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John L. Worden, USN:
A Hero for All Times

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Sultana: Victim of Courtenay’s Coal Torpedo?

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Sitting in a museum in Vermont is a nondescript piece of iron the size of a small grapefruit. Cast from a mold of a lump of coal, it was found in Confederate President Jefferson Davis’s office in Richmond after its evacuation in April 1865. The inside is hollow, to be filled with about four ounces of gunpowder, about as much as the blasting charge inside a case shot fired from a 12-pound smoothbore cannon, the most common field artillery piece of the Civil War. It would be sealed with a threaded plug to keep the powder inside. Covered in pitch and coal powder from any sort of distance the resulting object would be almost indistinguishable from a piece of coal. Was such a device, known as a Courtenay coal torpedo, lurking in the coal bins of the steamboat Sultana on April 27, 1865? Was it then unknowingly shoveled into the ship’s furnace where its detonation caused a series of fatal boiler explosions that resulted in a death toll of Union soldiers rivaling that of the two-day Battle of Shiloh? The generally accepted theory is that Sultana’s loss was the result of an accident made worse through ignorance, negligence, and greed.

Importantly, the idea that the ship and her passengers were victims of Confederate sabotage using such a weapon cannot be conclusively ruled out.
The Courtenay Coal Torpedo
Thomas Edgeworth Courtenay immigrated to the United States from Ireland in 1842, eventually settling in St. Louis, Missouri. There he became involved in a number of businesses, including the insuring of riverboats and their cargoes. The outbreak of the Civil War, however, found him facing numerous financial reversals and increased police scrutiny because of his southern connections and leanings. In 1863 he volunteered to serve on the staff of Confederate Major General Sterling Price, whom he had known in pre-war St. Louis. Courtenay introduced Price to his idea of the coal torpedo and its use to counter Union naval superiority in the region. Impressed, Price endorsed the proposed weapon and later that year Courtenay was on his way to Richmond to meet with President Davis, who was likewise impressed. Within a few weeks the Artillery Works Shop in Richmond had manufactured the first coal torpedo. With the passage of appropriate legislation, Courtenay's coal torpedo and a unit of men to deploy it became part of the Confederate military. The unit would be paid in Confederate government bonds in an amount based on the value of the enemy's property destroyed. The "property" to be attacked included any using "the waters and rail roads [sic] of the Confederate States... public or private."

The coal torpedo was the perfect covert weapon. Easy to transport, it could be buried in a supply of coal waiting to be loaded onto its target or carried aboard in the pocket of its deliverer to be tossed in a coal bin where it would blend in with its surroundings. The same size as the optimal piece of boiler coal, those stoking a furnace fire would not attempt to break it into smaller pieces thus exposing its true nature. When thrown into a furnace, it would sit, increasing in temperature until the powder inside detonated. At the very least, hot coals from the furnace would be sent flying throughout the vessel, most likely constructed with very combustible wood. At the other extreme, flying chunks of the torpedo could pierce the boiler above sufficiently to cause a boiler explosion that would then result in extreme damage, if not total destruction of the vessel. As an added benefit, the delayed nature of the weapon allowed for the person...
planting it to make a clean escape. Finally, the Courtenay coal torpedo was simple to construct. Other than its odd shape and its pitch and coal covering, it was nearly identical to an artillery shell—something that both sides produced by the thousands during the war.

It is nearly impossible to determine the success of the coal torpedo. While a plan to seed a coal barge with several torpedoes in order to target Union blockading ships never came to fruition, Courtenay, in a May 1864 letter claimed responsibility for the boiler explosion that severely crippled the Union gunboat Chenango on its maiden voyage that April. In a later letter to an acquaintance who was a member of the British Parliament, he claimed that in addition to Chenango, his invention had “destroyed many steamers on the [Mississippi].” Again, none of these claims can be verified, but if true, could Sultana have been an additional victim?

The Steamboat Sultana Heads South

Constructed and put into service in the first months of 1863, the steamboat Sultana was built to transport freight and passengers up and down the Mississippi River and its tributaries. With the fall of Vicksburg, Mississippi and Port Hudson, Louisiana in mid-1863, northern ships were able to range the length of the Mississippi all the way to New Orleans, and Sultana would make many runs south out of her base in St. Louis. One of the larger and faster steamboats operating on the river, Sultana brought in net revenues during her first year of operation almost double the cost to build her.

