# LAST WORD SOCIETY

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# The III-Fated Passenger Steamer Sultana: An Inland Maritime Mass Disaster of Unparalleled Magnitude

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ABSTRACT: On the night of 27 April 1865, the Sultana left Memphis for points north on the flood-swollen Mississippi River. An estimated 2347 individuals were on board this luxury passenger steamer—a boat designed to accommodate only 76 cabin passengers and 300 deck passengers.

At a point seven miles (11 km) north of Memphis near a group of islands known as Paddy's Hen and Chickens, 3 of the boat's 4 boilers exploded. The explosion, fire, and tiver claimed approximately 1547 lives, exceeding the death toll of the *Titanic* 

Why were so many passengers on board the Sultana? Why did the boilers explode? What were the stories of the survivors? And how does this tragedy compare with the Itanic disaster?

These questions are addressed along with other aspects of the tragedy. In addition, recent attempts by the authors to discover the exact location of the wreck are discussed

KEYWORDS: The Last Word Society, Sultana, historical background, mass disasters

On 26 April 1865, the luxury passenger steamer Sultana unloaded cargo at Memphis, Tennessee, and later that evening crossed the river to the coaling station at Hopefield, Arkansas [1]. The Sultana was known to be one of the largest and best luxury steamers ever constructed; however, that night found it deplorably overcrowded. It was near midnight when the coal supply was loaded and the boat continued its journey, laboriously steaming north up the flood swollen Mississippi River. At two o'clock on the morning of 27 April 1865, at a point approximately 7 miles (11 km) north of Memphis, 3 of the Sultana's 4 massive boilers exploded. The explosion, fire, and river claimed 1547 lives [2,3], a death toll exceeding that of the Titanic. Unfortunately, the magnitude of this disaster was soon lost to history.

The purpose of this paper is to investigate various aspects of the Sultana disaster including the reasons for the overcrowded conditions aboard, the cause of the explosion, factors leading to the excessive loss of life, statements of the survivors, and the reasons for its obscurity.

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In addition, recent attempts by the authors to discover the exact location of the wreck will be discussed.

#### The Sultana and the Disaster

The Sultana was built at the Litherburg Shipyard, Cincinnair, Ohio by Captain Preston Lodwick for a sum of \$60 000 and launched into the Ohio River on 3 Jan. 1863 [2]. The boat was coal-fueled with four high-pressure, tubular boilers measuring 18 ft (5.5 m) in length and 3 ft 10 in. (1 m) in diameter. It had a capacity for 1000 tons (907 Mg) but trimmed on only 34 in. (86 cm) of water. The Sultana was a luxury steamer as evidenced by the chandeliers, carpets, fine china, and glassware aboard. On 7 March 1864, a group of investors purchased the steamer for \$80 000. The new captain and part owner was J. Cass Mason, a 34-year-old who had amassed much experience on the Mississippi River and was respected by his peers [4]. William Jordon Gambrel was first clerk and one-eighth owner of the steamer.

After stopping at Memphis to unload cargo, the Sultana continued up river, successfully navigated the difficult Paddy's Hen and Chickens Islands area, and was approximately 7 miles (11 km) above Memphis when the boilers exploded (Fig. 1). Steam and twisted pieces of metal ripped through the decks above the boilers, and the midsection of the steamer erupted, heaving the pilot house, portions of the deck, and hundreds of sleeping passengers into the river. Many were killed instantly by the shrapnel and steam. The center of the hurricane deck was blown upward by the initial explosion, but then collapsed to form a funnel that fed many of the passengers directly into the fire and steam of the boilers. Confusion and terror were everywhere. Nonswimmers clung to swimmers. Several stated they had witnessed a hundred or more passengers clinging to one another drown enmasse [5].

One of the survivors, Commodore Smith, a member of Company C of the 1st Michigan Volunteer Infantry, noted

The boat was on fire and the wounded begged us to throw them overboard, choosing to drown instead of being roasted to death. . [We] proceeded to . . [throw] overboard into the jaws of certain death by drowning those comrades who were unable on account of broken bones and limbs to help themselves. Some were so badly scalded . . that the flesh was falling from their bones. . . [I listened] to the heartfelt prayers of those suffering and wounded comrades and . . . their dying requests as they commended their wives, children, fathers, mothers, sisters and brothers to God's kind care and keeping, and them thanking us for our kindness to them, notwithstanding the pain they were suffering. They fully realized the fact that their last day, hour and even last minute to live had come; and then to hear the gurgling sounds, the dying groans and see them writhing in the water, and finally see them sink to rise no more until the morning when all shall come forth [6].

