

## The SS Columbia

*Note: The client asked me to produce an overview of the history of steamboats/ the SS Columbia to include as a preface to the archival documents they were donating.*

### **The History of the Steam Vessel**

The early nineteenth century gave birth to the era of the steam powered vessels. While there are a few exceptions to this date, steam ships were popularised around this period. In 1807 *The Clermont* in New York, designed by Robert Fulton, became one of the first commercial paddle steamboats in America, carrying passengers between New York City and Albany.<sup>1</sup>

These vessels initially used paddlewheels, powered by a steam engine, to propel the vessel through water. While paddlewheels could be placed on the rear of a ship (sternwheelers), they could also be placed on its side (sidewheeler). Interestingly, paddlewheels worked a variety of ways. Initially, and into the late 1800s, most steamboats used the radial paddlewheel. With no moving parts, the blades pass through the water at a fixed angle.<sup>2</sup> However, towards the end of the century, radial paddlewheels were deemed inefficient compared to the invention of the new feathering paddlewheel. The feathering paddlewheel was designed to combat the loss of power that occurred as the paddle entered and exited the water. Instead, using levers and linkages to change the angle of the paddles, a feathering paddlewheel attempted to keep paddles almost vertical for the period in which they are in the water.<sup>3</sup>

With time, however, screw-propellers generally replaced paddlewheels to become the most popular mechanism of propulsion. A propeller proved more efficient than paddlewheels as it allowed consistent propulsion regardless of the vessel's depth. Furthermore, because propellers were far smaller, lighter and better positioned, they were less likely to be damaged.<sup>4</sup> Some vessels, however, had both a paddlewheel and a propeller as paddlewheels could work more efficiently where the vessel's depth was not so much of an issue.<sup>5</sup> Today the prefix 'PS' designates a paddle steamer, while 'SS' shows that it is a screw-propeller steamer.

Over time, the type of engine used changed too. Most notably, engines evolved from vertical beam engines (also known as walking beam engines) to inclined engines. Though vertical beam engines were slow turning owing to the long strokes the machine took, the vessels were usually surprisingly fast, and, when properly maintained, rarely wore out.<sup>6</sup> With time though, inclined engines replaced the walking beam on side-wheel steamers. These engines had

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<sup>1</sup> 'Clermont Steamboat', Encyclopædia Britannica, published August, 4, 2017  
<https://www.britannica.com/topic/Clermont-steamboat>.

<sup>2</sup> Norman Brouwer, *Steamboats on Long Island Sound*, (Charleston: Arcadia Publishing, 2014), 29.

<sup>3</sup> William Ewen, *Steamboats on the Hudson River*, (Charleston: Arcadia Publishing, 2011), 14.

<sup>4</sup> D. Taylor, *Resistance of Ships*, (London: Whittake & Co, 1893), 201.

<sup>5</sup> Ewen, *Steamboats*, 16.

<sup>6</sup> Ewen, *Steamboats*, 15.

crankshafts placed in inclined angles up to the main deck level. The cylinders sat diagonally in the lower hull and little of the machinery rises higher than the shafts of the paddle wheels.<sup>7</sup>

By the 1830s, steamboats were the conventional method of transportation in navigable waterways such as canals; steam vessels also littered the Great Lakes. There were both day and night liners that would take passengers from point A to point B like never before.

By the 1850s, however, as America grew larger and the western frontier expanded, demand for reliable, safe and cost-effective means of transport soared. Thanks to advancements made in the industrial revolution, this was now a realistic possibility. Resultantly, the rapid production of roads, canals, steamboats and railroads across America sparked a Transport revolution. By 1860, the North had constructed rail networks that connected every major city.<sup>8</sup>

Naturally, with such technology now available, the ease, speed and reliability of steamboats were called into question. Fortunately for the steamboat industry, however, the issue was not as clear cut as this initially. Certainly, in some cases, the railroads and steamboats competed, however, at times they also worked together to take travellers further. In 1855, Alfred Van Santvoord of the Hudson River Steamboat Company, for example, bought the day liner *Alidi* and regular day trips became commonplace between Albany and New York City. Acknowledging the benefits of these boats, the New York Central Railroad paired with the Hudson River Steamboat Company and ran customers from Chicago to Albany where they were then transferred to a steamboat and travelled the rest of the journey to New York City.<sup>9</sup>

Naturally, it also took a lot of time and money to construct the railroads, and so some areas were still best served by steam. As Francis Pruche argued, 'to list the steamboats that engaged in army transport in the decade and half before the Civil War is virtually to make a catalogue of all the steamers on the Mississippi River.'<sup>10</sup>

When railroads expanded even more, competition grew too strong. While night boats were unable to adapt and fell out of favour, many day boats survived by becoming excursion and sightseeing vessels.<sup>11</sup> The *SS Columbia*, the *Put-in-bay*, and the *Peyer Stuyvesant*, are all examples of excursion boats that ferried passengers from major cities to different amusement

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<sup>7</sup> Brouwer, *Steamboats*, 39.

