

# A Re-Examination of the Structures on the Forward Roof *Titanic's* Fourth Funnel Deckhouse

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## Introduction

Recently, there has been much discussion regarding the presence or absence of structures on the forward roof of *Titanic's* fourth funnel deckhouse. This is a complicated area because you have ventilators whose positions are fixed by photographic sightlines. Then you have a controversy about whether there were restaurant galley skylights on the roof of the deckhouse. I have taken some time away from the discussion forums to analyze this area as thoroughly as possible. In this article I will examine the questions of the ventilators and the skylights separately.

## The Ventilators

There are quite a few points of agreement regarding the placement of the 35-inch ventilator and the two 20-inch ventilators on the deckhouse roof. I believe there is agreement about where these ventilators were placed. The previous disagreements primarily related to the ducts attached to these ventilators. The duct from the 35-inch ventilator can be easily seen in photos and there is no disagreement regarding it of which I am aware. The previous disagreement centered on the duct configuration of the two 20-inch ventilators.

After studying the situation, I believe the disagreement was how these ventilators ducted into the light and air trunk for the restaurant galley on B deck. I also believe that the disagreement centered on what was thought must be a difference in the ducts if there were restaurant galley skylights present or not. **I now believe the ducts from the 20-inch ventilators were mostly the same with or without skylights.**

On *Olympic* after 1913, a 20-inch suction ventilator was added on the forward roof of the fourth funnel deckhouse. The ventilator was oriented so that the duct entered the ventilator intake on the starboard side. This allowed the use of a rectangular cross-section duct to the skylight. This arrangement is seen in Figure 1.

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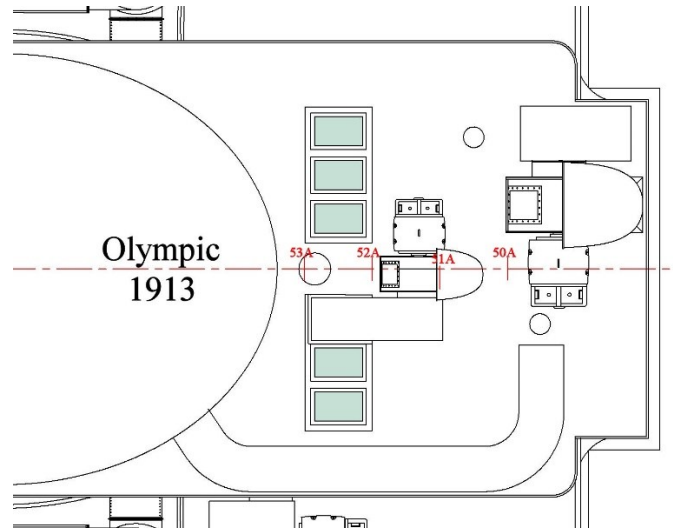


Figure 1

### Ducting from 20-inch ventilator to *Olympic's* restaurant galley skylight

On *Titanic* the 20-inch ventilators had their intakes facing aft. This meant that if there were skylights, there would have to be a conversion of ducting from the ventilator intake to a rectangular cross-section connection to the skylight. The standard 20-inch ducting could be used to attach to the roof if there were no skylights. Since the area the duct would go through the roof was into a trunk which spanned the width between frames 52A and 53A, the duct would **not** have to be centered between frames as I have previously mis-stated. The reason this is important is that the 20-inch ventilators could retain their previously determined positions.

I attempted numerous duct transition attachments to skylights and they didn't seem to agree with photos. I believe the reason is because I was trying to use the *Olympic* method of connection to the skylights. In a moment of insight, it occurred to me that a standard 20-inch duct connection to the deck could easily be adapted for use with the skylights. This type of duct is shown in Figure 2.

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Figure 2

### Standard deck duct for 20-inch ventilator

This type of duct makes a 90-degree angle from the ventilator intake downwards. I believe this type of duct could be adapted by cutting its lower aspect to match the slope of the upper aspect of the skylight shown in Figure 3.