# Chester D. Berry stated that the

'horrors of that night will never be effaced from my memory—such swearing, praying, shouting and crying I had never heard; and much of it from the same throat—imprecations followed by petitions to the Almighty, denunciations by bitter weeping . . . I came across one man who was weeping bitterly and wringing his hands as if in terrible agony, continually crying, 'O dear, O dear,'. . . I took him by his shoulder and asked where he was hurt. I'm not hurt at ali,' he said, 'but I can't swim, I've got to drown, O dear,'. . . I said to him, 'There, do you see that [plank]; now you go to that pile of broken deck and get you one like it, and when you jump into the water put it under your chin and you can't drown.' 'But I did get one,' said he, 'and someone snatched it away from me.' 'Well then, get another 'said I. 'I did,' said he, 'and they took that away from me.' 'Well then,' get another.' 'Why' said he, 'what would be the use, they would take it from me. O dear, I tell you there is no use; I've got to drown I can't swim.' By this time I was thoroughly disgusted, and giving him a shove, I said, 'drown then you fool.' I want to say to you . . . I have been sorry all these years for that very act' [7].

Joseph Stevens noted that "We had a number of mules aboard the boat and some of the boys hung on to their tails while they swam to shore. Others would get out by means of

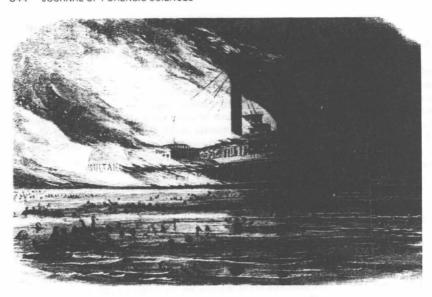


FIG. 1-Explosion of the steamer Sultana as depicted by Harper's Weekly.

planks and barrels... We hung onto... [a] bale of hay and floated down six or eight miles below Memphis, where we were picked up by a gunboat..." [8]. George F. Robinson stated, "I was almost a goner, when I saw a dark object in the water and made for it, and it was a dead mule, one that was blown off the boat. He was dead but not quite cold. I crawled up on him and was there when I was picked up at Fort Pickens three miles below Memphis" [9]

Rescue efforts were launched by many of the locals who lived along the river as well as other commercial and military steamers. The Essex, a Federal gunboat, saved 60 men and 1 woman south of Memphis [10]. Captain John T. Watson of the commercial steamer Bostonia II, upon seeing the fire from the Sultana, ordered his crew to put out the stage planks, tables, chairs, hay bales, and any cargo that would float. This act, along with the Bostonia's lifeboats, are credited with saving a number of lives [11]. William H. Wooldridge and Mr. Hill, his mother's overseer, took a skiff from the Tennessee side of the river and saved 45 passengers [12]. John Fogleman and his neighbors on the Arkansas side of the river saved over 100 people with a crude raft they constructed. DeWitt Clinton Spikes, a young passenger on the Sultana, saved 30 lives but was not able to save his father, mother, 3 sisters, 2 brothers, and a niece [11].

The aftermath of the tragedy was gruesome. The Memphis Argus on 12 May reported that "many bodies of the victims of the Sultana catastrophe can be seen floating in the river, and lying on the banks and in the driftwood on both sides as far down as White River. . . . Some of them have been made the prey of dogs and hogs, and doubtless other animals" [13]. Captain Mason and Clerk Gambrel were both killed in the wreck and, although rewards of \$200 were offered, their bodies were never recovered [14]. Mason was last seen during the disaster throwing wood and debris from the Sultana to save those in the river [15].

The magnitude of this disaster is best comprehended by comparing it to the sinking of the *Titanic*, commonly considered the greatest maritime mass disaster in history. The *Titanic* was almost 900 ft (274 m) long (one-sixth of a mile) with 9 decks rising to a height of 11 stories [16]. The *Sultana* was only 263 ft (80 m) long and 42 ft (13 m) wide, with roughly 4

stories consisting of 3 decks. The upper deck was the hurricane deck with the pilot house below it, then the passenger deck with its cabins, and the boiler deck, which was closest to the water line. Below the boiler deck and running the length of the boat was a cargo hold 7 ft (2 m) deep. The Titanic with her steel hull weighed 46 000 tons (41 730 Mg) [17]. The wooden hull of the Sultana weighted 719 tons (652 Mg), 400 tons (363 Mg) less than the weight of the rivets used in the construction of the Trianic The Titanic could accommodate 2376 passengers. At the time of the disaster there were 2235 passengers, of whom 1522 died [18]. The Sultana had a legal carrying capacity of 376 passengers and crew. At the time of the explosion, there were 2347 passengers [19], of whom 1547 died [20].