<sup>8</sup> Claude Wiatrowski, *Railroads Across North America*, (Minneapolis: MBI Publishing Co., 2007), 12.

<sup>9</sup> "A Short History of the Hudson River Day Line", Peter Hess, New York History Blog, published February, 4, 2017, <http://newyorkhistoryblog.org/2017/02/04/a-short-history-of-the-hudson-river-day-line/>.

<sup>10</sup> Francis Prucha, *Broadax and Bayonet: The Role of the US Army in the Development of the Northwest, 1815-1860*, (Lincoln, University of Nebraska Press, 1995), 178.

<sup>11</sup> Thomas Rinaldi & Robert Yasinsac, *Hudson Valley Ruins: Forgotten Landmarks of an American Landscape*, (University Press of New England, USA, 2006), 207.

parks in the surrounding areas.<sup>12</sup> Others allowed passengers to spend the day enjoying fishing, crabbing or salt-water bathing for example.<sup>13</sup>

Importantly too, steam vessels had a variety of uses, they were not just used for transport or leisure activities. During the civil war, for example, the *New World* steamboat was converted into a civil war hospital to help treat injured troops.<sup>14</sup> Steamboats were also used as barracks for troops during this time too. Alternatively, some steamboats were turned into museums or restaurants and have been preserved for historical purposes.<sup>15</sup>

By the mid to late-twentieth century, however, excursion steamboats too began to really suffer. To make matters worse, owing to World War Two, fuel was scarce, and some boats were taken out of service to aid military efforts instead.<sup>16</sup> Eventually, though sight-seeing vessels replaced the traditional day liners, over time smaller pleasure crafts replaced the sight-seeing vessels themselves.<sup>17</sup> An increased ability to possess your own boat, combined with the soaring popularity and affordability of cars, meant that excursion vessels, and steamboats themselves, eventually became a thing of the past.

### **Key Figures: Frank E. Kirby & Louis O. Kiel**

Moving on to key figures within the steam vessel industry, born 1849, just as the transport revolution had really accelerated, Frank E. Kirby grew to become one of the most highly regarded naval architects and marine engineers in American history.

In his youth Kirby studied naval architecture at the Cooper Institute Night School in New York and soon became employed by the Delameter Iron Works of New York. For one of his first major projects Kirby designed an iron hulled ship; producing such an efficient, powerful and speedy ship, his career was set. Eventually Frank joined his father's business, the Detroit Dry Dock Company, and became their lead Engineer and Naval architect.<sup>18</sup>

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<sup>12</sup> "The SS Columbia, ghost ship on the Buffalo River", Mark Sommer, Buffalo News, published July, 30, 2017, <http://buffalonews.com/2017/07/29/steamboat-past-charges-future/>.

<sup>13</sup> Patsy Fletcher, *Historically African American Leisure Destinations Around Washington D.C.*, (Charleston: The History Press, 2015), chap. 3, [https://books.google.co.uk/books?id=5MI4CwAAQBAJ&lpg=PT49&ots=le\\_dcWEqIU&dq=amusement%20parks%20to%20get%20to%20by%20excursion%20steamships&pg=PT80#v=onepage&q=amusement%20parks%20to%20get%20to%20by%20excursion%20steamships&f=false](https://books.google.co.uk/books?id=5MI4CwAAQBAJ&lpg=PT49&ots=le_dcWEqIU&dq=amusement%20parks%20to%20get%20to%20by%20excursion%20steamships&pg=PT80#v=onepage&q=amusement%20parks%20to%20get%20to%20by%20excursion%20steamships&f=false)

<sup>14</sup> Ewen, *Steamboats*, 18.

<sup>15</sup> Arkansas Residents, *Somewhere Apart: My Favourite Places in Arkansas*, (Fayetteville, University of Arkansas Press, 1997), 59 & Ewen, *Steamboats*, 71.

<sup>16</sup> Brian Cudahy, *How We Got to Coney Island: The Development of Mass Transportation in Brooklyn and Kings County*, (New York: Fordham University Press, 2002), 243.