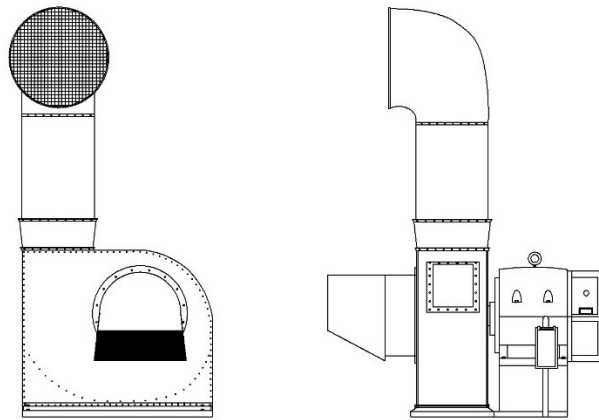


Figure 3

### 20-inch ventilator with modified standard deck duct

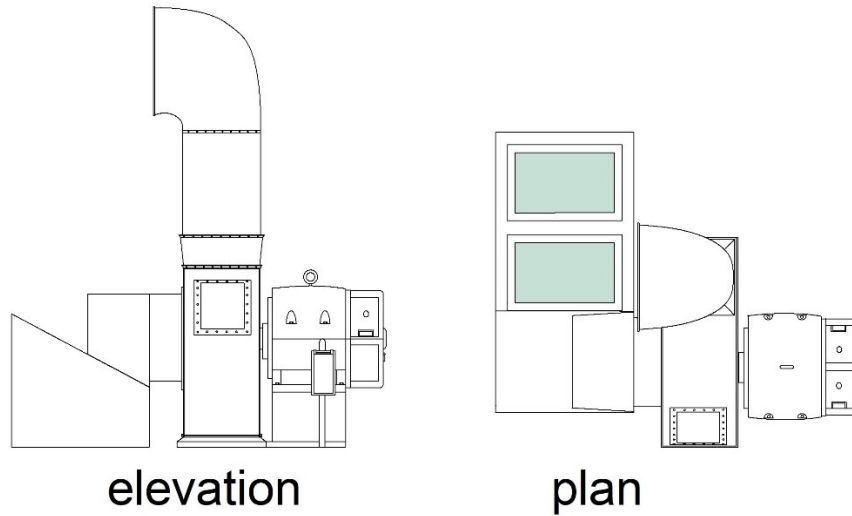


Figure 4

### Installation of 20-inch ventilator to galley skylight

**What this means is that in all the photos we have, there would be no visual difference between the two versions of this standard deck duct because we can only see the upper aspect of this duct.**

Figure 5 shows a plan view of how a modified 20-inch ventilator duct would appear as adapted to the restaurant galley skylight.

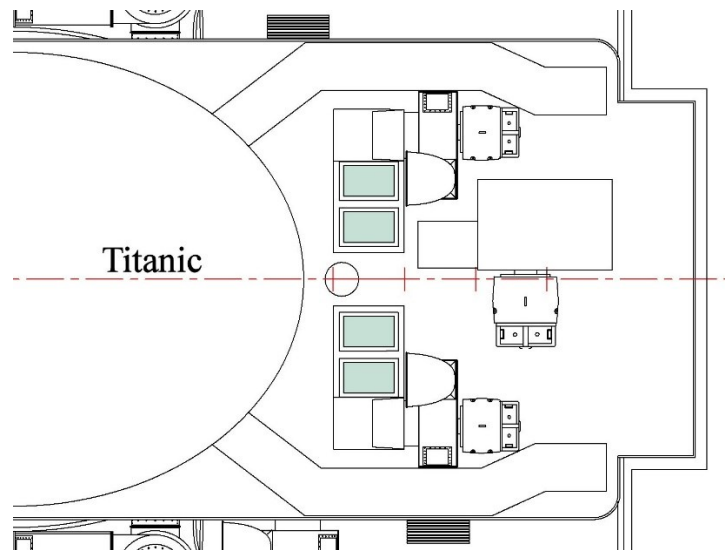


Figure 5

### Plan view of standard deck duct modified to fit skylight

Figure 6 shows an elevation view of how the use of this modified deck duct would appear the same as if there were no skylights.

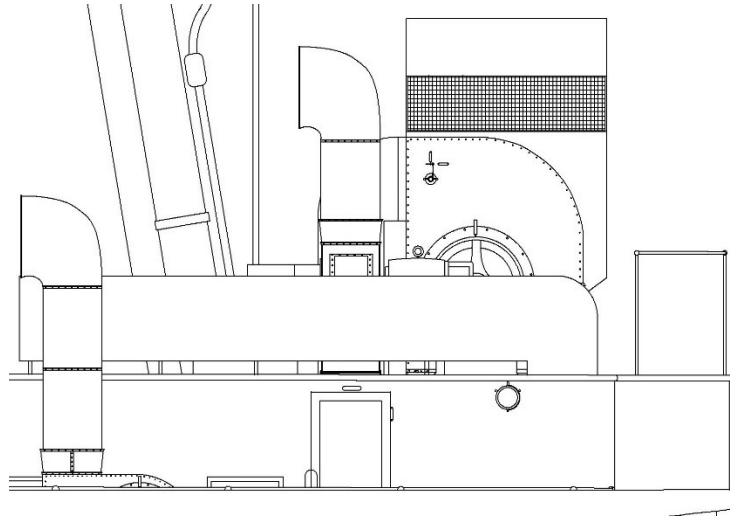


Figure 6

Elevation view of standard deck duct modified to fit skylight.

