

# The Case for the Function of *Titanic's* Docking Bridge Wheel Exclusively as an Emergency Back-up

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## Introduction

This article is being written to expand on recent discussions held in various online *Titanic* forums regarding the purpose of the ship's wheel located on *Titanic's* docking bridge. Figure 1 show the wheel on the docking bridge of *Titanic's* sister ship *Olympic*.



Figure 1

There seems to be a prevalent thought that the wheel was for the purpose of steering the ship during docking procedures while either entering or leaving the docking area. Some have modified their position to say that the wheel may not always have been used during docking

but that it *could* have been. It will be argued in this article that although the wheel is located on the docking bridge, it performed **no** function during docking procedures.

## Documentary Evidence

As is the case with many ships in the *Titanic* era, it is difficult, if not impossible, to find documentation of procedures used to carry out various tasks aboard ship. The primary reason for this is because in the nautical journals, knowledge of such procedures was considered common knowledge and not necessary to explain. One of the most prominent journals of the day was *The Shipbuilder*. In the 1911 special edition which covered the *Olympic* class, of which *Titanic* was the second ship, there are very brief entries which bear on the question of the wheel on the docking bridge. On p. 121 under the section "The Navigating Bridge" we have two sentences: **"The navigating bridge, from which the ship is controlled, is situated at the forward end of the boat deck, so that the navigating officer may have a clear view ahead."** The second sentence is: **"There is also a docking bridge provided right aft, for use when the vessel is docking or turning in a confined space."**

The most important statement from these quotations is "The navigating bridge, from which the ship is controlled..." This establishes the sole location for control of the ship. By "control", what is meant is that any and all orders given regarding the movement of ship originates on the navigating bridge. During docking procedures the ship is usually under the delegated control of the pilot who is not a regular member of the crew. His knowledge of the local waters and procedures to dock the ship were considered necessary for docking large ships. The Captain still had final say regarding the movement of the ship when the pilot was in control but he would only intervene if he felt the safety of the ship was in jeopardy.

The second statement describes the docking bridge. The statement is vague in that it describes the purpose of the docking bridge as being "for use when the vessel is docking or turning in a confined space." The important aspect of this quotation is that there is no indication whatsoever that control of the ship was ever transferred to the docking bridge.

If we examine all methods of communication between the navigating bridge and the docking bridge, we find that orders to the docking bridge from the navigating bridge are considered compulsory. Communication from the docking bridge to the navigating bridge are only advisory. Two articles which describe these various means of communication are [Titanic's Engine-Order Telegraphs](#) by Bill Sauder and Parks Stephenson and [New Evidence Which Explains the Functions of Titanic's Docking Signal Systems](#) by Bob Read. The purpose of the docking bridge was to provide an elevated platform with good visibility for the officers there to monitor the movement of the aft part of the vessel, the disposition of attending tugboats and to monitor whether the propellers were clear of lines and other hazards which could foul them.

Just because a piece of equipment was located on the docking bridge does not mean that it had any function relating to docking. Some of these pieces of unrelated equipment would be the

patent log, the voice tubes to the steering flat and the socket signal holder on the port side. Therefore the presence of a wheel on the docking bridge didn't necessarily mean that it had any function related to docking.

When examining a question like this about the function of the wheel on the docking bridge, we have to examine all the evidence and make deductions based on that evidence because it is rare to have every piece of equipment explained completely.

## Purpose of the Wheel on the Docking Bridge

The control of the direction of the ship without the assistance of tugboats is accomplished by the movement of the rudder. The control of the rudder is normally accomplished on the navigating bridge or in the wheelhouse. On the navigating bridge there is a wheel which is mechanically connected to a telemotor in the wheelhouse. In the wheelhouse there is a wheel which is also mechanically connected to the telemotor. The telemotor controls the movement of the rudder by sending hydraulic inputs to a steering engine on the steering flat on the deck below the poop deck. There was only one telemotor on the ship. Of the wheels on the navigating bridge and the wheelhouse, only one of these wheels could control the telemotor at any one time. There was a clutch on the telemotor to engage only one of the wheels. In the event of a malfunction of the telemotor, control of the rudder had to be transferred aft while the telemotor was repaired. The primary method of utilizing this back-up control of the rudder was by disengaging the connection of the telemotor to the steering engine and engaging the mechanical connection of the wheel on the docking bridge to the steering engine. There were further redundancies available to control the steering engine but they will not be discussed here.