In April 1865, Sultana was preparing to make what would be her last trip to New Orleans.

During this time, she underwent her “Third Inspection” by federal steamship inspectors. As part of this, her four boilers underwent hydrostatic tests to a pressure 44 percent higher than their normal operating pressure. Sultana passed her inspection, was deemed able to “be employed as a steamer ... without peril to life from imperfection of form, materials, workmanship, or arrangement of the several parts or from age or use” and departed the next day, April 13, 1865. During the journey south, several stops were made before reaching New Orleans. While in New Orleans, Sultana's boilers were drained and cleaned and on April 21, she left New Orleans for the last time bound for St. Louis.
Final Journey

A little over a day after leaving New Orleans, *Sultana*’s chief engineer, Nathan Wintringer discovered a small steam leak in one of her boilers. Under greatly reduced power, the steamboat pulled into Vicksburg during the evening of April 23. While Wintringer went in search of a boiler mechanic, *Sultana*’s master and part owner, James Cass Mason, met with Army officials to arrange a deal whereby *Sultana* would provide passage to hundreds of soldiers.

At the time of *Sultana*’s stop in Vicksburg, that city was the temporary home to thousands of recently released Union soldiers who had been imprisoned. The Confederate government, in order to alleviate the logistical problems caused by its holding tens of thousands of prisoners while unable to feed its own troops, began sending them to Union parole camps so that they could be fed and clothed by the U.S. government until exchanged. Those held in Andersonville, Georgia and Cahaba, Alabama were sent to a broad clearing near Vicksburg known as Camp Fisk. Robert E. Lee’s surrender of his Army of Northern Virginia resulted in the Confederate authorities at Camp Fisk being ordered to release all prisoners to Union forces without formal exchange.

Mason, who took note of the situation during his stop in Vicksburg on the way to New Orleans, was determined to get as many of these soldiers on *Sultana* as possible.

While Mason negotiated with a myriad of Union officers (and perhaps bribed at least a few) in order to obtain passengers for his trip north, Wintringer had found a local boilermaker, R. G. Taylor, and was doing his own negotiating. Taylor was concerned that he wouldn’t be given enough time to do a proper repair, while Wintringer’s concern was that the work Taylor was wanting to do would take too long. In the end, Taylor placed a rough patch over the leak in the boiler in exchange for a promise that more extensive repairs would be conducted when the ship reached St. Louis. While not perfect, both sides at the time seemed satisfied that it was an acceptable fix.

As *Sultana*’s boiler was being repaired, Union troops began boarding the ship. Totally overwhelmed by the task at hand, hampered by those more concerned with lining their own pockets with what would now be called kickbacks, and without proper oversight on scene by senior officials, the entire logistical and administrative process of getting the men from Camp Fisk to Vicksburg and onboard *Sultana* totally broke down.* In the resulting confusion, over 2,000 Union soldiers were loaded onto the ship, while other similar ships left Vicksburg nearly empty and headed north.* At around nine o’clock on the evening of April 24, *Sultana* cast off her lines and continued north.

Nightmare on the Mississippi

Thirty hours later, shortly after sunrise, *Sultana* tied up to a wharf boat at Helena, Arkansas where, packed stem to
Sultana: Victim of Courtenay’s Coal Torpedo?

Stern with soldiers, she made quite the sight. The citizens of the town raced to the river to see the spectacle. Among the crowd was local photographer, Thomas W. Bankes, with his camera. Gawking back at the gawkers and perhaps wanting to get into the photograph Bankes was preparing to take, the soldiers rushed to Sultana’s port side. This reportedly put a significant list on the ship and prompted Mason to request their officers to keep them evenly distributed. Bankes got his photograph and less than an hour later, Sultana was underway setting a course upriver to Memphis where she would arrive on the evening of April 26.

In Memphis, Sultana unloaded some cargo along with a few passengers and by midnight had moved to take on fuel from coal barges anchored just up river. After taking on 1,000 bushels of coal, Sultana departed a few hours later and continued towards St. Louis. At around two o’clock in the morning on April 27, as Sultana was making her way past a set of islands known as Paddy’s Hen and Chickens, disaster struck. In quick succession, three of her boilers exploded, spraying shards of iron and showers of scalding steam among the packed passengers.

