Screens Over Intake and Exhaust Ducts of *Titanic's* Ventilators

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Introduction

Some of the many exterior ventilators on *Titanic* had screens over either their intake or exhaust ducts. This article is being written primarily for the benefit of modelers. It is hoped that it will enable the modeler to produce a more accurate appearance for the ventilators. There are ventilators below deck which can't be seen. This article will be confined to the ventilators which can be seen on the weather decks. The ventilators and their screens will be discussed in terms of the different types of ventilators. Not every ventilator will be mentioned individually.

35-inch ventilators with swan neck intake ducts – The 35-inch sirocco electric fan ventilators were the largest ventilators on *Titanic's* weather decks. These ventilators were exclusively to deliver air to spaces below decks. They were configured with either a swan neck intake duct or without one where the intake was a circular opening in the fan body. Figure 1 shows a 35-inch ventilator with a swan neck intake duct.

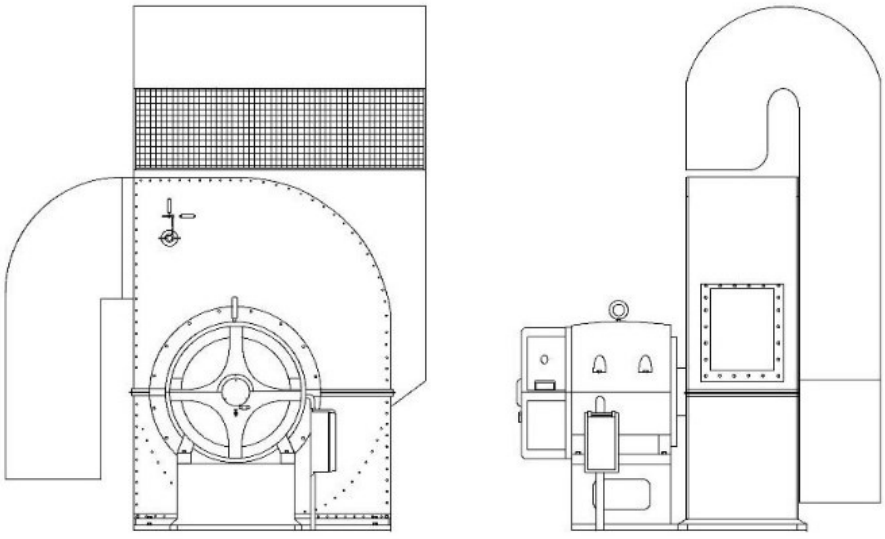

Figure 1

35-inch sirocco ventilator with swan neck intake

The screen over the forward-facing intake of the swan neck duct was a fine mesh screen with the screen wires oriented vertically and horizontally. A close-up view of this screen is seen in Figure 2.

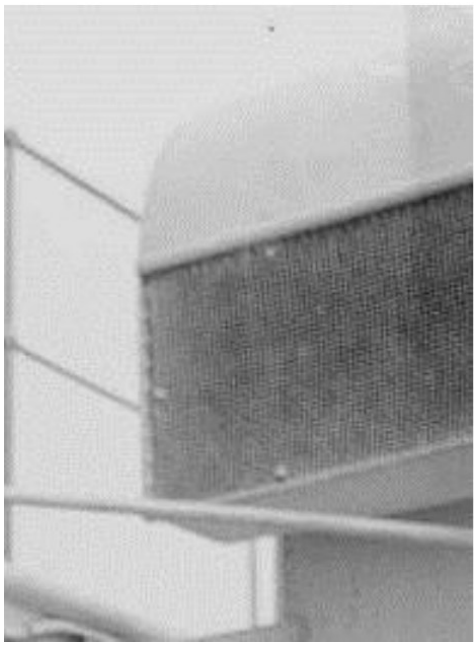

Figure 2

Screen over opening of swan neck intake duct

35-inch ventilators without intake duct – There are a number of 35-inch ventilators which have no swan neck intake ducts. These ventilators intake air through a large circular opening in the body of the ventilator opposite the motor. A coarse mesh diagonal screen covered the opening. Figure 3 shows an example.

