

Abraham Lincoln

as an Advocate of Improved Transportation

by Jason Emerson

Abraham Lincoln

February 12, 1809–April 15, 1865

“The people and events of the past serve no useful purpose if they are forgotten.”



Lincoln crossing Potomac Creek Bridge on the way to review the Army of the Potomac. By Edwin Forbes, 1863. Library of Congress: LC-USZC4-4410

This issue of the *DTJ* commemorates the bicentennial year of Abraham Lincoln's birth with a story that our readers will find especially engaging. Sincere thanks go to Jason Emerson for sharing transportation insight from Lincoln's perspective and for sharing his new release, *Lincoln the Inventor*.

Abraham Lincoln is renowned today for many ideas and accomplishments, but the one initiative to which he gave more attention than almost anything else was his desire to improve transportation throughout the US. He once said during his early political career that his “highest ambition” was “to become the DeWitt Clinton of Illinois” and improve the internal transportation of his home state as Clinton did for New York with the Erie Canal. Though Lincoln's support of transportation and infrastructure eventually was supplanted by his opposition to slavery's expansion, it never was abandoned or forgotten. In fact, Lincoln's belief in internal improvements spanned his entire political life, influenced a number of his actions as president, and even led to an invention and patent of his own creation.

Abraham Lincoln understood the need for reliable transportation in the early US through his own experiences without it. He had grown up on the frontier regions of Kentucky and Indiana where roads were poor, railroads nonexistent, and the reliability of river travel unpredictable. As a farmer he knew the importance of quality roads and waterways to get produce to markets; as a river boatman who worked the Ohio, Illinois, and Mississippi Rivers, he understood the need for waterways deep enough to travel and clear of obstructions. These early experiences and his affiliation with the Whig Party led him to become a political champion of Henry Clay's “American System,” which preached the gospel of “internal improvements” throughout the US.

Even in his first failed run for state legislator in 1832, the 23-year-old Lincoln focused his campaign on his great belief in the creation of good roads, bridges, railways, and canals and the clearing of impediments to improve river travel. “Time and experience have verified to a demonstration, the

public utility of internal improvements,” Lincoln declared in his first printed political pronouncement. “That the poorest and most thinly populated countries would be greatly benefited by the opening of good roads, and in the clearing of navigable streams within their limits, is what no person will deny.” Throughout his ensuing four terms in the Illinois state legislature, from 1834 to 1842, Lincoln was a vociferous supporter of internal improvements, and in the 1836 session helped secure \$10 million to construct a statewide system of roads, canals, and railroads financed by state bonds.

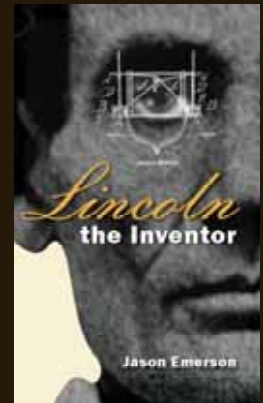
As a member of the US House of Representatives from 1847 to 1849, Lincoln continued to advocate internal improvements, and even gave a speech on the House floor solely dedicated to it. “The question of internal improvements is now more distinctly made—has become more intense—than at any former period,” he said on June 20, 1848, in response to a previous veto message by President James K. Polk. “It can no longer be avoided.” Lincoln then went on to argue against Democrat’s objections and assert that such an improved system of national transportation would not overwhelm the Treasury, nor offer unequal benefits to different localities, nor be unconstitutional.

As President during the Civil War, Lincoln espoused the importance of transportation through the building and improving of both vehicles and infrastructure. From a military standpoint, Lincoln understood the application of railroads in transporting armies and supplies around the country. He also supported and encouraged new technology to aid the Union war effort, such as the creation of mobile gun carriages, ironclad ships, and submarines. In a civilian capacity, Lincoln viewed improved transportation as necessary to encourage westward expansion and agricultural improvements. One of his great domestic achievements (independent of the war) was his support for a transcontinental railroad and telegraph line and his signing into law four Pacific Railroad Acts. Concomitantly, Lincoln also advocated and signed into law the Homestead Act (free dispersal of public lands out west subject to improvement and five years of residence), the first Morrill Land-Grant Act (donating public lands to states and territories that may provide colleges for the benefit of agriculture and

Just Released!