### Factors Leading to the Disaster

In February 1865, with the war between the states drawing to a close, a prisoner exchange was begun with Vicksburg established as a collection point for Federal prisoners of war being held at Cahaba near Selma, Alabama, and Andersonville in Georgia. They were sent by train to Camp Fisk, a parole camp located 4 miles (6 km) from Vicksburg. Captain George A Williams of the Union Army was the Commissary of Musters at Vicksburg and was in charge of prisoner exchange. On 7 April, Captain Williams was ordered to Cairo, Illinois, to communicate with General Grant. Captain Frederic Speed, Assistant Adjutant General, performed Williams' duties in his stead [21]. Colonel R. B. Hatch was Chief Quartermaster, and Captain W. F. Kerns was Assistant Quartermaster in charge of river transportation [22]. Note that some federal officers at Vicksburg were suspected of taking bribes from steamboat captains to secure larger loads of troops [23].

On 12 April 1865, the Sultana was inspected in St. Louis before beginning its final voyage down the Mississippi River, and the boilers were found to be in good working order [24]. On the trip downriver, the Sultana stopped at Vicksburg, and Captain Mason went to the office of Brigadier General Morgan L. Smith, Commander of the District of Vicksburg, to seek passengers for the return trip. The Sultana belonged to the People's Line, which was under contract with the U.S. government to ship troops [25]. Smith promised to give Mason a "load" of prisoners on his trip back, and further instructed Mason to inform him if the officers in his command did not comply [26].

The Sultana continued down river and arrived in New Orleans on 19 April. At 10 o'clock on the morning of 21 April, it backed away from the Gravier Street dock and steamed northward with approximately 250 passengers and crew [27]. The trip upriver from New Orleans was uneventful until approximately 10 h from Vicksburg, Mississippi, when a leak was discovered in the middle larboard boiler [28,29]. The Sultana continued toward Vicksburg at a greatly reduced speed [29].

As soon as the Sultana could be moored to the wharfboat at Vicksburg on the evening of 23 April, Nathan Wintringer, the chief engineer, hired R. G. Taylor, a local boilermaker with 28 years of experience, to repair the boiler. Concerned with time, Captain Mason ordered Taylor to replace the damaged piece with a 27- by 11-in. (68.5- by 28-cm) patch. Taylor, after protesting, finally complied, but was not allowed to force back the bulge in the boiler. Although Wintringer approved the boiler, Taylor stated that it could not be considered safe, and noted that the boilers appeared to have been burned as a result of being operated with too little water [30].

While the Sultana was being repaired, Mason visited Colonel Hatch, Captain Speed, and Captain Williams to press for the load of men promised by General Smith Since the Sultana belonged to a line that was contracted with the government, Mason threatened to file a complaint in Washington against the Exchange Office for using noncontract lines [31]. Apparently his threat worked.

On the morning of 24 April, while Captains Speed and Williams were at Camp Fisk preparing prisoners for the trip north, Captain Kerns received a written order from Department Headquarters. The order stated that all prisoners remaining at Four Mile Bridge and the hospital at Big Black were to be organized for transportation north. A postscript on the order stated "Copy furnished Captain of the Sultana" [32]. The clear implication was that all of these men were to be placed on the Sultana.

Captain Kerns, learning that the steamer Lady Gay had docked, approached Colonel Hatch with the possibility of placing a portion of the men on that vessel. Hatch telegramed Speed on this matter, but Speed's return telegram stated that all the men could go on one boat—the Sultana [33]. When a second steamer, the Pauline Carroll, docked at the wharfboat, Kerns went to Colonel Hatch, General Smith, and General J. Warren Miller requesting that this boat be detained for troop transport. They were indifferent to his request. Williams, when approached, angrily replied that they could all go very well on the Sultana and that the Pauline Carroll offered 20 cents per man, and for that reason she could not have a man [34], thus implying a suspicion that Kerns was being bribed. Kerns had been suspected of bribery from the captain of the Olive Branch, a steamer that had earlier transported prisoners from Vicksburg.

