover applied thereto and also showing wings or brackets secured to the walls of the chimney, and having a bail pivotally attached thereto. Fig. 3, is a transverse section on the line $x-x$ of Fig. 1, showing the light producing appliance and the

staggered apertured false bottom of the lantern for the ingress of air to the internal chamber of the lantern, and around or about the light producing appliance thereof; and Fig. 4, is a similar view on the line $v-v$ of Fig. 3, showing the flaring and staggered apertured false bottom of the lantern, and the light producing appliance thereof.

Referring to the drawings, a , is the housing of the lantern; b , a glass or other reflecting body inserted into or screwed to the wall of the housing a .

d , is a conical-shaped chimney connected with the head or cap of the lantern. To the exterior wall or surface of the chimney d , are attached brackets or wings e and e' .

f , is a bail pivotally connected with the free extremities of the wings or brackets e and e' .

g , is a perforated dish-shaped device provided with an imperforate hinged cover g' , applied to and supported by the chimney d . This device g , is provided with perforations l and l' , in the lower curved portion and also in the side or curved wall, thereof, in order to permit the air to travel in two different directions, and adjacent to the surface or wall of the chimney d , and any gases or heated air to travel in a path adjacent to the internal wall or surface of the dish-shaped device g , thence through the apertures or perforations l and l' , respectively provided in the device g . These perforations l and l' are preferably made so that their diameters vary respectively, that is to say, the diameter of one series of perforations being larger than the other series of perforations.

k , is a light producing appliance which may consist of a spirit or oil lamp k' , provided with a wick k^2 , and with means k^3 for raising or lowering the wick.

S , is the false bottom of the lantern composed of two disks or diaphragms s' , and s^2 , separated from each other so as to form a chamber or space s^3 , between them. These disks or diaphragms s' , and s^2 , constituting the false bottom S , are provided with staggered perforations l^2 and l^3 , of varying diameters respectively. These perforations permit the air in its passage into the chamber s^3 , to take a zig-zag course therefrom into the internal chamber of the lantern, for maintaining the flame of the light producing ap-

plianee k , in such condition as to insure the most effective illumination therefrom, as well as greatly increased reflecting action. Moreover, such construction more effectually regulates and insures the presentation of the required volume of air around and about the flame of the light producing appliance of the lantern to steady the same and to prevent flickering thereof. Inclined apertures s^1 , extend through the disks or diaphragms s' and s^2 , of the false bottom S , whereby the volume of air rising in a vertical direction through the staggered openings in the false bottom S , into the internal chamber of the lantern will be met by a decreased volume of air entering through the inclined apertures s^4 , thereby maintaining the flame of the light producing appliance k , in such a state or condition as to give the most beneficial results, without flickering of the flame, or of the conical-shaped chimney d , being blackened from the flame in case of the use of an oil and wick lamp, in such lantern. It may be remarked that the inclined apertures s^4 are of a less area than the openings in the disks or diaphragms s' and s^2 . The upward and downward currents of air to the light producing appliance of the lantern are uniformly equalized and regulated by the construction and arrangement of the lantern as hereinbefore explained, so that atmospheric changes, as storms or gales, do not affect the flame of the lantern. Moreover, the ingress and egress of the currents of air to the lantern are such that no part thereof can become overheated; and therefore, the lantern may be made of inexpensive material without fear of any of the parts being melted or destroyed thereby in use. Moreover, the con-

stant cleaning of such a signal lantern is not made necessary by reason of the fact that smoking is prevented and hence blacking of the internal parts thereof obviated.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A signal lantern provided with a chimney, perforations thereon and provided with an imperforate cover, a light producing appliance mounted in said lantern, a false bottom with staggered perforations therein, and inclined apertures extending therethrough, substantially as and for the purposes set forth.

2. A signal lantern provided with a light producing appliance supported upon a perforated two-part bottom having inclined apertures extending therethrough, substantially as and for the purposes set forth.

3. A signal lantern provided with a light producing appliance supported on a two-part perforated bottom having the perforations therein staggered, and inclined apertures extending through the same, a chimney, a perforated device engaging therewith having an imperforate cover, the construction being such that the flame of the light producing appliance is equalized or regulated and maintained without flickering and the giving off of smoke under varying conditions or changes obviated, substantially as set forth.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ERNST HEINRIG LUDWIG PETERSEN.

Witnesses:

PAUL FISCHER,
PAUL BRINKMANN.