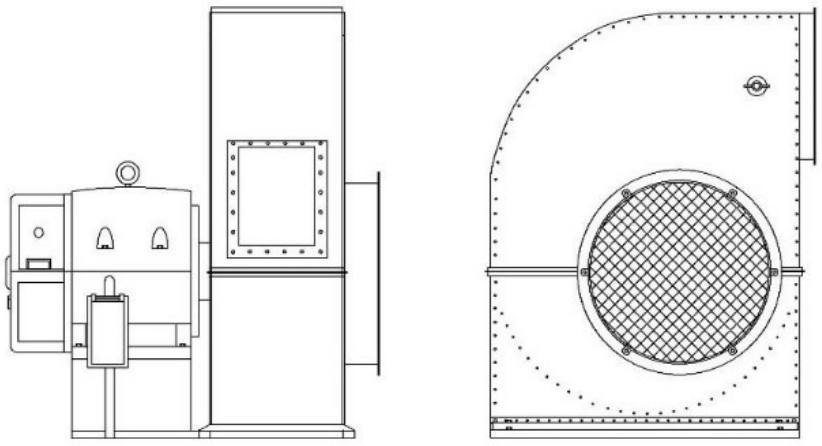

Figure 3

35-inch sirocco fan without intake duct

Figure 4 shows the screen over the intake opening of a 35-inch sirocco ventilator.

Figure 4

Screen over intake opening of 35-inch sirocco ventilator

35-inch sirocco ventilator screen exceptions – There are two 35-inch ventilators which don't fit the pattern of the two previous ventilator types. These have swan neck intake ducts without a forward-facing intake opening. The locations of these two ventilators are on the port roof of the tank room and on the aft port side of the deckhouse under the second funnel. Figure 5 shows the intake duct of the 35-inch sirocco ventilator on the port side of the tank room.

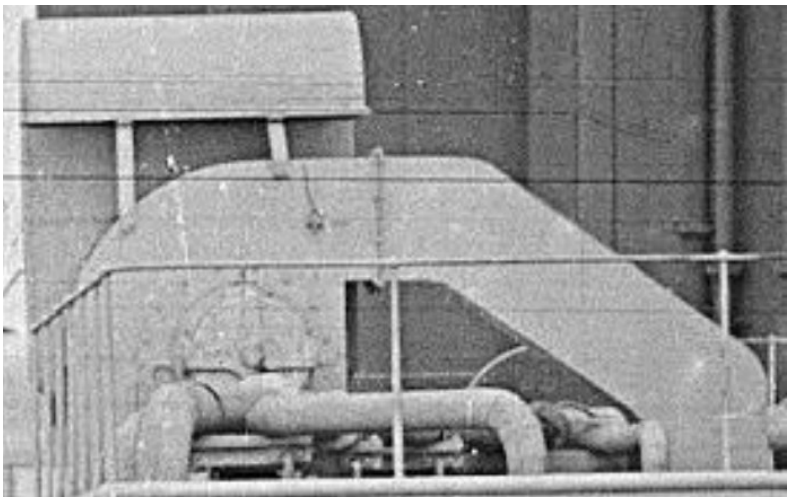

Figure 5

35-inch sirocco ventilator without forward facing intake

These two 35-inch sirocco ventilators probably do have screens over their downward facing intakes but it is not possible to identify these screens from existing photos.

30-inch sirocco suction ventilators with cowl exhaust duct – The next type of ventilator is the large 30-inch sirocco suction fan with cowl exhaust duct. All of the cowl exhaust ducts are aft facing. Figure 6 shows one of these 30-inch sirocco ventilators with the diagonally oriented screen in place.

