

The Case for *Titanic's* Electric Fan Ventilator with an Angled Duct into the Vent Trunk

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Introduction

This article is being written because there seems to be confusion about the arrangement of electric fan ventilators forward of *Titanic's* third funnel. I refer specifically to the four ventilators which ducted into vent trunks. The point of contention is whether *Titanic* had a 35 in. sirocco ventilator which had an angled duct into the starboard warm air vent trunk. This article will make the case that there is precedent for these angled ducts.

Olympic Evidence

The first thing that needs to be shown is that there is a precedent on *Olympic* for ventilators with angled ducts which ducted into the vent trunks forward of the third funnel. Figure 1 shows a 1920 plan of ventilators as they existed on *Olympic* after her post-war refit.

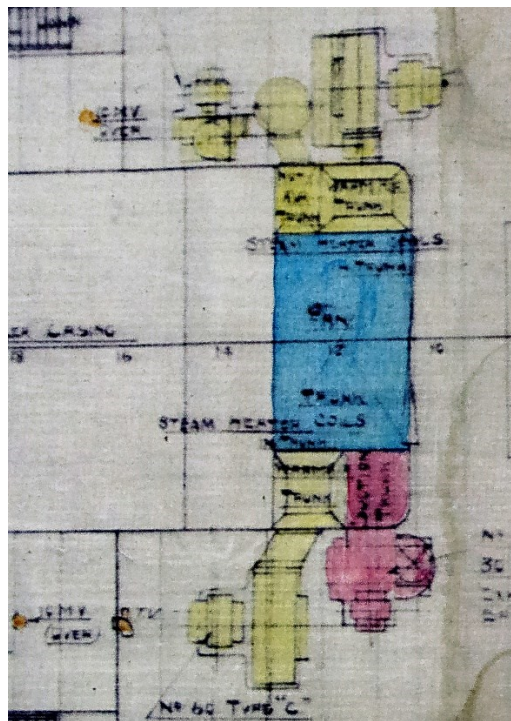


Figure 1

Ventilators forward of *Olympic's* third funnel

Many of the ventilators were the same ones which existed both before and after her 1913 refit. As can be seen, there is a thermotank on the port side with an angled duct and a 35 in. sirocco ventilator with an angled duct on the starboard side. There are some minor differences between the configurations of the ventilators on later *Olympic* and those of *Titanic* but the basic arrangement is the same. The basic principle of ducting into these vent trunks is this: **Ventilators had to duct into vent trunks. If they couldn't duct directly into a vent trunk, their ducts were angled to connect with vent trunk.**

The Fidley Vent Objection

There has been a suggestion that when ducting from ventilators into vent trunks that the most important consideration was that the ducts were oriented at 90 degrees to the midline. In this proposal, if a duct can't be connected directly to a vent trunk, it would need to have ducting into and running through a fidley trunk. This is said to only apply to *Titanic* because the larger ventilators found forward of *Olympic's* third funnel were retrofitted. I know of no evidence for this proposed fidley trunk arrangement of ventilation ducts on *Titanic*.

The evidence suggests that the least expensive solution was merely to install an angled duct so that it ducted directly into a vent trunk without the ventilator fan being aligned directly outboard of the vent trunk.

The Configuration of Vent Trunks

Vent trunks weren't simply trunks which were open at their tops and bottoms like the fidley trunks. Ventilator ducts did *not* pass through the vent trunks. The vent trunks were, in effect, large ducts themselves. The electric fan ventilators attached to the upper aspects of the vent trunks and either sent air into the trunk or exhausted air from the trunk. Below decks there were smaller distribution trunks which either sent air to different areas of the particular deck or they exhausted air from those areas.

Comparison of post-refit *Olympic* and *Titanic's* Ventilators

Figure 2 shows the ventilators forward of the third funnel on both post-refit *Olympic* and *Titanic*.