With the use of a modified standard deck duct modified to fit the skylight, the difference between it and a configuration with no skylights would be indistinguishable.

### The Skylights

Since the visual appearance of ventilators with or without the presence of skylight is indistinguishable in photos, we must evaluate whether Titanic had restaurant galley skylights separately and on their own merits.

Perhaps the primary piece of evidence which has been submitted to invalidate the presence of restaurant galley skylights on Titanic is a fitting out photo of Titanic shown in Figure 7.

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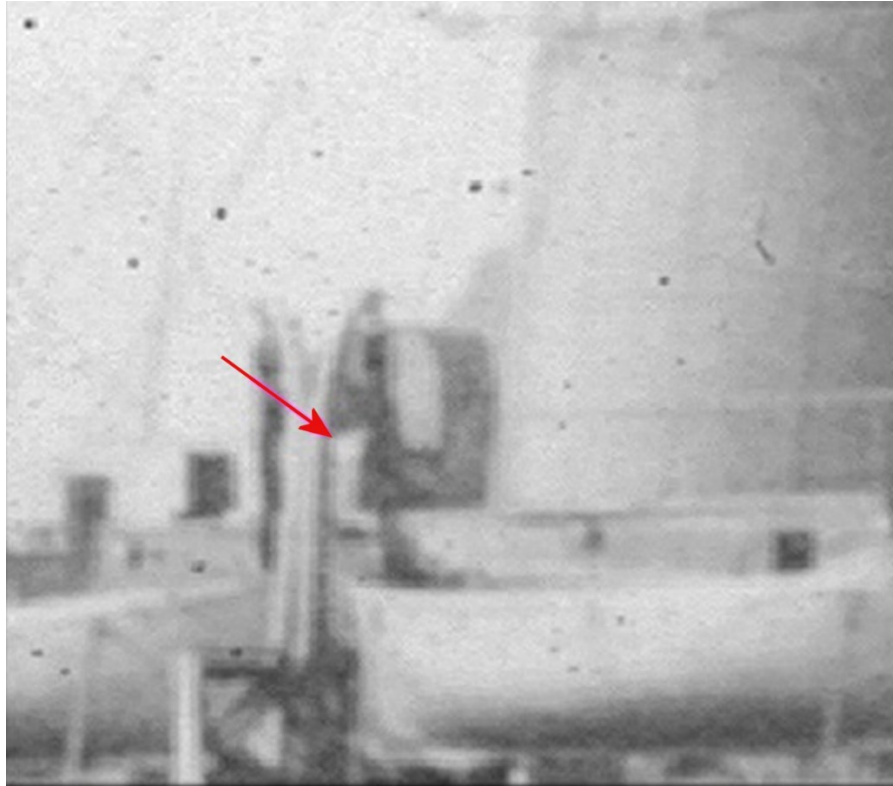


Figure 7

Titanic fitting out photo showing what is thought to be a standard deck duct for a 20-inch ventilator

The object in Figure 7 which is pointed to with a red arrow is what is thought to be a standard deck duct for a 20-inch ventilator. For the sake of this discussion, I will accept that it is one of the types of deck ducts shown previously in Figure 2. Since I have conceded that one of these modified ducts was used to connect to the skylights there really is no argument. However, the presence of this duct was previously pointed to as evidence that there were no skylights. Since the duct could easily be adapted to fit the skylight, its presence in a photo does not exclude the presence of skylights. Some may wonder why an unmodified duct would be present in a photo. I would assume that much of the fitting and modification was done on-site to ensure a good fit.

Most of the case for restaurant galley skylights on *Titanic* was presented in the article [The Case for Restaurant Galley Skylights on Titanic](#). One aspect of that case that I believe bears repeating is the *Britannic* fitting out photo. A crucial part of the argument for the presence of restaurant galley skylights on *Titanic* was that if we could show their presence on *Britannic*, we would have them existing both before and after *Titanic* so it would be strong circumstantial evidence that they also existed on *Titanic* also. Figure 8 shows a fitting out photo of *Britannic* which shows what I believe is likely one of *Britannic's* restaurant galley skylights.