Lincoln the Inventor

The complete story of Abraham Lincoln's invention and patent, and how his mechanical genius shaped his life Southern Illinois University Press; 112 pages; January 8, 2009



In addition to his other accomplishments, Abraham Lincoln was the only US president to hold a registered patent. Jason Emerson offers the first treatment of Lincoln’s invention of a device to buoy vessels over shoals and its subsequent patent in May 1849 as more than mere historical footnote. As Emerson demonstrates, Lincoln’s scientific curiosity helped drive his lifelong intellectual development and influenced his treatment of inventors and innovators both as a lawyer and as president.

In this fresh contribution to the field of Lincoln studies, Emerson shows how, when, where, and why Lincoln created his invention and demonstrates how his penchant for inventions and discoveries informed his political belief in internal improvements and free-labor principles. Lincoln’s interest in the topic led him to try his hand at scholarly lecturing; later, as president, Lincoln encouraged and occasionally contributed to the creation of new weapons for the Union.

During his extensive research, Emerson uncovered correspondence between Lincoln’s son Robert and his presidential secretary, John Nicolay, that revealed the existence of a previously unknown draft of Abraham Lincoln’s lecture “Discoveries and Inventions” (the known draft of which is included in this book). Emerson not only examines the creation, delivery, and legacy of this lecture, but he also reveals for the first time how Robert Lincoln owned this unknown version, how he lost and later tried to find it, the indifference with which Robert and Nicolay both held the lecture, and the decision to give it as little attention as possible when Nicolay and John Hay published President Lincoln’s collected works in 1894.

The story of Lincoln’s invention extends beyond a boat journey, the whittling of some wood, and a trip to the Patent Office; the invention had ramifications for Lincoln’s life from the day his flatboat became stuck on a milldam in 1831 until the day he died in 1865. In addition to giving a complete examination of this important yet little-known aspect of Lincoln’s life, Emerson delves into Lincoln’s intellectual curiosity and creativity, both as a civilian and as president, and considers how those traits contributed to his greatness and allow new insight into his character. By learning to understand Lincoln the inventor, readers will better understand Lincoln the man.

Jason Emerson, an independent historian and freelance writer living in Cazenovia, NY, has published numerous articles and book reviews in both scholarly and popular publications on the subject of Abraham Lincoln. An earlier work, “The Madness of Mary Lincoln,” published in 2007, revealed new examination of Mary Todd Lincoln’s insanity case based on Jason’s discovery of Mary Lincoln’s twenty “lost” insanity letters, for which historians had been looking for eighty years. To learn more about the author and his writing, visit: www.jasonemerson.com.

mechanic arts), and the creation of the Department of Agriculture.

In private life, Lincoln was not a “railroad attorney,” but he did more often than not argue cases that favored transportation expansion, often in his work for railroads. As a state legislator, Lincoln helped incorporate the first Illinois Central Railroad Com-

pany, and, as Mark E. Steiner shows in his book *An Honest Calling: The Law Practice of Abraham Lincoln*, Lincoln worked on retainer for the company for nearly ten years and about 50 cases. He represented the company in local, state, and federal courts, regarding issues such as eminent domain, right-of-way, and tax and insurance liabili-

A March 1924 issue of *Popular Mechanics* first brought public attention to Lincoln's invention. Another transportation topic highlighted in the same magazine included notice of "auto bodies made of fabric—to end squeaks and rattles" on the road. The automobile design was manufactured in France and had an added time saving benefit since the body did not require dusting or polishing.



ties. Lincoln's most lucrative case was one for the Illinois Central against a suit by McLean County, Illinois, for tax liability. Lincoln won the suit and submitted a bill for \$5000, which the company refused to pay. Lincoln brought suit to collect and won the biggest fee of his legal career.