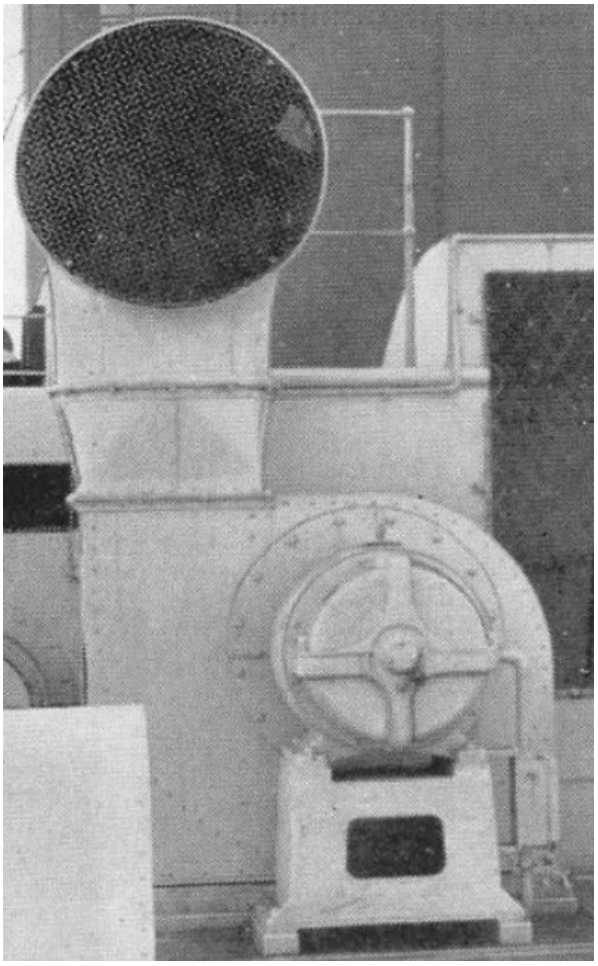

Figure 6

30-inch sirocco ventilator with cowl exhaust and diagonal screen in place

30-inch sirocco delivery ventilators without intake ducts attached to thermotanks – The 30-inch sirocco delivery ventilators without intake ducts had circular openings in the body of the ventilator for intake of air. There are no photos of which I am aware which show the intake opening but it is logical to believe that the intake was protected by diagonal screens like the 35-inch sirocco ventilators without intake ducts. In Figure 7 a drawing of one of the 30-inch sirocco delivery ventilators attached to a thermotank without an intake duct shows diagonal screening over the circular intake in the body of the ventilator.

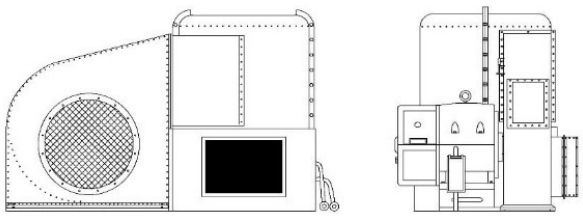

Figure 7

30-inch sirocco delivery ventilator without intake duct attached to thermotank

30-inch sirocco delivery ventilator with swan neck intake duct attached to thermotank –

Similar to the previous ventilator is the 30-inch sirocco ventilator with swan neck intake duct attached to thermotank. Figure 8 is a drawing showing this ventilator.

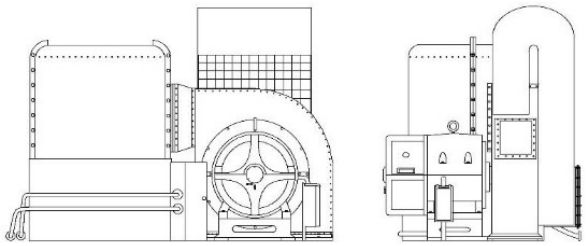

Figure 8

30-inch sirocco delivery ventilator with swan neck intake duct attached to thermotank

The screen over the swan neck intake duct is an open mesh screen with the screen oriented vertically and horizontally. Figure 9 is an image of this type of ventilator without thermotank attachment to illustrate the screen.

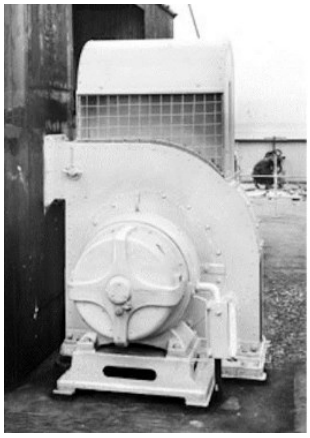

Figure 9

30-inch sirocco ventilator with swan neck intake duct showing intake screen

20-inch sirocco suction ventilator with cowl exhaust duct – Figure 10 shows the 20-inch sirocco suction ventilator with cowl exhaust duct. It has a diagonal screen over the cowl exhaust.