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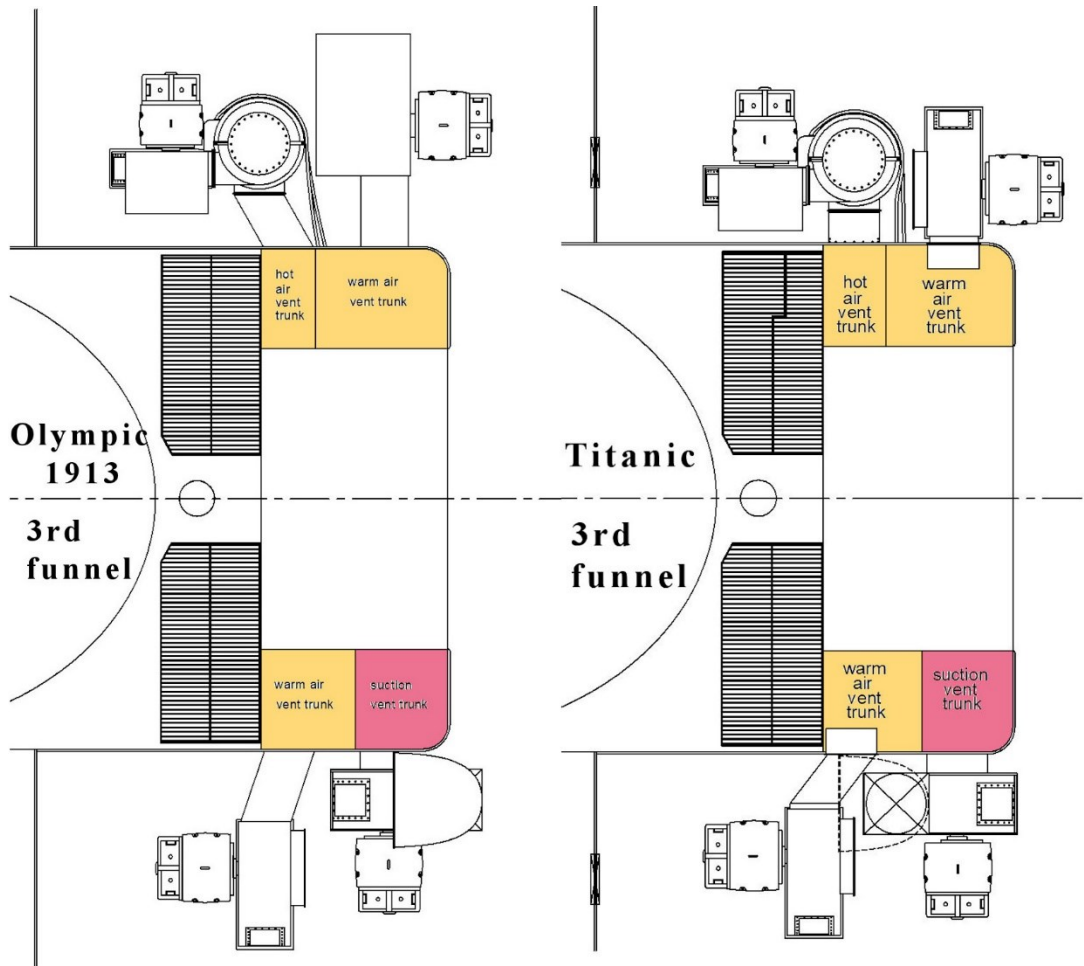


Figure 2

Comparison of ventilators forward of 3rd funnel on *Olympic* and *Titanic*

The slight variation of the same basic ventilators can be seen. Only the starboard 35 in. sirocco ventilator on *Titanic* has an angled duct into the warm air trunk. It will be noted that to accommodate the angled duct, the 30 in. suction fan has a slightly extended duct into the suction vent trunk. On *Titanic's* port side, both ventilators were able to duct directly into the hot air and warm air trunks because the 35 in. warm air ventilator had no swan neck intake duct.

One difference in the ducting of the 35 in. ventilators into the vent trunks for *Olympic* vs. *Titanic* has to do with where the duct connects to the vent trunk. On *Olympic* these ventilators used duct which angled downward to duct into the vent trunk below the molding at the top edge of the deckhouse. This downward angled duct can be seen in Figure 3.

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Figure 3

Downward angled duct into vent trunk on *Olympic*

On *Titanic*, these ducts did not have a downward angle. The molding in way of the duct is removed and the duct travels horizontally with a curved duct into the top of the vent trunk. Figure 4 shows this type of duct on *Titanic*.

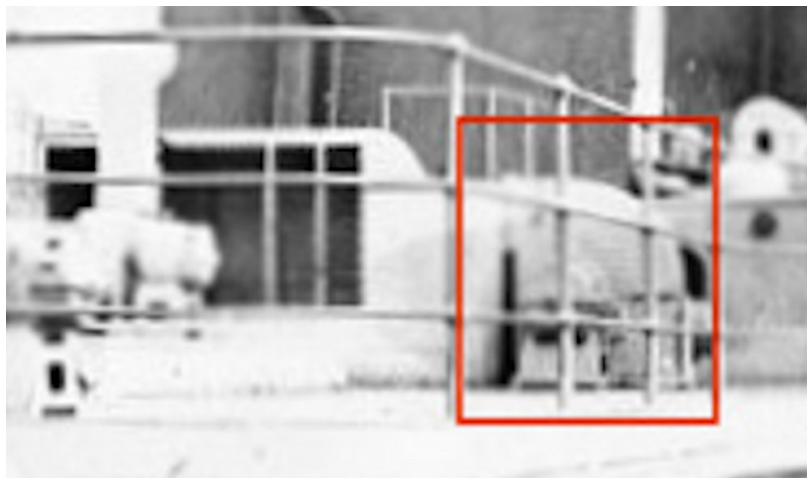


Figure 4

Horizontal duct into vent trunk on *Titanic*

Figure 5 shows where a 35 in. ventilator ducted into the vent trunk on the *Titanic* wreck. It can be seen where the molding at the top of the deckhouse has been cut in way of the ventilator duct into the vent trunk.



Figure 5

Titanic wreck photo showing how 35 in. ventilators ducted into the vent trunk on the raised roof

Conclusion

This article has made the case for a 35 in. ventilator with an angled duct into the vent trunk on the starboard side forward of *Titanic's* third funnel. The precedent of angled ducts on *Olympic* has been demonstrated. An argument has been made against the use of fidley trunks to accommodate ventilation ducts due to the cost and time involved to carry out such a configuration. The primary concern was to have the ventilation ducts connect directly to the vent trunks. There is no practical need to use the fidley trunks for the sole purpose of eliminating angled ducts into the vent trunks.