

1821

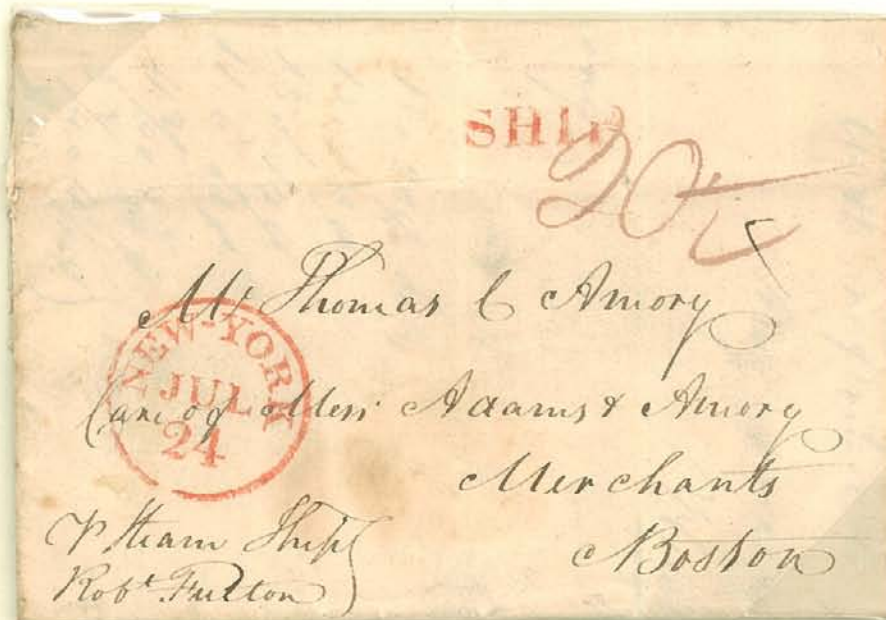
### PIONEER STEAMSHIPS

S.S. Robert Fulton

Amory Correspondence

The technical advancements represented by the S.S. Robert Fulton, the first truly oceangoing steamship, was represented by a note in the Richmond Inquirer of August 3, 1821, quoting from the Charleston Courier: Steam-Ship ROBERT FULTON. - This extraordinary and beautiful vessel arrived on Tuesday evening last in 3 days from New Orleans the 9th, arrived at Havana in 86 hours; came thence to Charleston in 76 hours! Such amazing rapidity would almost seem to imply the use of wings, It is a magnificent triumph of art, and a convincing lesson, among others of the present day, that we should despair of nothing.

This ship gave many comforts not readably available at the time, the least of which was speed. This Amory correspondence letter was posted at New Orleans July 6, 1821, and arrived at New York on July 24. This time lapse included stops at Havana and Charleston. The letter is endorsed: pr. Steam Ship/Robt. Fulton.



July 24. Robert Fulton arrived at New York. Letter rated, Act of 1816, 150-400, New York to Boston, at 18½¢ + 2¢ Ship Letter charge = 20½¢ due.

Letters carried on board the S.S. Robert Fulton are seldom seen.

New Orleans July 6th 1821

My Dear Sir

A short time since I gave Mr E. Fenna of this city a letter of introduction to you. He is a young gentleman from New York, his connections are of the first respectability but, being his first visit to our metropolis, I felt desirous that he might be pleased with his reception, and I knew of no one, among my acquaintances, that I could give him a letter with more pleasure, than to yourself. I have been acquainted with Mr. F. for several years, & can say that you will find him an agreeable companion. He is the Captain of the Louisiana Guards, the company to which I am attached, I therefore feel a particular wish that he may see the Armories of the Independent Companies. He has heard our Militia & particularly the above corps, spoken of highly & I hope that he may not be disappointed, when he sees the accoutrements & witnesses their evolutions.

Business is dull, as usual, at this season. I will thank you to present my regards to your good mother, Mr. and Mrs. T. Dexter, & other of my friends, not forgetting C.L. & Q.G.A.

With reference to quotations, I remain  
Very sincerely yours

Henry Marston.



1822

# PIONEER STEAMSHIPS

## S.S. Robert Fulton

The Robert Fulton was truly a pioneer steamship, and is credited with being the first practical oceangoing steamer. This wooden, coppered, side paddle wheel paddle steamer was 159' x 33'-5" beam and a depth of 17'-3" with a draft of about 10'. The engine was a single cylinder, crosshead type, 44" bore and a 5' stroke. The Robert Fulton was the first to be coal fueled, a great improvement in fuel efficiency over using wood as a fuel, allowing greater distances on a load of fuel. She principally ran New York-Charleston, S.C.-Havana-New Orleans. In all she made 18 voyages in five years of service. In 1827 she was sold to the Brazilian navy and converted to sail.