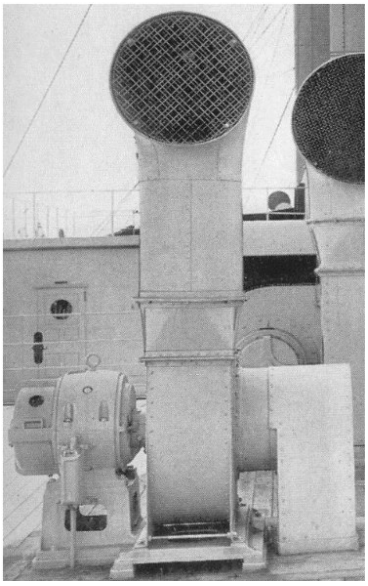

Figure 10

20-inch sirocco suction ventilator with cowl exhaust duct

10-inch sirocco suction ventilator with cowl exhaust duct – There was only one of this type of sirocco ventilator aboard *Titanic*. It was also the lone exception among sirocco ventilators with cowl exhaust ducts in that it had no screen over the cowl duct. Figure 11 shows this ventilator.

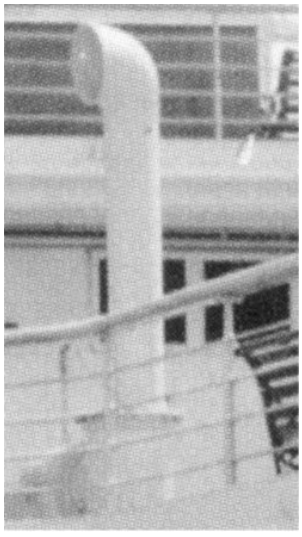

Figure 11

10-inch sirocco suction ventilator with cowl exhaust duct and no screen

This ventilator was the aftmost ventilator on A deck. Figure 12 is a photo which confirms that the cowl duct exhaust did not have a screen probably because of its height.

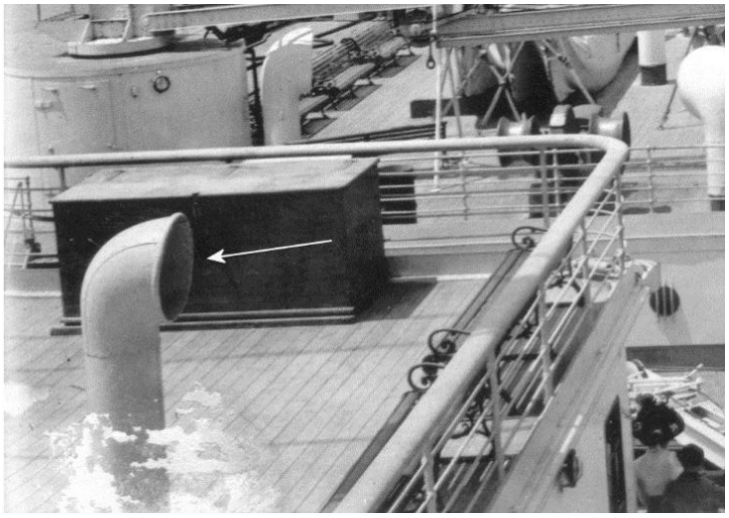

Figure 12

10-inch sirocco suction ventilator with cowl duct exhaust showing the absence of a screen over the cowl opening.

Natural draft cowl ventilators (screened) – These ventilators were simple cowl ducts which weren't directly connected to sirocco ventilators. They were most numerous on the poop deck and with only two exceptions they were screened. Figure 13 shows a screened cowl ventilator on the poop deck of maiden voyage Olympic. We don't have direct photo evidence for *Titanic* but it is believed that *Titanic* shared the same configuration of these cowl ventilators.