With the telemotor disabled and disconnected from the steering engine, the wheel on the docking bridge was engaged and a quartermaster was stationed at the wheel to steer the ship. The steering orders still came from the navigating bridge to the docking bridge. Figures 2 and 3 show the mechanical connection from the docking bridge wheel to the steering engine below on the steering flat.

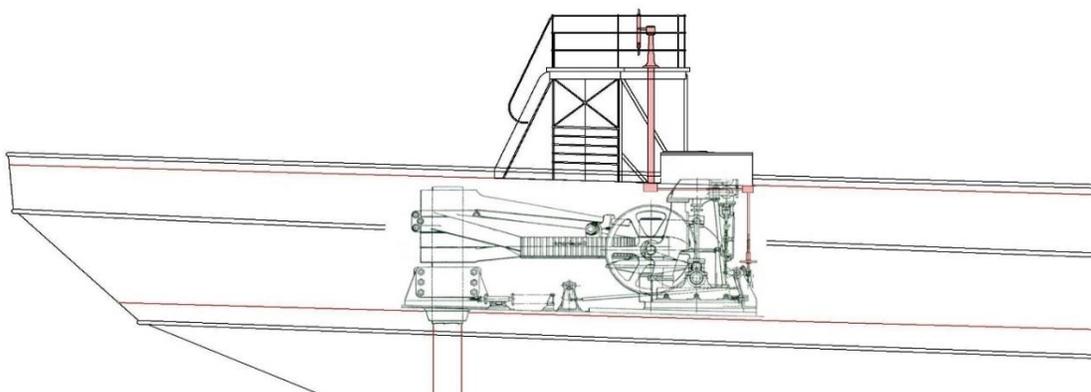


Figure 2

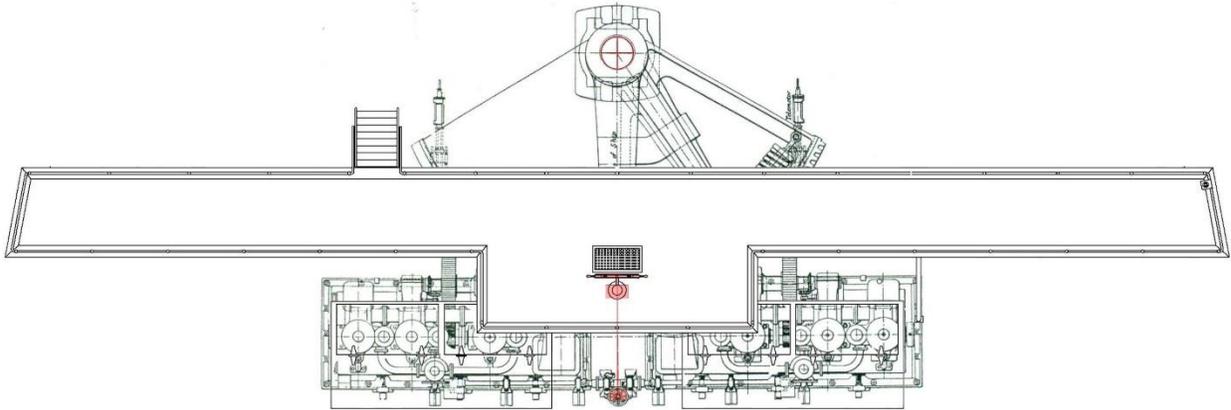


Figure 3

In the opinion of several people familiar with the machinery whom I have consulted, the disengagement of the telemotor control and the engagement of the linkage from the wheel on the docking bridge is an operation they thought would be a “wrench job”, meaning it would be something that could take some time to do. This is in contrast to the clutch mechanism on the telemotor which could very quickly change the control from the navigating bridge wheel to the wheelhouse wheel. This kind of delay to the engagement of the docking bridge wheel would not bode well for any kind of coordinated transfer of control from the telemotor to the wheel on the docking bridge. This by itself would most likely negate any possibility of the wheel on the docking bridge being used during docking where timing of procedures can be crucial to the safety of the ship.