One of the most impressive and unknown offshoots of Lincoln's unshakable belief in improving transportation was his own invention of a "device to buoy vessels over shoals" to help improve river travel. Running aground on sand bars and other river impediments was a common threat to shallow water navigation in the mid nineteenth century. As a young river boatman in the Midwest, Lincoln knew this well. In fact, one of Lincoln's life-changing moments occurred in 1831 when a flatboat he was crewing loaded with hogs and barrels of bacon, pork, and corn became grounded on the Sangamon River below the town of New Salem, Illinois.

With the front hanging out over the Rutledge milldam and the rear taking on water, Lincoln began straining every muscle to pry the boat over the dam. As the flatboat began taking on more water, Lincoln directed the crew to unload the hogs onto a borrowed boat while he ran into the village and borrowed an augur from the cooper shop. He then bored a hole in

On his return to Washington, Lincoln submitted his application for a patent for a device for "Buoying Vessels Over Shoals," along with his model. The patent was approved as Patent Number 6469 on May 22, 1849—making Lincoln to this day the only US President to hold a patent.

the end of the boat hanging over the dam. The cargo barrels were rolled to the bow, the boat tilted, the water drained out, and the boat floated free. Lincoln's ingenuity impressed his employer, Denton Offutt, who later opened a general store in New Salem and hired Lincoln as a clerk.

Years later, in the autumn of 1847, Congressman Lincoln was returning home to Springfield from Washington. As his steamship, the *Globe*, passed up the Detroit River, it came upon another steamboat, the *Canada*, which had run aground. From the deck of the *Globe*, Lincoln watched as the *Canada's* captain ordered his crew to collect all the empty barrels, boxes, and loose planks on the ship and force them under the sides to buoy the boat over the shallow water. Lincoln, an experienced boatman with an intensely curious and mechanically inclined intellect, watched the procedure with great interest. The event certainly must have reminded him of his experience on the New Salem milldam, and for the rest of his trip home he considered creating a solution to this common waterway difficulty.

His idea used inflatable air chambers—similar to giant bellows—attached on each side of the hull of a steamboat (or any other vessel) just below the water line, with a system of sliding spars or shafts, ropes, and pulleys to fill the chambers with air. Inflation of the chambers could be achieved by either steam power or manpower and could be done whenever needed to buoy the ship over obstructions without the need to discharge the ship's cargo. In Lincoln's vision, the bellows

could be inflated simultaneously or individually, as the case may require, and then easily deflated and folded up for storage in housing boxes secured to the lower guard of the vessel when not in use.

Lincoln spent eight weeks writing a description of his invention and assisting a local mechanic in making a model of his design. His law partner, William Hern-

don, remembered how Lincoln would work on the model in the office, and, while whittling the spars for it, talk about "the revolution it was destined to work" in steamboat navigation. On his return to Washington, Lincoln submitted his application for a patent for a device for "Buoying Vessels Over Shoals," along with his model. The patent was approved as Patent Number 6469 on May 22, 1849—making Lincoln to this day the only US President to hold a patent.

Interestingly, after all his work to invent and patent his device, Lincoln never sought to publicize or market his invention. His collected writings show no evidence that he ever thought about it again. As Patent Office historian Harry Goldsmith has stated, the creation "just became another one among those thousands of patents which fail of commercial success." Historian Mark E. Neely suggested that Lincoln's invention went nowhere "probably because the weight of the apparatus would cause the problem he was trying to solve," ie, grounding the boat in the river bottom.

Whatever the explanation, more than one historian has surmised that Lincoln's invention may have furthered modern technology more than critics realize; the engineering ideas behind his buoyant chambers actually may have advanced the creation of modern ship salvaging and submarine construction. His work in support of railroad advancement and construction helped set legal precedents in Illinois, aid the Union army, build the transcontinental railroad, and advance westward expansion across America. DTJ