<sup>17</sup> Thomas Rinaldi & Robert Yasinsac, *Hudson Valley Ruins: Forgotten Landmarks of an American Landscape*, (University Press of New England, USA, 2006), 210.

<sup>18</sup> "Canadiana Architect Frank E. Kirby", SS Canadiana Project, Accessed October, 8, 2017, <http://scanadiana.com/kirby.html>.

Kirby heavily influenced steamboat design for following generations. Primarily specialising in steamship design and the paddle-wheel, Kirby was famed for designing and building luxurious passenger steamers. These vessels enabled greater opportunities for passengers to venture further West than traditional means had provided. Further, these steamers came to be known colloquially as “floating palaces” due to the excessive lavishness of their design. The SS Columbia, for example, had a new girder system that allowed for a dance floor on board the boat; as such, it was the first steamboat in US history to have a proper ballroom. These new steamers came to form the iconic backdrop of the Great Lakes and inspired generations of designers to follow his lead.<sup>19</sup>

Beyond passenger vessels, however, Kirby also designed and built vessels with other purposes in mind. He developed the *Landsdown* River railroad car ferry, which, for a while this was the largest ship on the Great Lakes.<sup>20</sup> Additionally, Kirby designed the *St Ignace* of 1888. In this build he pioneered the bow propeller, the suction of which drew the supporting water from beneath the ice enabling it to break it as it moved forward.<sup>21</sup> Finally, at the start of the Spanish-America War, devoid of any troop carriers Kirby was asked to remodelled fourteen ships to be used to aid American efforts. He achieved this feat in record time and consequently rendered aid of immeasurable value.<sup>22</sup>

Though he died in 1929 in New York City, his legacy lives on today too. In 1904 the *PS General Slocum*, a passenger steamboat in New York, caught fire and sank. An estimated 1,021 of the 1,342 on board died.<sup>23</sup> With his expertise in identifying and solving problems with ships, Kirby helped draw up the Steamboat Inspection Code revision to prevent further tragedies like this from occurring in the future.

Kirby often collaborated with interior designer Louis O. Keil. Keil was responsible for the interior design of several steamers that Kirby orchestrated – among them the *City of Detroit III*, the *SS Ste Claire*, and the *SS Columbia*.<sup>24</sup> His work, however, was not limited to steamers. In 1913 Keil became the architect of the Iroquois Avenue Christ Lutheran Church sanctuary.<sup>25</sup>

### **The SS Columbia**

The *SS Columbia* became one of Kirby’s and Keil’s most iconic pieces. In 1902, the Detroit Belle Isle and Windsor Ferry Company hired the Detroit Dry Dock Company, owned by Kirby,

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<sup>19</sup> SS Canadiana, “Canadian Architect”.

<sup>20</sup> George Hilton, *The Great Lakes Car Ferries*, (Davenport, Montevallo Historical Press, 2003), 22.

<sup>21</sup> Grant Brown, *Ninety Years Crossing Lake Michigan: The History of the Ann Arbor Car Ferries*, (Ann Arbor: University of Michigan Press, 2008), 19

<sup>22</sup> SS Canadiana, “Canadian Architect”.

<sup>23</sup> Luc Sante, *Low Life: Lures and Snares of Old New York*, (New York: Farrar, Straus, Giroux, 2003), 16.

<sup>24</sup> Gordon Bugbee, *The D-III: The Story of the Sidewheel Steamer “City of Detroit III”*, (Detroit: Great Lakes Maritime Institute, 1976), 10.

<sup>25</sup> “History of Iroquois Avenue Christ Lutheran Congregation”, Iroquois Christ, Accessed October, 9, 2017, [http://iroquoischrist.org/wordpress/?page\\_id=643](http://iroquoischrist.org/wordpress/?page_id=643).

to build the SS Columbia in Wyandotte, Michigan.<sup>26</sup> On the 8<sup>th</sup> July 1902, the SS Columbia entered service. Its fundamental purpose as an excursion steamer was to ferry passengers 18 miles (29km) between Detroit and Boblo Island amusement park on Bois Blanc Island in Ontario, Canada. With a 1,200-horsepower triple expansion steam engine, three decks, and at 207 ft long with a 45 ft beam, the vessel carried up to 3,200 passengers in its heyday.<sup>27</sup>

The SS Columbia was unique. As mentioned previously, a new girder system that graced the Columbia allowed for a dance floor on board the boat, complete with a small bandstand area. It's opulence too cannot be understated; the *Columbia* had a grand staircase, Corinthian pilasters, and mahogany panelling to compliment the grandness of its ballroom.<sup>28</sup>

In 1910, owing to high demand at the park, Kirby built a similar propeller-driven excursion steamer named the *Ste. Claire*.<sup>29</sup> The *SS Columbia* also inspired a wave of other excursion steamers throughout the era, from the *Americana* and *Canadiana*, to the *Peter Stuyvesant*.