May 1, 1822. A letter headed at Belize, an anchoring spot at the mouth of the Mississippi River, by a ship captain informing his wife that he was sailing for Liverpool after receiving a fair wind to cross the Bar. Letter is endorsed: Pr. Ship Robert Fulton Via N. York. The captain was able to hand off his letter to the S.S. Robert Fulton, able to cross the Bar in spite of the winds.



May 21. The S.S. Robert Fulton arrived at New York after stopping at Havana and Charleston.

Letter rated, Act of 1816, 150 to 400 miles, New York to Portsmouth, N.H., 18½¢ + 2¢ Ship Letter charge = 20½¢ due.

Richmond Inquirer, Friday, August 3, 1821.

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(Charleston Courier.)

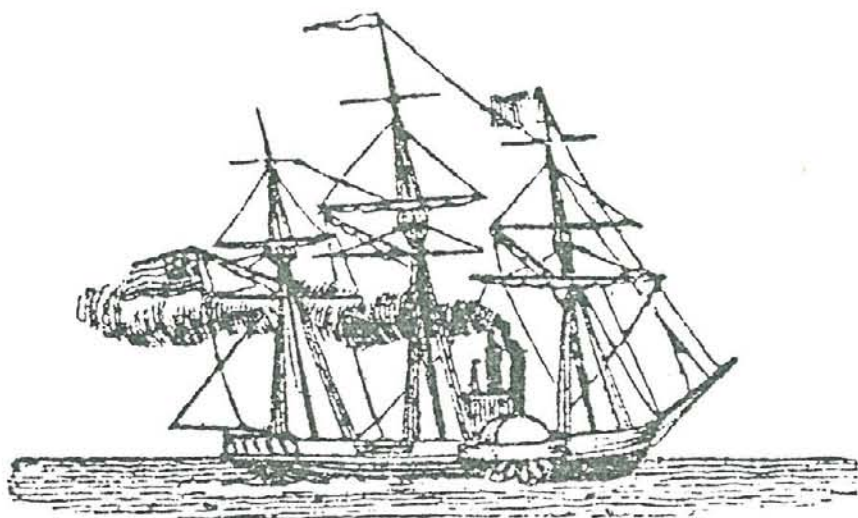
Charleston, Oct. 29, 1821. The steam-boat Robert Fulton, which started yesterday morning for Havana, N. Orleans and Pensacola, had about one hundred passengers. She was delayed on Saturday afternoon, in consequence of their (sic) being so much swell upon the bar, as to render it unsafe to attempt crossing it. Richmond Inquirer, Nov. 6, 1821.

86 hours (2)

Richmond Inquirer

LB 119





Newspaper cut of the *Robert Fulton*. Courtesy of The New York Historical Society, New York City.

masted schooner; her paddle wheels enabled her to escape with ease.

The U.S. Navy was assigned the task of clearing up the situation and decided that a steam-powered vessel of small size and light draft was essential for the work.<sup>12</sup> For this they acquired the steamboat *Enterprise*, formerly captained by R. S. Bunker, son of the master of that name whom we have seen on many occasions. She had been built in Hartford, Connecticut, in 1818 and ran on Long Island Sound from New York to Mamaroneck and Oyster Bay in 1821 and 1822 before being purchased in December 1822 by Commodore David Porter.<sup>13</sup> She was refitted, renamed *Sea Gull*, and served as the flagship of a fleet of schooners under Porter's command in West Indian waters during 1823 and 1824. She was unique in having a rotary engine, of which nothing is known of its details. Before joining the navy she had neither masts nor sails.

A much grander approach had been advocated by a New York paper,<sup>14</sup> which advised the purchase and arming of the *Robert Fulton* for the work. There was even a discussion of a whole fleet of steam frigates to be copied after her.

Following her escape from pirates, the *Fulton* made two more voyages to New Orleans in 1821. Then, in August, a grand excursion was offered that would take

three days and two nights.<sup>15</sup> She was to sail from New York on Thursday, August 9, head for Sandy Hook, and, subsequently, stop to allow her passengers to fish for sea bass. She would take on additional passengers at Long Branch, New Jersey. She would then circumnavigate Long Island. One hundred and seventy-five passengers paid the \$10 fare and proved so enthusiastic that a second "party of pleasure" was announced from New York and New Haven to Newport and Providence and return for \$12.50 for adults and at half the price for children and servants.<sup>16</sup> This time she carried a more comfortable load of eighty persons. One of these, John Quincy Adams, then Secretary of State, left her at Providence to continue on his way toward Boston and Quincy.