A fire, small at first, but growing as shattered timbers fell into the destroyed boiler furnace, quickly spread through the ship. The resulting inferno forced hundreds of its passengers and crew to jump into the Mississippi to avoid incineration.

Unfortunately, the cold and swiftly moving water provided salvation to scant few. While a few hundred survivors were rescued from the river, or made it to shore, in the end, over 1,700 lost their lives—more than perished in the 20th century sinking of Titanic.
Sabotage?

As with any disaster, the search for its cause began immediately. Could something like Courtenay’s coal torpedo have caused the boiler explosion on Sultana? On April 28, Sultana’s chief mate reportedly told a Memphis newspaper that he believed that “there must have been some infernal machine put in the coal.” This story was repeated by newspapers throughout the country. The same Memphis paper later reported that it was told by a witness that he had seen Sultana’s furnace doors blow open moments before the boiler explosion, indicating a detonation of some sort occurred in the furnace. On May 2, a report in a Washington, D.C. paper noted “that a torpedo, prepared to represent a lump of coal, was the cause of the explosion of the steamer Sultana” and that an example of such device was found in Jefferson Davis’s office.11

Federal officials were also wondering about the use of a coal torpedo to attack Sultana. Within a week of the disaster, supervising inspector of steamboats J.J. Witzig was asked by an investigative body if “supposing a small shell or a number of shells containing about half pound of powder had been thrown in the fire under the boilers and there exploded, in what manner would such explosion effect the boilers of a steamboat?” The impetus behind this question could have been the finding of what appeared to be a piece of an exploded artillery shell on the remains of Sultana a couple of days after the disaster.
That the description used in the question so closely matched that of the coal torpedo begs the question of whether sabotage was on the minds of those investigating the cause of the disaster. As will be seen, however, no mention of sabotage was made in official military reports of the incident.

Talk of sabotage slowly faded until 1888 when a St. Louis newspaper article reported that a known Confederate saboteur named Robert Louden claimed to have used an explosive weapon that resembled a lump of coal to blow up Sultana.

The article reported that Louden had said he placed the weapon onboard the ship while she was taking on coal outside of Memphis. Because of the lack of corroborating evidence, very few took serious notice. Indeed, in 1962 author James W. Elliot stated that “Inevitably, the idea [of sabotage] was adopted by the usual weird assortment of cranks and publicity seekers.” Even Deb H. Rule’s “Sultana: A Case for Sabotage” article in the December 2001 issue of North & South Magazine (Volume 5, No. 1, p 76-87) did little to boost the idea that the ship could have been an identified target of a coal torpedo or a random victim of an action similar to the one planned in Wilmington, N.C., the previous year—the seeding of a coal barge with several torpedoes. As an aside, Louden was an alleged member of the pre-war St. Louis Liberty Fire Company, whose founder and last president was Thomas Courtenay.

Sultana Investigations

What did the investigations into the destruction of Sultana find? The military investigations chiefly focused on identifying those responsible for the overcrowding of the ship, while the thrust of a civilian inquiry was to deflect criticism of the steamship inspection organization in St. Louis.

Far from ruling out sabotage, none took a serious look into its probability or possibility.

Not surprisingly, the destruction of Sultana and the resulting loss of life prompted the commencement of no fewer than three investigations by the military and one by a civilian official. Within hours of the explosion, Major General Cadwallader Washburn, the commander of the District of West Tennessee in Memphis, had ordered a three-member commission to conduct an inquiry and that very morning it interviewed its first witness. A few days later, Secretary of War Edwin Stanton ordered Union Brigadier General William Hoffman, the Commissary-General of Prisoners in Washington, to go to Memphis and Vicksburg and conduct an investigation into the loss. While Hoffman was making his way west and Washburn moved the location of his inquiry to Memphis to obtain information about the loading of the steamboat, the commander of the Department of Mississippi, Major General Napoleon J.T. Dana, organized his own investigative commission.

The Dana Commission

The Dana commission from the beginning was

General Napoleon Jackson Tecumseh Dana. Photographed by Brady National Photographic Art Gallery, Washington, D.C. Dana also investigated the Sultana disaster. National Archives Identifier 530514. Local Identifier 111-175-I.
suspect as it was headed by Brigadier General Morgan Smith who was personally involved in the actions (and inactions) that led to the overcrowding of Sultana. It took testimony from only a handful of witnesses in a lackluster effort. Not surprisingly, Dana’s report was devoid of any definitive conclusions and only in response to pressure from Hoffman did Dana finally finger two junior officers as responsible for the “transfer and shipment of the prisoners” and the “character” of the transportation they received.