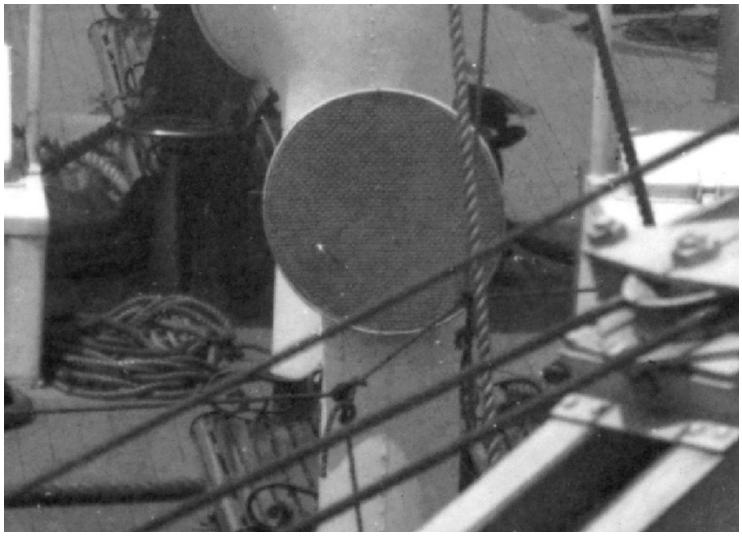

Figure 13

Natural draft cowl ventilator with screen

Natural draft cowl ventilators (unscreened) – There are only three natural draft cowl ventilators which don't have screens. These are found at the aft end of the roof of the tank room and on the port side of the forecastle. Figure 14 shows an *Olympic* photo comparing a non-screened cowl ventilator atop the tank room with a natural draft cowl which is screened on the aft end of B deck on *Olympic.* As was discussed before, no definitive photo exists for *Titanic* so early *Olympic* evidence is used.