The trip was equally successful and each landing found the whole waterfront crowded with the curious, gathered to see and welcome this fabulous craft.<sup>17</sup> The passengers hurried ashore to see the sights and the visitors rushed aboard with the identical purpose. At Newport, in an attempt to keep down the throngs, only ladies were permitted aboard. Some six hundred of the fair sex took advantage of the opportunity.

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quors, however, were extra. When the *Robert Fulton* got under way at 10:35 A.M. on September 30, 1821, a strong south wind was blowing. As she steamed toward Sandy Hook all the yards were lowered and the topmasts struck so that windage would be reduced. At 3:20 in the afternoon she rounded the Hook, put her visitors on board the pilot boat, and headed into a heavy sea and a rising gale. Both were severe enough to prevent progress; it must be remembered that her engine could produce less than 100 horsepower and roughly one-half of this would be consumed by the friction in the engine and the fluid losses in the side wheels. After two hours of attempting the impossible, Captain Barnard put back into the shelter of Sandy Hook to ride out the storm. Anchor was weighed next day at 3 P.M. and the steamer plowed along into heavy swells. When the wind veered to a favorable direction the topsails were set, the wheels disconnected—this report is the only indication that it was possible to do so—the fires drawn, and the *Robert Fulton* continued on course entirely under sail from 2 A.M. until 8 A.M. on October 2. At times during the night a speed of 11 knots was attained. As the wind died, the sails were taken in, steam raised, and a 7-knot speed under power was achieved. The seasick passengers emerged from their misery as wind and wave diminished. The next night a head wind arose; once more the spars and running rigging were stripped from the masts. On October 4 the wind was favorable again and sail hoisted. When squalls appeared, she proceeded under steam and reefed topsails.

It is clear that Captain Barnard took every possible advantage of the wind and used his seamen in the best sailing ship tradition to set sails, furl them, strike topmasts as necessary, and see that the ship sped along as rapidly as possible with the least expenditure of fuel. On October 6 the Charleston pilot was picked up and the dock reached by 10 A.M. Once the passengers were landed, gold and silver shipments were taken aboard and she headed out at 3 P.M. After striking the bar with her keel on three separate occasions, she made sail for Savannah, took on the pilot there, and anchored at the river mouth waiting for a favorable tide. She did not reach the city until twenty-four hours after leaving Charleston. On the 8th at 3 P.M. she got under way but the Savannah pilot proved even worse than the Charleston one and put her on an oyster bed, where the falling tide left her hard aground until 5 A.M. the next day.

The wind being adverse, the *Fulton* beat her way under fore-and-aft sails plus steam to Charleston, docking there at 6 P.M. on the 10th. Two days were spent coaling and preparing for the return. At 11 A.M., October 12, she headed out to sea at 8 to 10 knots. Since two ministers were aboard, one conducted the Sunday services while the other preached the sermon. Northbound the wind was variable; at times she set sail; at others she steamed

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## The LITTLE-HOLD CAMPLER List

Wooden paddle steamer Robert Fulton  
702 tons, blt. 1820, New York, N.Y.  
First Home Port.

Reg changed to ship 12/5/21

R 25 a RIA converted to sail 1825



# RIDGELY-NEVIT, "AMERICAN STEAMSHIPS ON THE ATLANTIC"

## 2

### The Robert Fulton

THE *Chancellor Livingston's* success, starting in 1817 on the Hudson, has been dealt with in considerable detail because this vessel led directly to an even more important one, the *Robert Fulton* of 1820. The latter was the first oceangoing steamship, both in concept and execution, to appear on American waters. David Dunham, merchant of New York City, who had managed coastwise packets for some years, was the leader of the enterprise that ordered her, Henry Eckford was both builder and part owner, and James P. Allaire served as engine builder and owner. During her construction Jasper Lynch, formerly employed by Fulton, supervised the engine work<sup>1</sup> and, in the newspapers, was erroneously credited with ownership. Thus the shipbuilder and engine builder who had combined their talents so successfully on the *Livingston* joined forces a second time to produce the largest steamship in the world and placed her, under the management of an experienced shipowner, on the New York to Charleston and New Orleans route. Both New York and New Orleans were major ports and the cargoes carried between them formed an essential part of the country's coastwise trade.