As to the cause of the explosion, Dana was silent.

The Washburn Investigation

Washburn’s investigation was much more thorough than Dana’s and involved the testimony of numerous passengers and surviving ship’s officers, including Sultana’s pilot, chief mate, and second engineer, who were all on watch at the time of the explosion (the first two in the pilothouse, the third manning the boilers). Notably, the last witness was Witzig, who testified that while a shell exploding in the furnace could result in the piercing of a boiler, it would not result in a boiler explosion. As expected, the commission in its conclusion concentrated on the overcrowding of the ship. As to the cause of the explosion it stated that although the repairs made in Vicksburg were insufficient they “did not materially endanger the safety of the boat” and that the cause of the explosion “was by there not being sufficient water in the boilers.” Washburn simply concurred with that finding. Again, there was no discussion concerning sabotage.

The Hoffman Investigation

Not surprisingly, career soldier Hoffman’s investigation was even more thorough than that of Washburn. Reviewing the documents from both Dana’s and Washburn’s work, he obtained testimony from many additional witnesses, including Sultana’s chief engineer (whom he met in Pittsburgh), an expert boiler maker, and a noted riverboat chief engineer. Hoffman also personally inspected a piece of boiler taken from the wreck. In his lengthy report to Stanton, he used the bulk of it to discuss the events and actions that led to the overcrowding of Sultana and who was responsible. As to the cause of the explosion he stated that there was nothing to show
that the boiler patch installed in Vicksburg was to blame. Overall, he very specifically stated that the information that he had did “not enable him to form a positive opinion” and “until the boilers can all be examined no reliable conjecture can be made to account for [the explosion].” Once again, the subject of possible sabotage was not mentioned.

The Witzig Investigation
The final look into the cause of Sultana’s boiler explosion was conducted by J.I. Witzig, the supervising inspector of steamships for the district headquartered in St. Louis. With a motive that was a bit suspect (his office inspected Sultana’s boilers just prior to her final journey and declared them safe) and some questionable math, he concluded that the boiler explosion was a direct result of the patch installed at Vicksburg. In his words “the boilers were imperfectly repaired . . . which the engineer alone can be held responsible.” He then had Wintringer’s engineer license revoked. In appealing this decision, Wintringer demanded that the local Board of Inspectors review the record and pass judgment. This it did, and Wintringer had his license reinstated. Additionally, the Board—composed of the two men who conducted Sultana’s final inspection—placed the entire blame for the explosion on low water levels in the boilers caused by the ship’s dead second engineer. Interestingly, within two years one of the inspectors would be accused of bribery, and Witzig, who had no steamboat experience when appointed to his position, would be removed for “malfeasance.”

Old Theories Challenged, New Theory Examined
Of the four investigations into the cause of Sultana’s boiler explosion, no two had come to the same conclusion: the thickness of the patch installed in Vicksburg; low levels of water in her boilers; the amount of careening experienced during Sultana’s interrupted trip upriver; the condition of the metal plates making up the boilers. All were examined at some point and were factors contributing to the various conclusions.

As all at the time seemed acceptable and continue to seem acceptable today, perhaps a look into sabotage was not needed. But what if the underlying understandings used to reach these conclusions were faulty or incomplete?

In 2013, Patrick Jennings, an engineer with Hartford Steam Boiler Inspection and Insurance Company, a firm established in 1866 as a direct result of the Sultana disaster, published a five-part blog and a short report on the company’s website. The same year he was the featured presenter at the National Board of Boiler and Pressure Vessel Inspectors’ 84th general meeting. In these he gave a modern engineering view of the cause of Sultana’s boiler explosion. Applying his findings and explanations, each of the causes of the boiler explosion found by the various investigations become suspect and somewhat incomplete, thus increasing the need to consider that Sultana was the victim of sabotage.