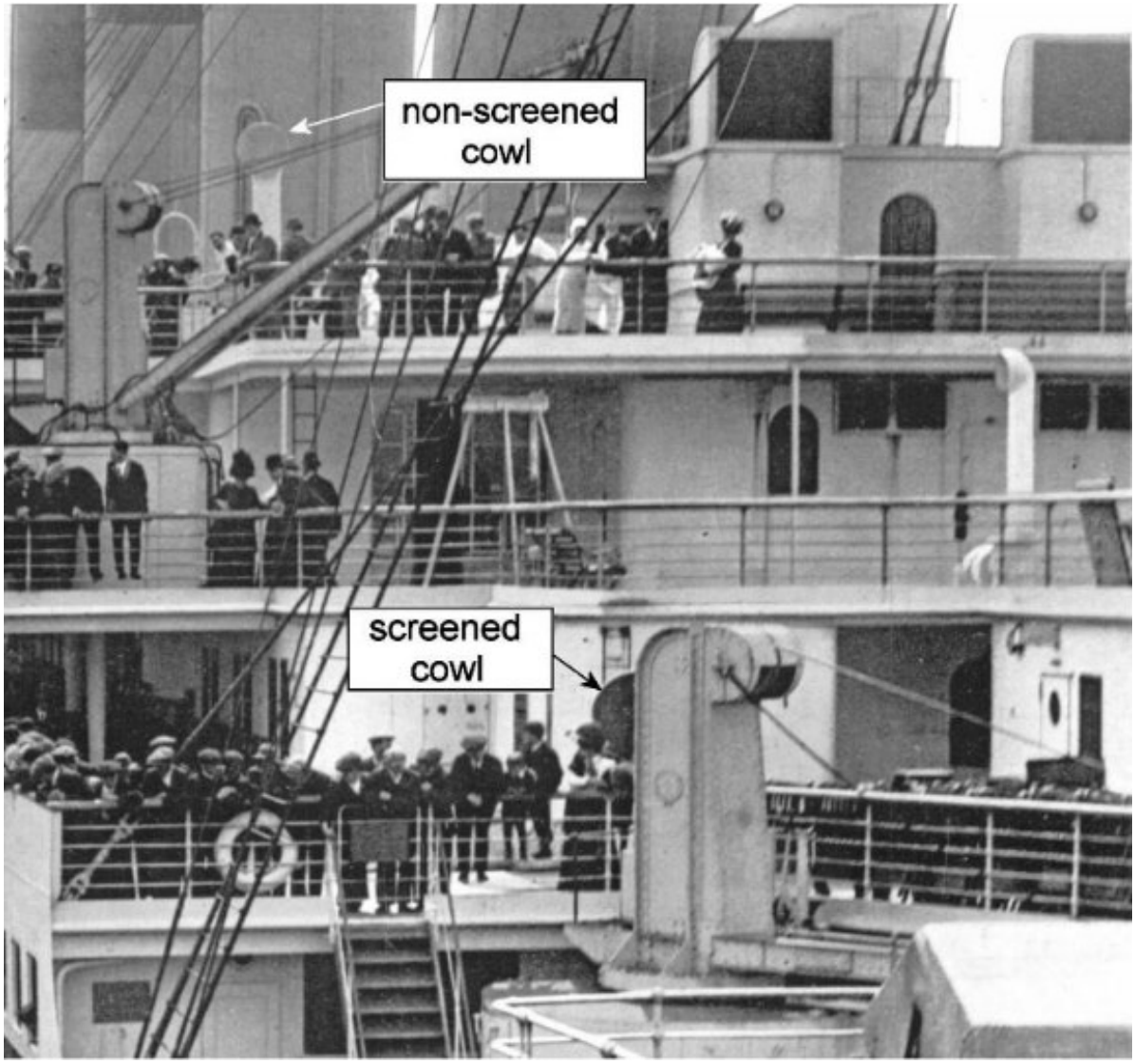

Figure 14

Natural draft cowls on Olympic

Go to next page

Stokehold vent intakes – The stokehold vent intakes were found fore and aft of the first three funnels. They had coarse diagonal screens over their openings. Figure 15 shows an example of the screens used on the stokehold vent openings.

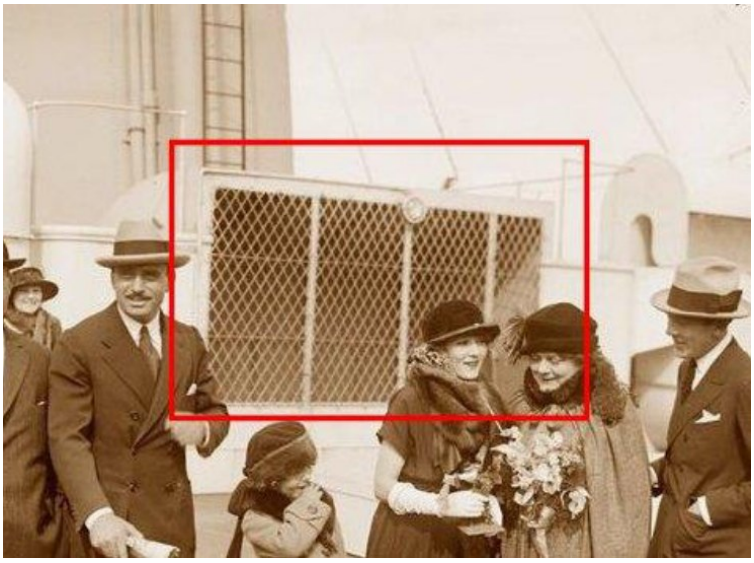

Figure 15

Stokehold vent opening

Light and air trunk intake on aft side of tank room deckhouse – The light and air trunk on the aft side of the tank room deckhouse is a natural draft trunk with the same coarse diagonal screen as the stokehold vents. This trunk opening is shown in Figure 16.

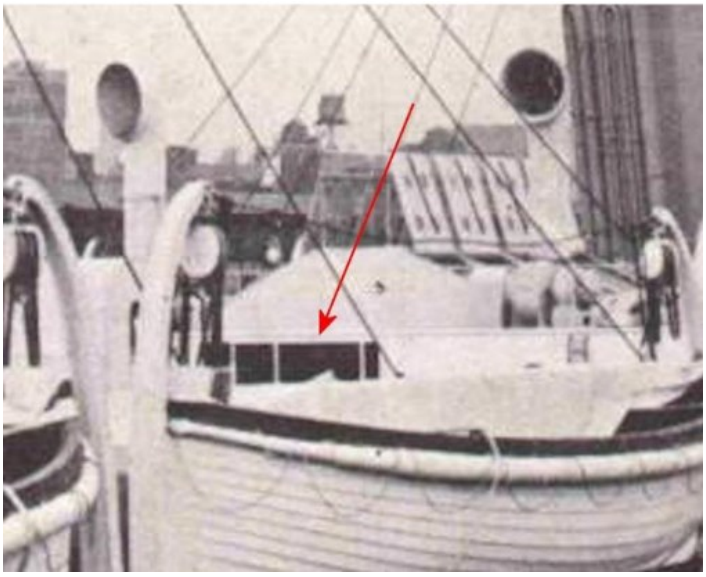

Figure 16

Light and Air trunk opening aft side of tank room deckhouse

Fidley vent trunks – The fidley vent trunks had openings fore and aft of the first three funnels. The openings were covered by screens a can be seen in the *Titanic* wreck photo shown in Figure 17.