Throughout its many years of operation, the *Columbia* encouraged people from all backgrounds to board the boat, mingle, and seek pleasure on the lake. However, there were two exceptions to this rule. Firstly, and understandably so, the company discouraged the rowdy, the rough, and the boisterous. Secondly, however, and unthinkable today, the *Columbia* adopted a policy that excluded Americans of 'colour'.<sup>30</sup> Resultantly, the *SS Columbia* made headlines in the 1940s for all the wrong reasons.

In June 1945 a class from Commerce High School embarked on a trip using the *SS Columbia*. Thirteen girls and their teacher paid 85 cents for a round-trip ticket. All of these women were white, with the exception of Sarah Elizabeth Ray, a black teenager. Though she was initially allowed on board without any questions, after a period of time elapsed the assistant general manager stated that Miss Ray could not join the trip because she was coloured. Eventually, after being faced with threats that she would be forcibly ejected, Ray left the premises and filed a discrimination law suit.<sup>31</sup>

After enlisting the help of the NAACP, Ray took the Bob-Lo Excursion Company to court. Ray's defence argued that the Company had breached the Michigan Civil Rights Act. The Act held it was illegal to deny a passenger transport because of his or her race or color. Bob-Lo Excursions', on the other hand, argued that because the route traversed the Canadian border, they were consequently involved in international commerce, and as a result should not

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<sup>26</sup> "The History of Bob-Lo Steamers", Bois Blanc Steamers, Accessed October, 9, 2017, <http://www.boblosteamers.com/history.html>.

<sup>27</sup> "History of the Boat", The SS Columbia Project, Accessed October, 9, 2017, <https://sscolumbia.org/history/>.

<sup>28</sup> "History of the Boat", The SS Columbia Project.

<sup>29</sup> "The Ste. Claire: Describe Present and Historic Physical Appearance", Maritime Heritage, Accessed October, 9, 2017, <https://npgallery.nps.gov/pdfhost/docs/NHLS/Text/79001177.pdf>.

<sup>30</sup> "Bob-Lo Excursion Co. v. Michigan. 333 U.S. 28 (1948)", Justia US Supreme Court, Access on October, 9, 2017, <https://supreme.justia.com/cases/federal/us/333/28/case.html>.

<sup>31</sup> "Bob-Lo Excursion", Justia.

subject to state regulations. Nevertheless, after much debate, in *Bob-Lo Excursion Co. v. Michigan* (1948), the federal Supreme Court found Bob-Lo guilty and the company was convicted of criminal charges.<sup>32</sup> Importantly too, this case helped spur civil rights developments forward as it afforded an opportunity to re-examine whether the commerce clause could invalidate the application of state law when it came to matters pertaining to civil rights.<sup>33</sup>

*The Columbia* could not survive forever. The decline of the *SS Columbia* coincides with the aforementioned larger history of the falling interest in excursion vessels more generally. Though the *SS Columbia* became listed on the National Register of Historic Places in 1979, sadly, by the summer of 1991, after years of low attendance, high expense and increased competition from nearby Cedar Point, following a record 81 years of service, the *SS Columbia* and *Ste Claire* set off for the final time. The *SS Columbia* was then docked at the Great Lakes Steel Dock in Ecorse Michigan and in 1992 was designated as an historic landmark.<sup>34</sup> In 1993, Boblo Island shut down too and real estate developers bought the plot of land. All was not lost, however, and in 2006, after years of decay, the New York-based non-profit group, *The SS Columbia Project*, were awarded the steamboat with the aim to restoring it to service as a cultural and educational resource on the Hudson River as a dayliner. In 2014, the *Columbia* was moved to a shipyard in Toledo, then in 2015 it was moved to Buffalo New York.<sup>35</sup>

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<sup>32</sup> “Bob-Lo Excursion”, Justia.

<sup>33</sup> “Constitutional Law: The Commerce Clause as a Barrier to State Regulation of Interstate or Foreign Commerce: Civil Rights Legislation.” *California Law Review*, 36, no. 6, (1948): 487-490.

<sup>34</sup> “History of the Boat”, The SS Columbia Project.

<sup>35</sup> Mark Sommer, “The SS Columbia, ghost ship on the Buffalo River”, Buffalo News, Published July, 30, 2017, <http://buffalonews.com/2017/07/29/steamboat-past-charges-future/>.