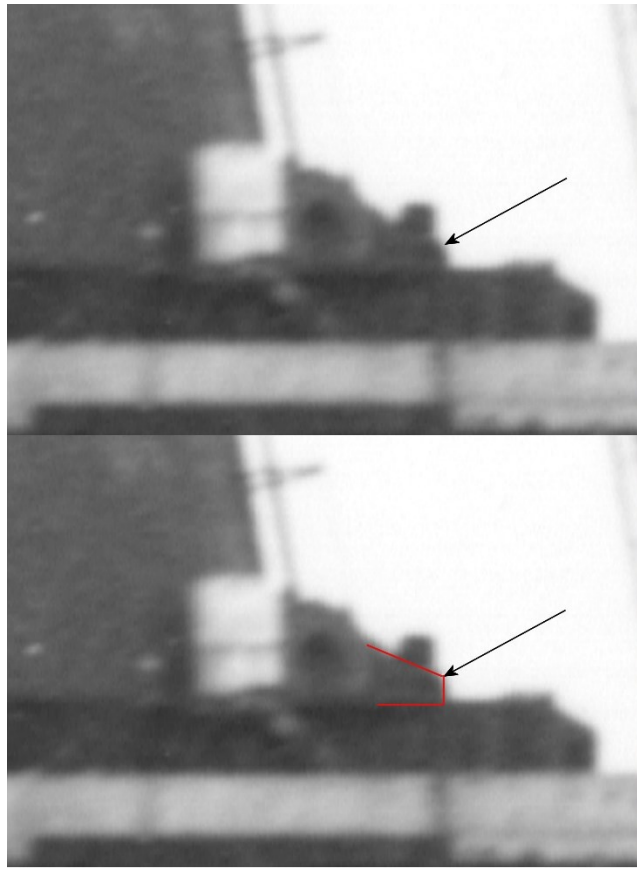


Figure 8

### Fitting out photo of *Britannic* with object thought to be skylight

The proponents of the no-skylight theory on *Titanic* have rejected the photo in Figure 8 as not being of sufficient quality to identify it as a skylight. I agree that if the photo were of higher resolution, it would be helpful. However, how can one say that the object in Figure 7 *must* be a standard 20-inch ventilator deck duct but the object in Figure 8 *can't* be a restaurant galley skylight? If we agree to throw out both photos because they are not ideal then the case that has been made for no restaurant galley skylights on *Titanic* effectively collapses. The case for restaurant galley skylights would be weakened but would still have the benefit of plan evidence showing restaurant galleys in the same location on all three sister ships.

**Special Note: The *Britannic* fitting out photo is one that I believe that has been misinterpreted. The object which I have identified as likely being a skylight has been rejected by some because it is not in the proper location and orientation. I agree. The reason it is not is because this is a stage of fitting out where equipment has been pre-positioned on the deckhouse roofs prior to installation. Both the thermotank ventilator and the object I have identified as a skylight are not in their final installation positions.**

The case for the presence of restaurant galley skylights stands on several factors.

1. Plans – There is a restaurant galley in the same location on all three Olympic class sisters.
2. The question would become, why remove restaurant galley skylights on *Titanic* and *Britannic* if they were kept throughout the career of *Olympic*? There was no interference by other equipment on *Titanic* and *Britannic* which would have required their removal.
3. Development – As *Olympic* matured, equipment on deck was moved, added or improved, but it is difficult to think of many examples where equipment was eliminated for no logical cause. It is doubtful that those who worked in the restaurant galley complained that there was too much natural light. If there was some other reason for eliminating the skylights of future ships, why wouldn't it be done retroactively on *Olympic* if there were some benefit?

## Analysis

The dispute over the equipment on the forward roof of the fourth funnel deckhouse of *Titanic* has centered on two aspects. The first aspect is the configuration of the ducts from the 20-inch ventilators into the light and air trunk which served the restaurant galley on B deck. It is possible that this article has eliminated that aspect of the dispute *if* it can be agreed upon that the standard deck duct for the 20-inch ventilators could be modified to fit a skylight of the type found on *Olympic*.

The second aspect of contention is whether there were restaurant galley skylights on *Titanic*. **It seems that the argument against skylights hinges on whether standard deck ducts were used with the 20-inch ventilators. If it can be agreed upon that that they could be adapted for use with the skylights, then there really is no more disagreement.**

## Conclusion

During forum discussions about the arrangement of ventilators and their ducts on the forward roof of *Titanic's* fourth funnel and whether skylights were present or not, much of the analysis was being done in real time which usually turns out to be unwise. At some point in the discussions, I became aware that I needed to take some time to carefully reconsider all the evidence. The purpose of the reconsideration was not to try to find a compromise. I was trying to evaluate new evidence and to see if there was some configuration of the ventilators which would account for all the photo evidence. It became apparent that a large measure of agreement could be accomplished with those with whom I had disagreement. It remains to be seen whether there will be agreement with how I believe the ducts of the 20-inch ventilators were modified to fit galley skylights. If there can be agreement about this aspect then there is no obstacle to agreement that *Titanic* had restaurant galley skylights.