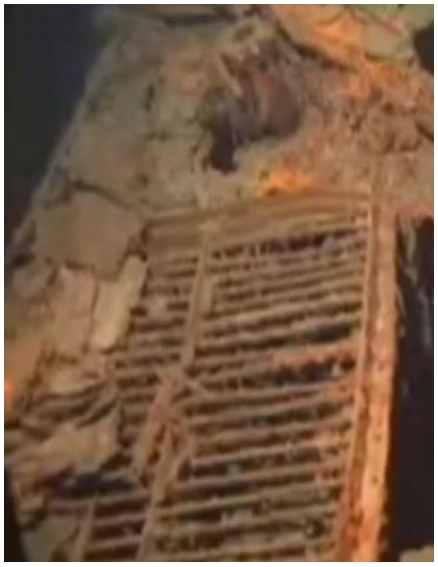

Figure 17

Screen over fiddley trunk

The shapes of the individual screen covers over the fiddley vent trunks are shown in Figure 18.

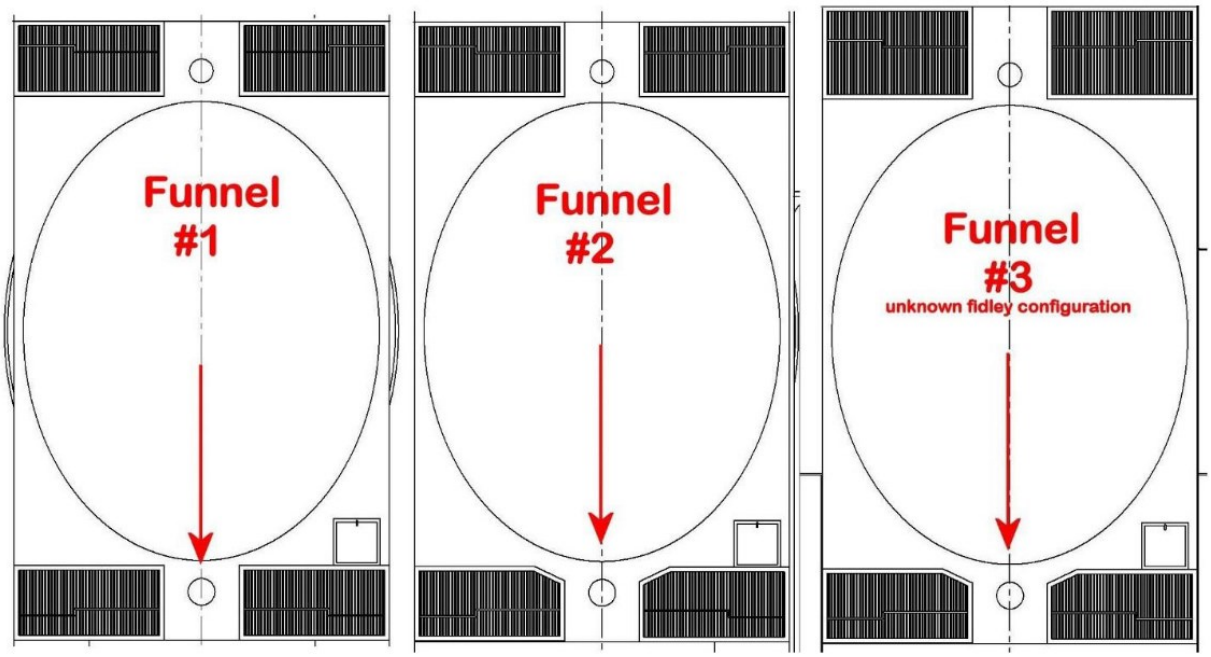

Figure 18

Screen covers over fiddley vent trunks

Fan room exhausts aft end of second-class entrance on boat deck – On the aft side of the second-class entrance on the boat deck are two exhaust shafts from the fan room on the aft A deck. These are covered by coarse diagonal screens. These are shown in Figure 19.

Figure 19

Fan room exhausts at aft end of second-class entrance on boat deck

Duct intakes below docking bridge for ventilator below poop deck – Below the docking bridge are two duct intakes for ventilators below the poop deck on C deck. The intake openings are covered by screens on the aft side of the ducts. Figure 20 shows this duct with a vertical and horizontal fine mesh screen covered intake.

