The Distress Socket Signal Firing Station Locations Aboard *Titanic*

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Introduction

The purpose of this article is to show the firing station locations of the distress socket signals aboard *Titanic.* This is not a general discussion about the use of the rockets. A comprehensive treatment of this subject has already been written by *Titanic* researcher, Sam Halpern here: Signals of Distress - What Color Were They? I would highly recommend this excellent article for anyone wishing to study this subject in greater depth.

Distress Signal Equipment

The distress signals used aboard *Titanic* were manufactured by the Cotton Powder Company. The distress signals were contained within a brass tube. When needed, the signals were inserted into a matching socket from which they were launched. Figure 1 shows a period advertisement of this socket signal. The socket signal is inserted into a matching socket installed in a bulwark rail. To fire the signal a friction tube is inserted into a hole in the top of the socket signal. The friction tube is attached to a lanyard. To launch the signal, the friction tube is withdrawn from the socket signal. The action of the friction tube is similar to striking a match. Chemicals within the socket signal are ignited by the friction causing the socket signal to launch.

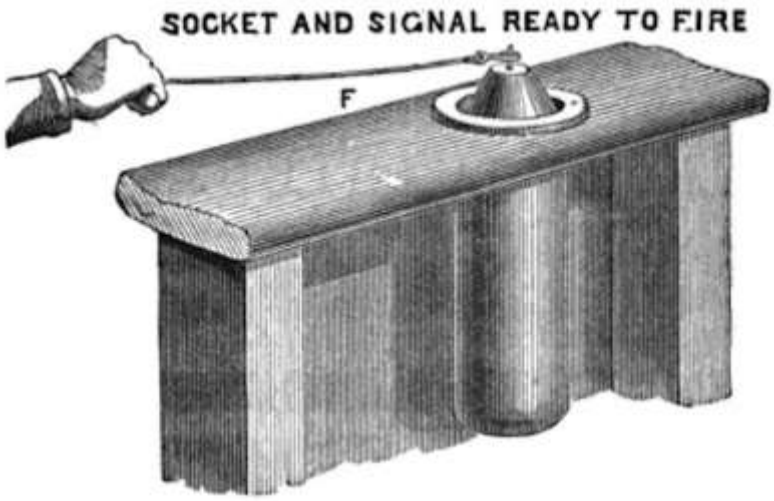

Figure 1

The socket signals were stored near the firing stations. Figure 2 shows a photo from the *Titanic* wreck site of a box of unused distress socket signals.

Figure 2

Regulations

In 1897 the international Regulations Preventing Collisions at Sea were put into effect. Pertinent to this discussion is the excerpt from these regulations shown in Figure 3.

Sockets for socket signals. **71.—The socket used for firing the socket signals should in all cases be fixed at an angle of 20 degrees from the perpendicular, so as to prevent the risk of a signal falling on the vesssel's deck in the event of a failure to rise to the usual height. The surveyors should satisfy themselves that the sockets are of sufficient strength, and that they are of such a gauge as to insure that the signal will rise to safe height before exploding.**

In all cases where socket signals are carried there should be 2 sockets, one forward and one aft, on different sides of the vessel.

Figure 3

The first pertinent part of this regulation states that the socket for firing the socket signals needs to be fixed at 20 degrees from vertical for safety reasons. The second pertinent part of the regulation states that there were to be two socket firing locations. One is to be forward and one aft on opposite sides of the ship. These two locations will be examined separately.

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The Forward Firing Location

The forward firing location for the distress socket signals has been located through two sources. The first is the testimony of *Titanic's* fourth officer, Joseph Boxhall, before the British Wreck Commissioner's Inquiry. The pertinent part of the testimony is excerpted below:

15434. *I do not know whether you can say with regard to the starboard boats at all whether there were any starboard boats on the "Titanic" at this time, or whether they had all gone?*

No I cannot say. In know the starboard emergency boat had gone some time, and they were working on the collapsible boats when I went, because I fired the distress signals from the socket in the rail just close to the bows of the emergency boat on the starboard side. Every time I fired a signal I had to clear everybody away from the vicinity of this socket, and then I remember the last one or two distress signals I sent off the boat had gone, and they were then working on the collapsible boat which was on the deck.