Inspector Witzig identified the thickness of the patch installed at Vicksburg as the cause of the explosion—as it was of thinner material than the rest of the boiler metal, it was not able to withstand the allowed operating pressure of the boiler and gave way, causing the catastrophic loss. In looking at this, Jennings pointed out that Witzig was correct in that the acceptable operating pressure that the patch should have been subjected to was less than the pressure at which Sultana was operating when the boilers exploded. However, he also noted that Witzig overlooked (or ignored) the factor of safety that is used to calculate acceptable operating pressures. This meant that iron plate of the thickness of the original boiler and of the thickness of the patch would both be able to withstand pressures greater than what was present the night of the explosion. Thus, the thickness of the patch did not cause the boiler explosion.

Much is made both then and now of the water level in the boilers and the careening of the ship. Then, as now, a boiler explosion would occur if the amount of steam in the boiler were to suddenly increase. What was not
completely understood in the 1860s was what would cause that to happen. At the time it was thought that low water levels were the leading cause. Indeed, the man who repaired the boiler on Sultana stated that "as long as there is a sufficiency of water in the boiler there is no danger of explosion." The thought was that if water levels were low, portions of the metal plates making up the boiler would be exposed to incredible heat from the furnace on the outside without the cooling effect of the water on the inside, thus becoming red hot. When water then came into contact with the red hot metal, it would immediately turn to steam thus over-pressurizing the boiler, causing it to explode. The effect of this would be magnified if the boilers were in a ship that was rocking from side to side. Even if this were true, there was no conclusive evidence that either was present, even though Washburn had indicated that a low water level in the boilers was the cause of the explosion. Both engineers who stood watch indicated that there was sufficient water in the boilers. Additionally, the two men who were in the pilothouse at the time of the explosion testified that Sultana was not rocking and General Hoffman in his report noted that "there is nothing to show that there was any careening of the boat at the time of the disaster... on the contrary, it is shown that she was running evenly." The increase in steam must have come from another source.

Jennings points out that it most likely came from a sudden loss of pressure within the boilers due to a mechanical failure such as a hole. A hole would cause a decrease of pressure in the boiler. As the pressure dropped, the boiling point of the water inside would also drop, flashing some of the water into steam that would work to re-pressurize the boiler. If the hole is small enough, or the boiler strong enough, the pressure may be contained and the boiler's contents just slowly leak out—just as in the Sultana's leak prior to reaching Vicksburg. If, however, the decrease in pressure is sufficient to cause an amount of water to flash to steam that further opens the initial hole or to cause new ones, there may be an explosion as more and more water flashes to steam. Jennings points out that "calculations show that the amount of steam generated from red hot steel is insignificant compared to that generated from a simple depressurization of the boiler."²

Jennings then turned his attention to what may have caused a loss of pressure. In analyzing the situation at the time, he came to a three-part conclusion. Firstly, the iron used to construct boilers in the mid-nineteenth century, Charcoal Hammered No. 1 (CH1), did not have the properties that were optimal for boiler construction. Chiefly, repeated heating and cooling results in the metal becoming brittle, "breaking with a sudden jerk." Second, the water that was put into Sultana's boilers, especially on the lower Mississippi, contained huge amounts of sediment and minerals. The sediment would settle on the bottom of the boilers, and the minerals would form scale on the boilerplates and boiler tubes. Each of these would act as an insulator, slowing the transfer of heat to the water, thus causing the boilerplates to overheat, increasing the brittleness of the iron. Finally, the design of the boilers used in Sultana made cleaning the sediment and scale from inside the boiler difficult. This increased the buildup of these insulating materials, leading to increased overheating of the boiler metal, which then would become even more brittle.

Jennings concluded that Sultana's boilers were destined to fail but the question remains—what was the immediate singular action that caused the explosion?

Jennings wrote that "[a]ll it took was one little break and a drop in pressure to unleash the steam's power, as the boiler clearly could not handle the sudden pressure." This is the very situation that the Courtenay coal torpedo was designed to exploit.

Summary

Will the cause of the explosion onboard Sultana that resulted in one of the largest maritime losses of life in history ever be identified beyond a doubt? Each of the several possible causes can be supported or refuted without having to go into the world of wild "conspiracy theories." Even the recent discovery of Sultana's remains most likely will not add to the library of knowledge as decades of decay have most likely obliterated any evidence that might have existed in the boilers and their surroundings. Perhaps someday the definitive letter or diary will be found in a dusty attic somewhere—but even
then, such a find will most likely raise as many more new questions as answers. Although seen by some as far-fetched, nothing so far has ruled out the possibility that the use of a coal torpedo, the piece of “coal-covered” metal in the Bennington Museum, could be the cause of the destruction of Sultana and the deaths of nearly two thousand individuals. Perhaps the best we can do is to continue the study keeping an open mind and always mindful that in war, not all deaths are on the battlefield.