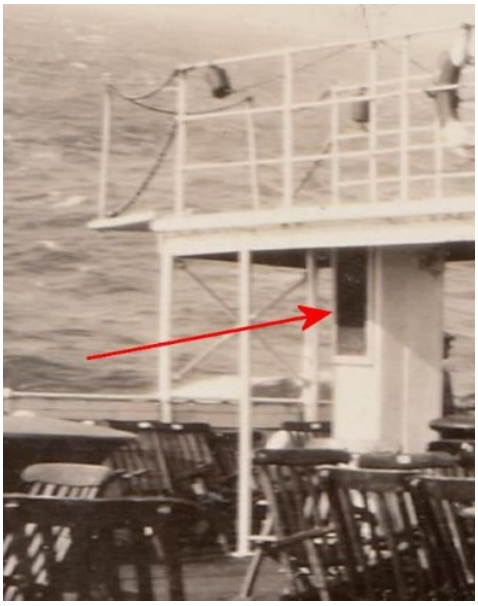

Figure 20

Duct intake below the docking bridge

Modeling Considerations

Since this article is mainly aimed at modelers, we should discuss some of the considerations that modelers should take into account when modeling these screens. This discussion will only apply to actual physical models, not digital models.

The primary consideration for the modeler is how to replicate a scale appearing screen over ventilator openings on his model. When ventilator openings are screened, the surface of the opening is flat with a dark appearance. The only way the interior of the ventilator openings is visible would be if there were direct sunlight at a right angle to the screened opening. This occurrence is very rare. Therefore, the screen cover should be essentially opaque. Figure 21 is an example of how the screened cowl exhaust opening of a sirocco ventilator would look.

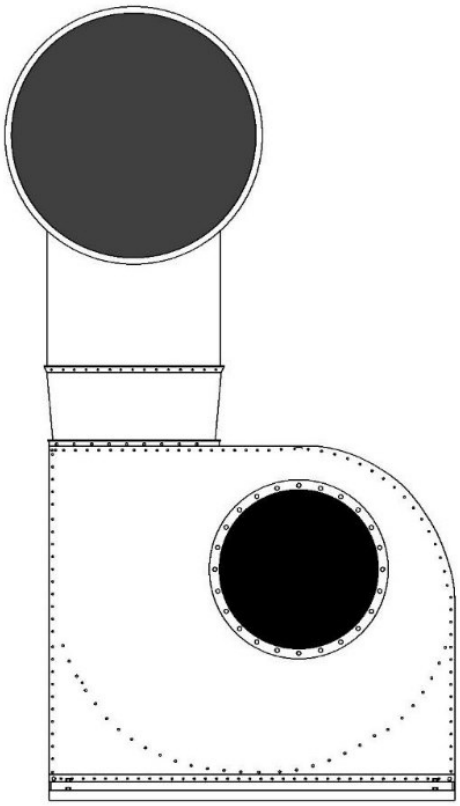

Figure 21

Model appearance of a screened cowl duct

The modeler should make sure that the surface of the cowl opening is flat in shape. In order to get the best scale appearance, the cowl screen should be surrounded by the white circular edge of the cowl. This would apply to other ducts with rectangular intakes. For the best appearance, I would suggest possibly using a decal of a dark gray screen which would leave just a thin outer edge of the opening in white.

The next consideration is the representation of cowl ducts with no screens over their openings. Even though the ventilator is painted white inside, in most photos the shadowed appearance makes it look light gray. For a good scale appearance, I would recommend painting the interior of unscreened cowls a light gray. Figure 22 is an example of how it would look.

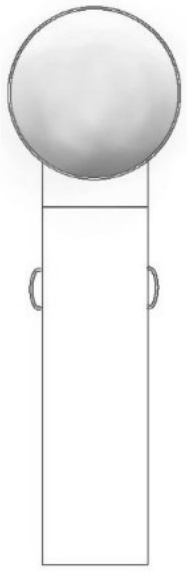

Figure 22

Model appearance of an unscreened cowl

Conclusion

This article was written for the modeler to be able to identify where screening was and was not used over ventilation openings. A concluding section was given was given to show modelers how to paint or use decals to achieve a more realistic scale appearance for their model's ventilators.