With this information, a search of photographs of *Titanic* and her sister ship, *Olympic,* was undertaken. The only photo which was located was a photo of *Olympic* which was found and is shown in Figure 4 which has an arrow pointing to the top of a socket signal protruding from the socket in the rail forward of the emergency cutter on the starboard side.

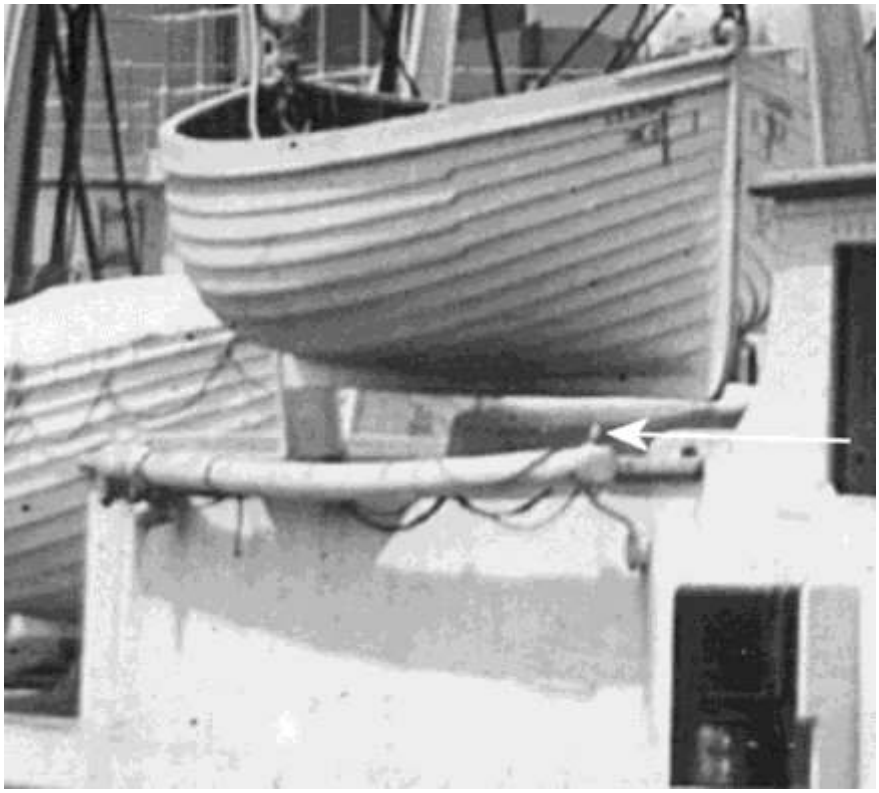

Figure 4

Figure 5 shows a plan view drawing of the starboard bulwark aft of the wing cab. The arrow points to the location of the signal socket.

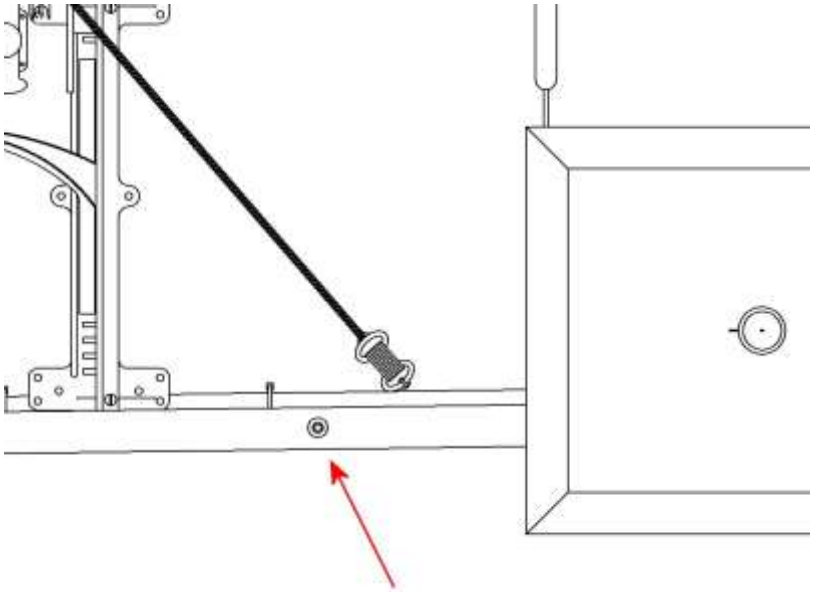

Figure 5

Figure 6 show an elevation cross sectional drawing of the bulwark looking forward from aft.