Her original register, of April 22, 1820, although difficult to decipher, seems to show dimensions of 159" in length, 33'-5" beam, and 17'-3" depth. There was a transom stern with quarter galleries and a bust as a figurehead. Her hull was constructed, in Eckford's normal manner, of the best possible materials: live oak, locust, cedar, and Georgia pine, with copper fastenings throughout the bottom and the bilges, and covered with sheet copper below the water<sup>2</sup> to prevent the growth of barnacles that would slow her down. It would also protect her from the marine borers called teredos. The length and beam dimensions were close to the *Chancellor Liv-*

*ingston's*, but, as befitted a seagoing ship, the depth was considerably increased, as was the draft, the latter being about 10'. Since there were no dredged channels into Charleston, the draft was lower than that of a contemporary sailing packet.

The engine was an enlargement of the *Livingston's*, still of the single-cylinder, crosshead type, with the bore enlarged from 40" to 44" in diameter and the stroke retained at 5'-0". The flywheels, 12'-0" in diameter with 6" wide rims and 7" spokes, were turned at twice the speed of the engine by means of 36 tooth gears meshing with 72 tooth ones on the paddle shafts. A colossal copper boiler 30'-10" long by 12'-10" by 8'-10" high<sup>3</sup> had four return flues and two stacks side by side. As a coal burner, the *Fulton* was the first designed to use this fuel exclusively. The required volume of firewood made any long sea voyage impossible. The wheels were 18' in diameter with ten floats 6'-6" wide and were mounted on 8" square shafts.

All the machinery was surrounded by wooden bulkheads lined with lead to make them watertight; the space could be flooded to put out a fire without sinking the ship. The rig, as originally planned, was a small one consisting of lug sails, a most unusual departure from normal American practice. Such a radical idea was typical of Eckford and shows that he considered the sails a purely auxiliary means of power. When they were furled everything was lowered on deck, leaving only bare poles and shrouds with the minimum of wind resistance. The *Robert Fulton* was a very large vessel for her time. The cost, \$130,000, was equally large and represented a major financial risk assumed by the three owners. Both hull and machinery required an extensive building period; although launched in May of 1819, a whole year was

needed to install the machinery and to finish and outfit her properly. There were extensive rumors, just as there had been during the *Connecticut's* construction. One was that she was intended to operate from New York to Liverpool or London<sup>4</sup>.

About the middle of April in 1820 a trial was made.<sup>5</sup> She steamed down the East River, rounded the Battery into the North River for a ways, then turned around and headed down the harbor as far as Gravesend Bay before returning. The distance was estimated to be 22 to 24 miles and the time two and one-half hours, all without sails. A journalist's reaction was: "... truly one of the wonders of the present age."

The first departure of the *Robert Fulton*, on April 25, 1820, for New Orleans, via Charleston and Havana, was celebrated by a sailing party for several hundred invited guests,<sup>6</sup> including Cadwallader Colden, who was doubly honored as a steamboat owner and as Mayor of New York. The well-wishers went down the harbor to Sandy Hook on her, dined aboard, and then transferred to the *Connecticut*, under Captain Elihu Bunker. During the return a series of flowery resolutions were passed by the guests praising the steamship, her owners, New York City, Captain Bunker, and any other subject brought to their attention; everyone had a wonderful time.

Under Captain Inott or Mott (the author is not sure whether there were two different masters on the *Robert Fulton's* first two voyages or only the latter with a sometimes misspelled name) the subject of all the excitement steamed smoothly along. The only untoward event as she headed South was that some of the paddles worked loose, fouled the guards, and were broken. The engine had to be stopped to permit replacement but was in continuous use during all the rest of the trip. Upon reaching Havana, permission was requested to enter the harbor without the payment of port dues.<sup>7</sup> Not only was this granted, but the Governor, the principal dignitaries of the town, and the merchants of note all came out to inspect their unusual guest. On May 10 she left for New Orleans, steamed from there on May 28, from Charleston June 11, and arrived New York June 14, 1820. In all she was 17 days 12 hours from New Orleans to New York, including stops of two days at Havana and four at Charleston. On board were sixty to seventy passengers. Once more there was a series of resolutions, which included the following statement:

Having experienced on our passage, several heavy blows, we have had good opportunities to judge whether any good cause existed for the apprehension at first entertained as to her safety in rough weather, and do not hesitate to declare them groundless. Being unincumbered with that heavy weight of spars and rigging, she consequently rolls and labours much less

than a vessel rigged in the usual way, and propelled only by sails; and the manner in which she contended for several days with a heavy head sea, and wind, convinces us that the duration of her passage will never be materially affected by the weather she has to encounter.<sup>8</sup>

The *Robert Fulton's* second trip was less of a triumph. Sailing from New York on July 2, she was south of the Florida Keys nine days later when a flywheel gear gave way, overloaded one side of her transmission system, and broke the crosshead.<sup>9</sup> She put about and sailed back to New York, arriving off Sandy Hook on July 20. A 1,200-mile trip in eight to nine days under a limited rig indicates that, despite her design as a steamship, she had a hull with excellent sailing characteristics.