At 9 a.m. on 24 April 1865, the Sultana backed away from the wharf at Vicksburg and steamed northward with 2347 on board. Both the Pauline Carroll and the Lady Gay left Vicksburg with no prisoners. The crowded conditions on the Sultana are best seen in a photograph taken at Helena, Arkansas (Fig. 2). The weight of the men produced a notable sag in the upper deck even though stantions were set in place for support [35]. Since there was only 1 cooking stove on the boat, the majority of the men were forced to eat their meat rations raw [35,36]. Among the freight aboard the Sultana were 250 hogsheads of sugar, each weighing over 1200 lbs (544 kg) [37], and 70 to 100 mules and horses [38]. In addition, the crew kept a large pet alligator in a wooden crate [39]. Many of the prisoners had taunted the creature on the trip up river, only to be tormented by the thoughts of its proximity after the explosion.

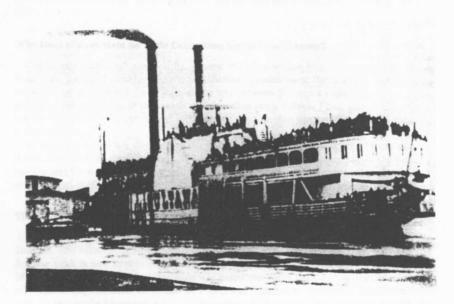


FIG. 2—Photograph of the Sultana taken at Helena, Arkansas, on the day before the disaster. Note the overcrowded conditions. (From the collection of The Public Library of Cincinnati and Hamilton County.)

### What Caused the Explosion?

Four factors may be proposed as causes of the explosion. The first was sabotage. During a reunion of the survivors of the Sultana. William C. Streeter of St. Louis claimed that Robert Lowden—also known as Charles Dale, a noted Confederate blockade runner during the war—was responsible for the explosion. According to Streeter, Lowden stated that while the Sultana was at the Memphis wharf, he smuggled aboard a torpedo concealed inside a large lump of coal and deposited it on the fuel pile near the boiler for the expressed purpose of destroying the steamer [40].

A second factor was the boiler's flues, which were designed for travel on the cleaner waters of the upper Mississippi. These flues supplied water from the river directly to the boat's boilers. Sediment of the lower Mississippi readily plugged these flues, resulting in the boilers running low of water, overheating, and exploding [4].

A third factor was that cargo could shift, causing the boat to list and to pull the intake flues from the river. This would also result in the boilers running low of water and exploding. When the photograph depicted in Fig. 2 was taken, the passengers crowded to the boat rail nearest the camera, causing the Sultana to list considerably [42].

Last, the patch placed on the botler in Vicksburg may be the most likely source of the explosion. According to J. J. Witzig, supervising inspector of steamboats, the Sultana's boilers were constructed of iron <sup>17</sup>/48 in (9 mm) in thickness and were regulated for 145 psi (1000 kPa). However, the 27- by 11-in. (68.5- by 28-cm) patch used to repair the boiler was only <sup>1</sup>/4 in. (0.6 cm) in thickness and boilers with iron <sup>1</sup>/4 in. (6 cm) thick were approved to operate at a maximum of 100.43 psi (692.44 kPa) [43,44]. Wintringer, the Sultana's chief engineer, stated they ran the boilers at 130 to 135 psi of pressure between Vicksburg and Memphis [45]. Since this exceeded by at least 30 psi (207 kPa) the maximum pressure the patch could safely operate under, it seems to represent an appealing explanation for the explosion. Unfortunately, the exact cause of the boiler explosion still remains a mystery.

# Why Were the Casualties So High?

Several factors were responsible for the large number of fatalities suffered. The Sultana's safety equipment included 76 cork-filled life preservers, 1 metallic lifeboat, and 1 yawl [46]. The lifeboat caused several deaths when it was thrown from the upper deck, landing upside down on the heads of a number of swimmers. The disaster occurred at night when the Mississippi River was at flood stage and extended a considerable distance into Arkansas. Also, the boat was constructed of wood, most of which was painted with a composition of turpentine, benzine, and other flammable substances. The entire boat was said to be in flames within 20 min of the explosion [47]. The malnourished and diseased condition of the prisoners cannot be overlooked. Andersonville was one of the most notorious of the Civil War prison camps. A Confederate surgeon in October 1864 stated that "over 10,000 Federal prisoners have died, that is, near one-third of the entire number have perished in less than seven months" [48]. Their appearance upon release from prison was described as follows:

Coming like cattle across an open field were scores of men who were nothing but skin and bones, some hobbling along as best they could, and others being helped by stronger comrades. Every gaunt face with its staring eyes told the story of the suffering and privation they had gone through, and protruding bones showed through their scanty tattered garments. One might have thought that the grave and the sea had given up their dead [49].