An argument that skeptics advance is that the wheel on the docking bridge would be crucial when the ship would be backing out of a dock as would routinely be done when leaving the New York docks. The purpose of the officers on the docking bridge was to be the “eyes” at the stern of the ship for the pilot on the navigating bridge. When backing a ship out of dock, the tugboats were the means by which maneuvering movements were accomplished rather than the rudder. In a confined space like the docks, the rudder cannot accomplish the kind of movements which are necessary. In backing out of a dock, the tugboats would first pull the ship away from the dock. The ship’s engines would be signaled to slow astern. The tugboats would then be signaled to guide the ship astern into the channel. With advisory communication from the officers on the docking bridge, the pilot would issue orders to these officers to signal required action by the tugboats. There was nothing about backing out of a dock which necessitated docking bridge helm control.

### Photo Evidence

During the departure of *Titanic* from the docks at Southampton, an incident occurred where there was a near collision with the liner *New York* which was tied up at the dock. We have a

photo taken during this event which clearly shows *Titanic's* docking bridge. This photos is shown in Figure 4.

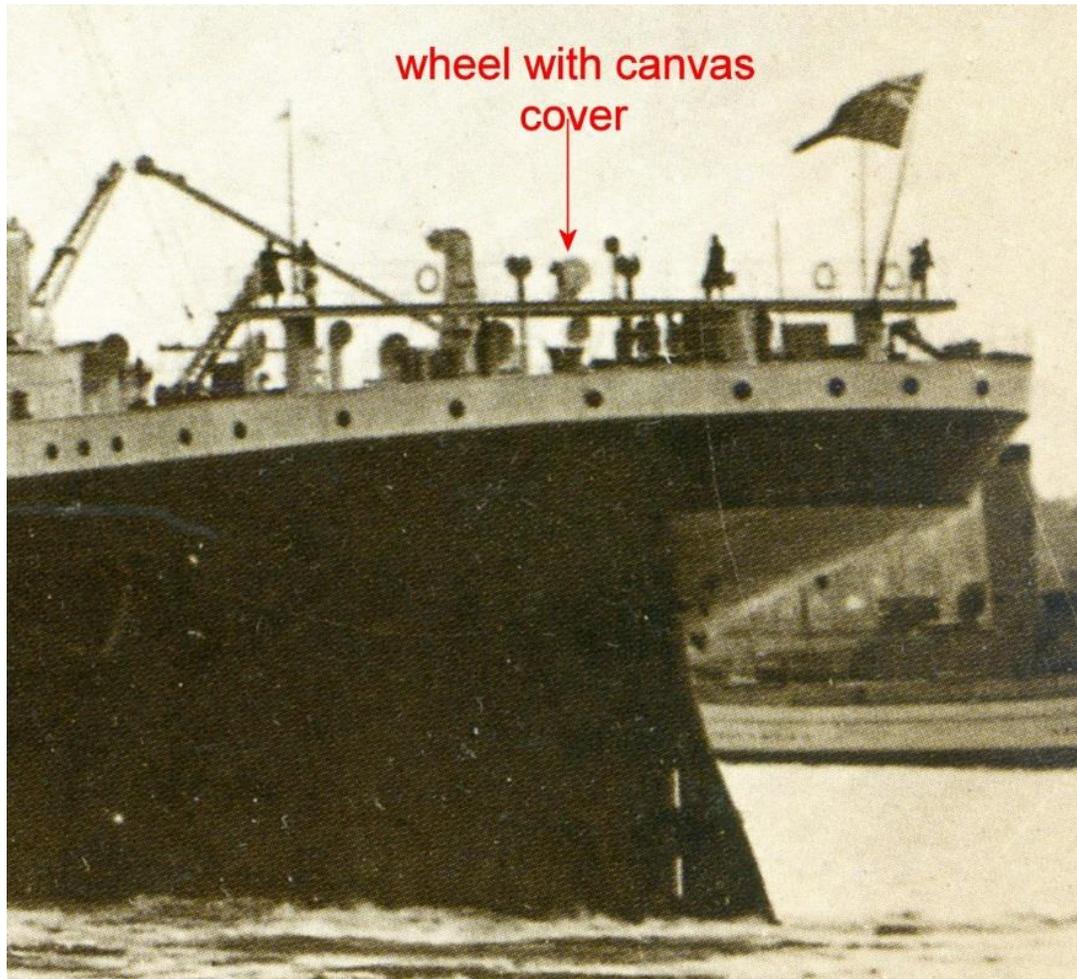


Figure 4

If the wheel on the docking bridge was to have the potential of being used during docking procedures, one would at least expect it to be at the ready. Instead, what we see is that the docking bridge wheel is secured with a protective canvas cover. This canvas cover is still in place in Queenstown as can be seen in Figure 5.

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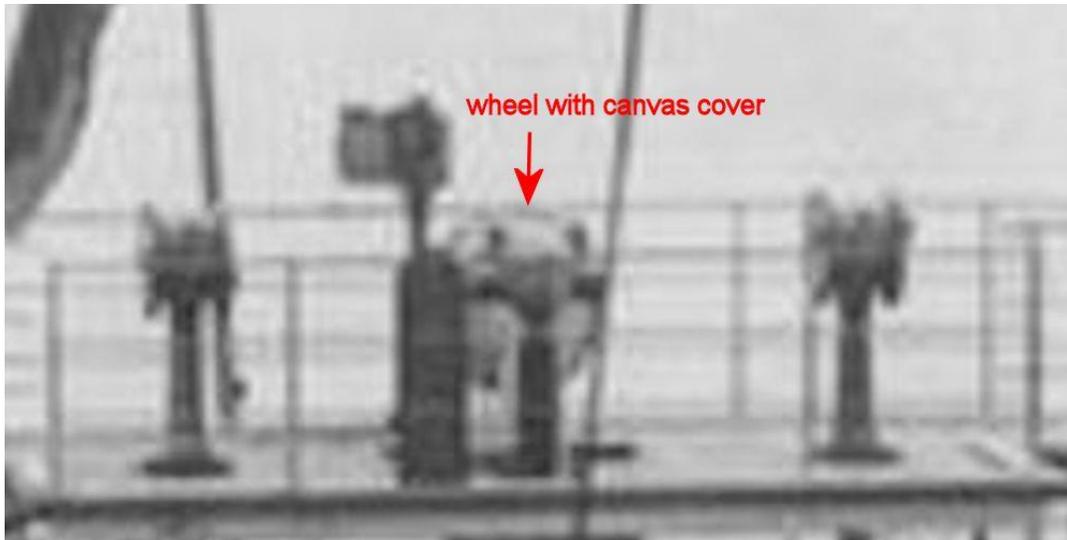


Figure 5

From this we can determine that the wheel was never uncovered during the entirety of *Titani's* voyage. From this photo evidence it becomes evident that the wheel on the docking bridge did not have any function during docking procedures.

Figure 6 shows *Olympic* in the midst of docking procedures at New York Harbor as evidenced by the rigged docking flags.