Notes
1. Interestingly, Austin Lightfoot Peay, the uncle of Courtenay’s wife, Mildred, was related by marriage to President Lincoln’s second wife, Mary Todd Lincoln, and was a close advisor, Joshua Fry Speed. The Speeds were Peay’s brothers-in-law and their childhood home, Farmington, was the site of the Courtenay’s wedding.
3. Indeed, its first year in service, Sultana was sold to new owners at a significant profit.
4. Sultana had received news of Lincoln’s assassination while at Carr. Dressed in black and carrying an extra load of newspapers announcing the assassination, she was the first source of this news at each stop thereafter.
5. There is evidence that repairs to Sultana’s boilers had been made in each of her previous two trips to New Orleans. Also, while in St. Louis prior to her previous trip to New Orleans, she had new tubes installed in her boilers.
6. It is impossible to get a full appreciation of the cause that led to the explosive overboiling of Sultana in an article of this length. Gene Salecker’s Disaster on the Mississippi: The Sultana Explosion, April 27, 1865 and Jerry G. Potter’s The Sultana Tragedy: America’s Greatest Maritime Disaster include what are perhaps the best descriptions of the confusion that was Viborg on April 23-24, 1865. Both books should be mandatory reading for any student of the Sultana disaster.
7. The steamboat Pauline Carroll left Viborg about an hour prior to Sultana with fewer than 20 passengers. Similarly, Lady Gay left Viborg while Sultana was loading, without a single former passenger onboard.
8. A barrel of coal weighs approximately 80 pounds. Allan Huffman stated in Sultana: Surviving Civil War, Prison and the Worst Maritime Disaster in American History that Sultana onboard “thousand barrel bags” worth of coal, the amounts are most likely equivalent and based on the amount a single man could carry (barrel or bag).
9. That not all four boilers exploded was determined when an intact boiler was pulled from Sultana’s remains in October 1865.
10. The stories of those who survived the explosion and of their rescuers are dramatically told in many books and articles including Salecker (see Recommended Viewings and Sources), Potter (see Recommended Viewings and Sources), and Huffman (see Recommended Viewings and Sources).
11. This is the coal torpedo that is currently held by the Bennington Museum, Bennington, Vermont.
13. Many such organizations operated in the city prior to the adopting its own professional fire department in 1868.
14. In 1865, Frederic Speed, who was involved in the loading of the soldiers onto Sultana was court-martialed on two specifications of neglect of duty. While there was testimony concerning the cause of Sultana’s boiler explosion, it was not a direct focus of his trial.
15. Secretary of War Edward Stanton would order General Washburn to conduct such an investigation in a telegram on April 30, 1865.
16. The second engineer, Samuel Celeitis (no relation) was badly scalded and would die shortly afterwards.
17. Huffman graduated from West Point in 1829 along with Robert E. Lee and Joseph E. Johnston.
18. Wilcox was most likely appointed to his position because of his efforts early in the war in keeping Missouri in the Union through his connections with St. Louis’s German community and his close association with the Bleil family. Wintringer would continue his career as an engineer and eventually became a well-respected steamboat master.
19. There are also indications that the initial explosion occurred on the back of the boiler, while the patch used to repair the leak was at the front.
20. Ironically, because of the large amount of potential energy stored in the water inside a boiler, a boiler that is more full of water can cause a more destructive explosion than one that is nearly empty.
21. In 1962, Memphis attorney and Sultana author Jerry O. Potter found what is believed to be the wreckage of Sultana 32 feet under a soybean field in Arkansas about four miles from Memphis.

Recommended Viewings and Sources on Sultana Disaster:
“Civil War Sabotage,” History Detectives, Special Investigations, Season 11, Episode 1, PBS.
http://www.pbs.org/kob/historydetections/investigation/civil-war-sabotage/
Adam I. Kane. The Western River Steamboat (College Station, TX: Texas A&M University Press, 2004).
Records of the Sultana Disaster, April 27, 1865. National Archives and Records Administration, Microfilm M1879 (3 rolls), Record Groups 93, 93, 153, 233, and 249.

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