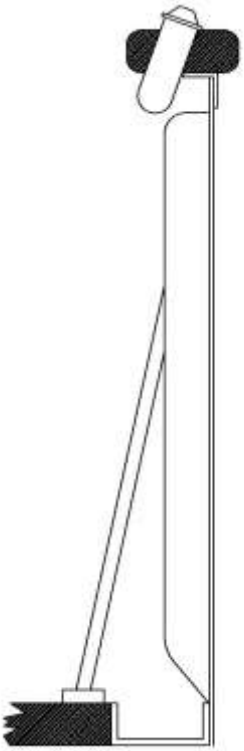

Figure 6

The Aft Firing Location

As per regulations, the second distress socket signal firing location was located aft on the port side. It was located on the port outboard end of the docking bridge. Since there was no wood rail atop the railings of the docking bridge, a special box was constructed to hold the signal socket. It was secured to the outer railings of the docking bridge. The box was designed so that the socket could be oriented at a 20 degree angle outboard from vertical. Figure 7 shows this box on the port side of *Titanic's* docking bridge.

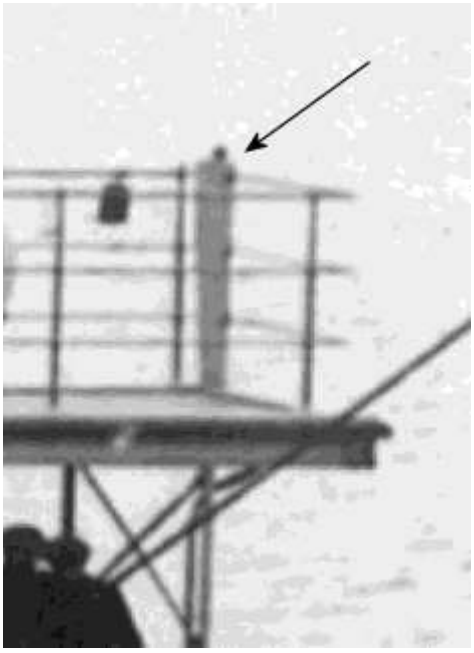

Figure7

Figure 8 shows a closer view of this box on *Olympic.*

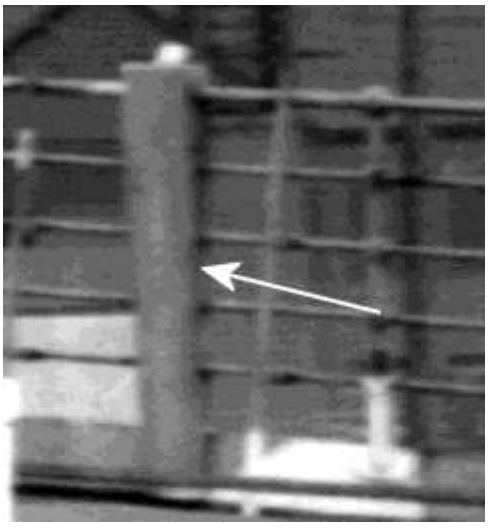

Figure 8

Figure 9 shows a drawing of a cross sectional elevation from forward looking aft.

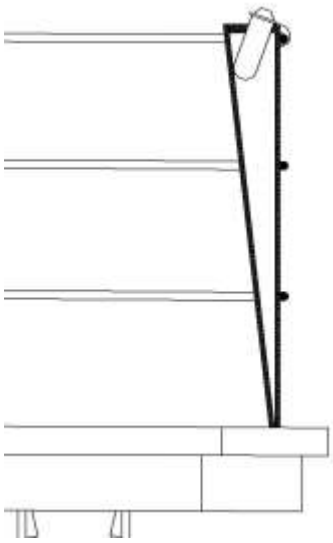

Figure 9

It should be noted that for reasons which are not entirely clear, the aft firing station of the distress socket signals was not used during the *Titanic* disaster.

Summary

This article has sought to clarify the location of the distress socket signal firing station. Both a forward and aft firing location were established per regulations. On the night of the *Titanic* disaster, only the forward firing station was employed.