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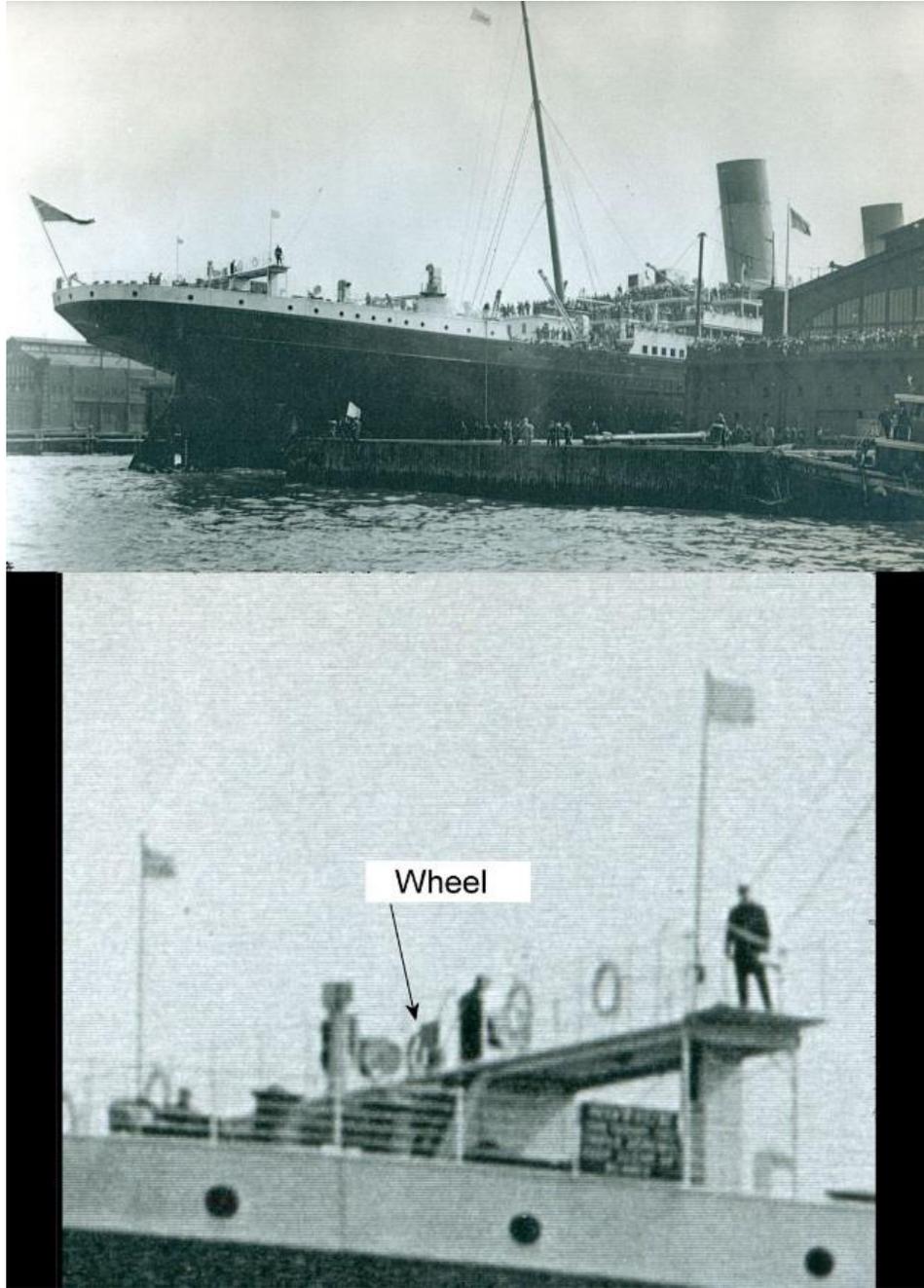


Figure 6

An enlargement of the docking bridge area shows that the docking bridge wheel is unmanned.

Another aspect of the wheel on the docking bridge that proponents of a docking function for the wheel must account for is the presence of a steering compass just forward of the wheel. Why would a steering compass be installed if the wheel were for docking? Docking procedures are visual. A course is not plotted and steered into or out of the docks. Clearly the steering compass was installed so that if the telemotor were disabled and helm control had to be

transferred to the docking bridge, the necessary course could be transmitted to the docking bridge from the navigating bridge to be steered using the steering compass.

## Conclusion

It is the conclusion of this article that the *only* function of the ship's wheel on the docking bridge was to act as an emergency back-up in case the ship's telemotor was disabled. At this point I have heard objections from those who believe that the wheel on the docking bridge had a function during docking procedures. They believe that I haven't proved my case unless I "prove a negative" by producing some reference which categorically states that the wheel on the docking bridge was *not* designed to be used during docking. To these who hold this position, I would say that the burden of proof is on them to provide some positive evidence that this wheel was used for docking. This could be done by producing a reference which states this or a photo showing a crewman operating the wheel during docking. Such a reference or photo has not been produced yet. While these skeptics are searching for a reference or a photo which would support their case, I would encourage them to read and thoroughly understand the articles previously linked to at the beginning of this article which explain in detail the various methods of communication between the navigating bridge and the docking bridge. What should especially be studied is what is actually being communicated and why. These articles establish what the *Shipbuilder* quotation stated that the ship was controlled from the navigating bridge.