No. 648,225. Patented Apr. 24, 1900.

E. A. WIMAN.

VENTILATING CAP FOR INLET OF AIR.

(Application filed Oct. 25, 1898.)

(No Model.)

Fig. 1.

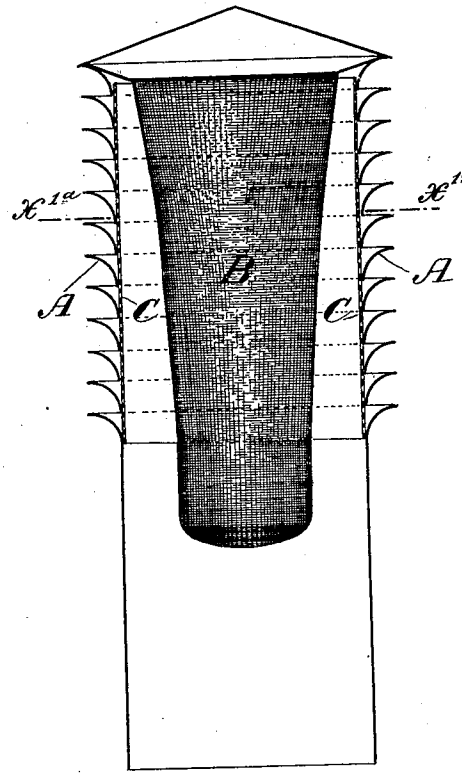


Fig. 2.

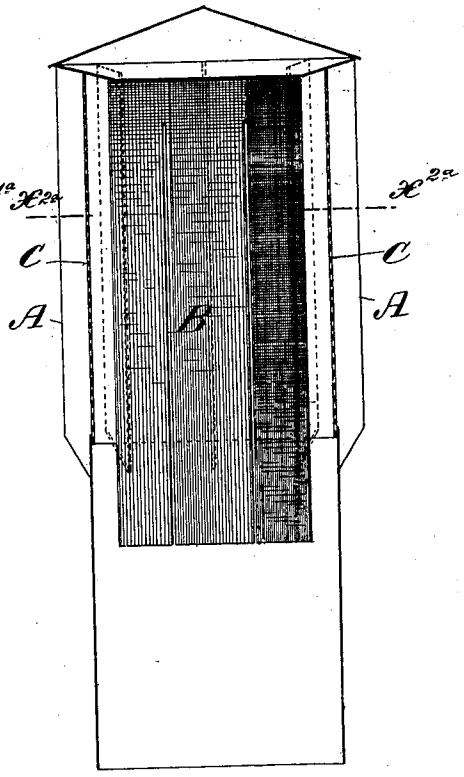


Fig. 1a

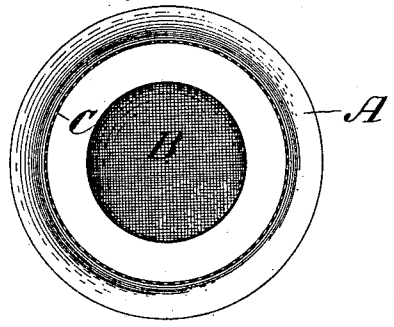
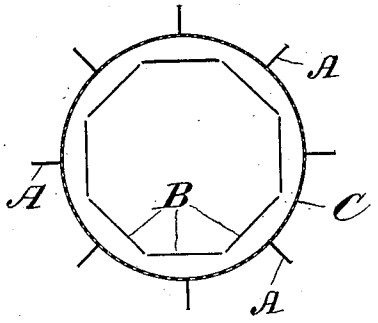


Fig. 2a



WITNESSES:

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ERNST AUGUST WIMAN, OF STOCKHOLM, SWEDEN.

VENTILATING-CAP FOR INLET OF AIR.

SPECIFICATION forming part of Letters Patent No. 648,225, dated April 24, 1900.

Application filed October 25, 1898. Serial No. 694,521. (No model.)

To all whom it may concern:

Be it known that I, ERNST AUGUST WIMAN, a subject of the King of Sweden and Norway, and a resident of Stockholm, Sweden, have invented certain new and useful Improvements in Ventilating-Caps for Air-Inlets, of which the following is a specification.