# Military Investigation of the Tragedy

Secretary of War Edwin Stanton telegramed General C. C. Washburn, Commander of the District of West Tennessee, and ordered a board of inquiry to be commissioned to investigate the incident. Washburn had already established such a board on the morning of the

disaster. The Commission, composed of three officers, conducted hearings in both Memphis and Vicksburg until late May 1865 [50]. The board concluded that the Sultana was a staunch vessel, and although the men had been as comfortable as could be expected, there was no military necessity to place so many on the boat. In addition, the quartermaster's office at Vicksburg was censured for permitting others to perform its duties, and Captain Speed was censured for taking upon himself duties not properly belonging to him. The Commission held that the explosion was caused by too little water in the boilers and concluded that "The evidence fully shows that the government has transferred as many or more troops on boats of no greater capacity than the Sultana frequently and with safety" [51]

The Secretary of War also ordered Brigadier General William Hoffman, Commissary General of Prisoners for the U.S. Army, to proceed to Memphis and conduct a separate investigation. Hoffman concluded that shipment of so many on one boat was unnecessary, unjustified, and a great outrage on the troops. He further concluded that the responsible parties were Colonel Hatch, Captain Speed, Captain Williams, and William Kerns, but that Hatch and Speed were primarily responsible [52].

On 9 Jan. 1866, Secretary of War Stanton ordered Captain Speed and several other officers at Vicksburg brought before a military court-martial tribunal. However, for reasons still obscure, Speed was the only officer actually tried. When the trial ended 5 June 1866, Captain Speed was found guilty of assuming unwarrantable authority by placing the troops on the Sultana, and he was sentenced to be dismissed from the service [53]. However, Brigadier General Joseph Holt, Judge Advocate General of the United States, reviewed the proceedings of the court-martial and placed the blame on the carelessness of Nathan Wintringer, the Sultana's chief engineer, and pointed suspicion in the direction of Colonel Hatch [54]. Holt recommended that Speed's sentence be disapproved and that he be publicly exonerated from the charges. The Secretary of War followed these recommendations and on 1 Sept. 1866, Captain Speed was honorably mustered out of the service [54]. Frederic Speed made Vicksburg his home. He was successful in the lumber business and later became Criminal Court Judge for Warren County, Mississippi [54], and editor of the Weekly Times and Republican [55]

## Why Does History Hold So Little Concerning the Sultana Disaster?

The disaster, although newsworthy, generated little artention from the news media of the time. Two events of extreme historic significance overshadowed the calamity. Earlier that same month at Appomattox, Virginia, the war between the states ended. This wax a war characterized by the loss of thousands of lives within single battles. Thus, loss of relatively so few on the Sultana was not viewed with insensitivity, but was simply placed within the context of the times.

In addition, only a few days before the disaster, President Abraham Lincoln was assassinated. Stories of the assassination, the alleged conspiracy, and the funeral filled the nation's newspapers for many weeks. Few editors gave more than a passing comment to the Sultana tragedy, and these were usually confined to the back pages of the newspaper.

# The Search for the Wreck of the Sultana

Over the past few years the authors of this paper have been searching for the wreck of the Sultana. The Mississippi River has changed course since 1865, and the point at which the Sultana sank is now approximately 2 miles (3 km) from the river in a soybean field near Mount City, Arkansas. The cargo hold was below the boiler deck and may still be in tact, although it may test between 18 and 30 ft (5.5 and 9 m) below the surface. Magnetometers and a water probe (designed and built by authors J. P. and S. O.) have been used in the search. The authors have no plans of excavating the wreck, only locating it. Once located,

this information will be provided to archaeologists who have expressed an interest in pursuing funding for excavation.

The wreck of the steamboat Bertrand provides an excellent indicator of preservation on the Sultana. The Bertrand sank on the Missouri River during the same month and year as the Sultana and was excavated during the 1960s [56]. Some of the artifacts recovered from the Bertrand's hold were thousands of pairs of boots, cases of wine and other food items still in the bottles, crates with readable shipping labels, clothing, and even rancid mutton [56]. To date, the authors have found only a few pieces of the Sultana, such as boiler supports, hog chain, and boiler grate. These were discovered on the remnants of the old river bank and probably represent debris from a salvage attempt conducted shortly after the disaster.