This invention relates to ventilating devices adapted to be mounted on air-inlets in order to collect and deflect the air downward into the inlet. The well-known rotatable trumpet-mouthed cap or hood used on vessels for collecting air and deflecting the current down into the hold or boiler-room of the vessel is a familiar example. These latter caps are adapted for adjustment by hand to face the wind, and hence they are a source of considerable trouble and inconvenience. The desirability of a cap which would be self-adjusting, so that it would always present its open mouth to the wind, however light, has no doubt been understood; but so far as known the object has not been attained, probably owing to the difficulty in carrying out the idea in a ventilator of sufficient sensitiveness to be acted upon by light winds and under the varying conditions due to the rolling of the vessel and at the same time of sufficiently strong and durable construction.

The present invention has for its object to provide a ventilating-cap more especially intended for steamships, but also well suited for other adaptations, which is non-rotative, but which always presents its receiving-face to the wind, however light or gentle its current may be.

In the accompanying drawings I have illustrated an embodiment of the invention in two slightly-different forms.

In the drawings, Figure 1 is a vertical axial section of one form of the ventilating-cap, and Fig. 1^a is a horizontal section of the same, taken in the plane indicated by line x'^a in Fig. 1. Figs. 2 and 2^a are views corresponding, respectively, to Figs. 1 and 1^a, illustrating another form of the cap.

In both of the forms of the device illustrated is an upright tube or shaft, preferably cylindrical, closed at the top and open or apertured at the sides all around. This shaft is provided with deflecting-plates A to collect the air and deflect it into the shaft, and inside of the shaft there is suspended a flexible deflector B to prevent the incoming air or the major portion thereof from traversing the shaft and escaping at the opposite side thereof. The unapertured base portion of the shaft will be connected with the cover, which closes its upper end through the medium of a cylinder C, of perforated metal, which will permit the air to enter freely. This cylinder C forms, substantially, a part of the shaft.

The inner pendent deflector B may be made of any light pliable material, such as cloth, leather, or the like.

In the form of the device illustrated in Figs. 1 and 1^a the louver-like deflectors A are horizontally arranged one above the other and are of ring-like form. To enable them to collect the air the better, they are inclined downward toward the cylinder C, to which they are secured, the upper and outer margin of one extending up to the inner and lower margin of that one next above. They may also be curved in outline or concave on the under side, as shown. The inner deflector B in this form of the device is constructed like a bag.

In the form seen in Figs. 2 and 2^a the deflectors A extend vertically and project out radially, and the inner deflector B is formed of separate suspended strips of flexible material.

It will be noted that when a wind is blowing against one face or side of the ventilating-cap it will enter the shaft and force the flexible freely-suspended deflector B over toward and even against the opposite side of the shaft, whereby it stops the flow of the air transversely through the pipe and out at the opposite side and compels it to pass downward, and as the deflector B is flexible this will happen in whatever direction the wind may be blowing. In case there is no wind blowing the deflector B leaves a free annular passage for the air to enter at.

The foraminous surface provided by the cylinder C, of perforated metal or wire-netting, serves as a bearing-surface for the flexible material of the inner deflector B and prevents the latter from chafing on the inner edges of the deflectors, and this lining C also to some extent excludes the rain and snow.

I am aware that louver ventilating-caps are

not broadly new. My invention resides, mainly, in the inner deflector B.

Having thus described my invention, I claim—

1. In a ventilating-cap for air-inlets, the combination with the upright shaft closed at the top and having apertures for air at all sides, of an inner deflector, of flexible material suspended freely within said shaft, substantially as set forth.

2. In a ventilating-cap for air-inlets, the combination with the upright shaft, closed at the top and having air-apertures and outer deflectors about its sides, of an inner deflector, in the nature of a bag of flexible material suspended freely from the cover of the shaft, and having normally an annular air-space about it in the shaft, substantially as set forth.

3. In a ventilating-cap for air-inlets, the combination with the shaft having an upper foraminous portion C, of the inner deflector of flexible material suspended freely from the cover of said shaft, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ERNST AUGUST WIMAN.

Witnesses:
ERNST SVANGVIST,
B. H. STICKLER.