### Conclusion

In conclusion, although the Sultana represents the greatest recorded maritime mass disaster, it remains an obscure footnote to history. In like manner, the term "obscurity" best describes our search for her wreck. The cargo hold of the Sultana still eludes us, and, in fact, it may not be our destiny to discover it. Perhaps Mark Twain was correct when he wrote in Life on the Mississippi. "Some farmer will turn up her bones with his plow one day, no doubt, and be surprised."

### References

- [1] Transcript of the Courtmartial of Captain Frederic Speed, Records of the Judge Advocate General Office, War Department Records, National Archives (hereafter cited as Transcript), p. 117.
- [2] Way, F., Way's Directory of Western River Packets. Sewickley, Penn, 1950 (hereafter cited as Way), p. 280.
- [3] The World Almanac and Book of Facts. The Newspaper Enterprise Association, New York, 1982. pp. 707 and 747.
- [4] Daily Missouri Democrat, St. Louis, 28 April 1865, p. 4.
- [5] Berry, C., Loss of the Sultana and Reminiscences of Survivors. Datius D. Thorp, Lansing, MI, 1892 (hereafter cited as Berry, C.), pp. 5, 89, 300.
- [6] Berry, C., pp. 319-321.
- [7] Berry, C., pp. 50-51.
- [8] Berry, C., p. 342.
- [9] Berry, C., p. 302.
- [10] The War of the Rebellion: A Compilation of the Official Records of the Union and Confederate Armies, Government Printing Office, Washington, DC, 1880-1901 (hereafter cited as O.R.), Series 1, Vol. 48, Part 1, p. 220.
- [11] Argus. Memphis, 28 April 1865, p. 3.
- [12] Commercial Appeal, Memphis, 25 Jan. 1920, p. 18.
- [13] Argus, Memphis, 12 May 1865, p. J.
- [14] Daily Bulletin. Memphis, 2 May 1865, p. J.
- [/5] Berry, C., p. 263.
- [16] Wade, W. C., The Titanic, End of a Dream, Penguin, New York, 1979 (hereafter cited as Wade), p. 18.
- [17] Wade, p. 19.
- [18] Wade, pp. 27 and 61.
- [19] Way, p. 280.
- [20] Transcript, p. 280.
- [21] Transcript. p. 11.
- [22] O.R., Series 1, Vol. 48, Part 1, p. 214, [23] O.R., Series 1, Vol. 48, Part, 1, p. 211.
- [24] Report of the Board of Supervising Inspectors of Steamboats. United States Congress, First Session, 1865-1866 (hereafter cited as Inspector), p. 216.
- [25] Transcript, p. 123.
- [26] Transcript. p. 121.
- [27] Inspector, p. 216.
- [28] O.R., Series 1, Vol. 48, Part 1, p. 216.

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[29] Transcript, p. 148.
[30] Transcript of the Washburn Commission. Records of the Judge Advocate General Office. Record
      Group No. 153, National Archives, Washington, DC (hereafter cited as Washburn Commission),
      pp. 36-38.
[31] Transcript. p. 127.
[32] Transcript, p. 58.
[33] Transcript, p. 48.
[34] Transcript, p. 52.
[35] O.R., Series 1, Vol. 48, Part 1, p. 215.
[36] Transcript, p. 102.
[37] Trunscript, p. 143.
[38] Transcript, p. 103.
[39] Berry, C., p. 225.
[40] Daily Appeal, Memphis, 8 May 1888, p. 1.
[41] Berry, C., pp. 25-26.
[42] Transcript, p. 101.
[43] Inspector. p. 216.
[44] Transcript, p. 132.
[45] Transcript, p. 166.
[46] Transcript, Inspector's Certification (Exhibit).
[47] Cochran, W., Proceedings of the Mississippi Valley Historical Association, Vol. 10, 1919-1920,
pp. 320-321.
[48] G.R., Series 4, Vol. 7, pp. 606-607.
[49] Elliott, J., The Sultanu Disaster, Indiana Historical Society Publication, Vol. 5, No. 3, pp.
      163-164.
[50] Washburn Commission, pp. 2-3.
[51] Daily Bulletin, Memphis, 21 May 1865, p. 4. [52] O.R., Series 1, Vol. 48, Part 1, pp. 213-215.

    [53] Transcript, pp. 4 and 371.
    [54] O.R., Series 1, Vol. 48, Part 1, pp. 219-220.

    [55] Biographical and Historical Memoirs of Mississippi, Vol. 2, Goodspeed, Chicago, 1891, p. 806.
    [56] Petsche, J., The Steumboat Bertrand, Washington, 1974.

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