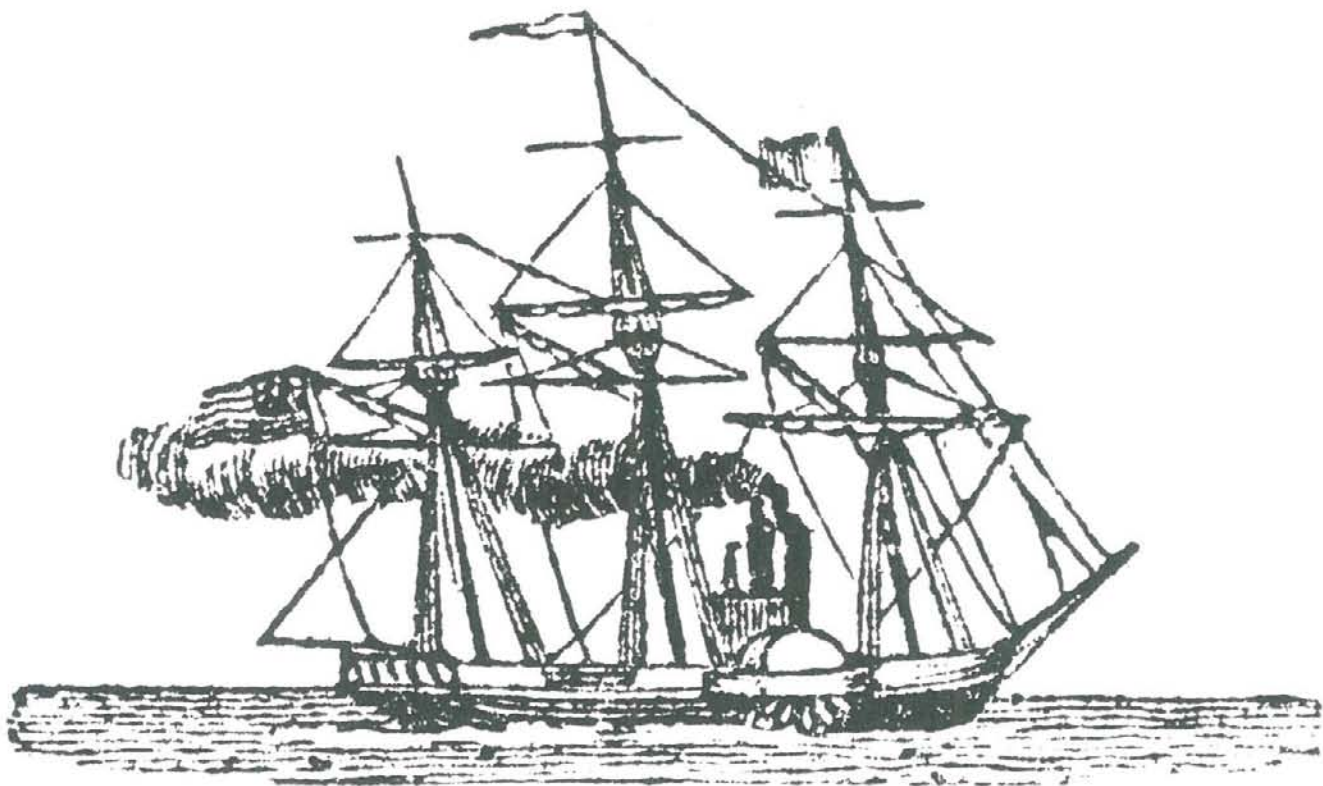
Repairs occupied all of August. An excursion trip around Long Island was advertised for September 11 or 12 but was called off because of lack of patronage.<sup>10</sup> It was followed by a third departure, on October 10, this time for Charleston only. New Orleans had been canceled because of a yellow fever outbreak. Despite a head wind that developed almost into a hurricane, Charleston was reached in five days and a quick return made. After this Captain Mott decided that more sails would be an asset, perhaps to save coal, perhaps to steady the ship and reduce rolling.

In the extremely short time of two weeks, new masts were made, stepped, rigged, and the *Robert Fulton* became a three-masted, square-rigged ship with topgallants on all masts and large spencers on the fore and main in addition to the usual jibs, staysails, and a spanker.<sup>11</sup> This was a flexible arrangement; she could send the yards down and operate as a three-masted schooner if the wind were ahead of the beam, or set all her square sails if it were aft. The lower masts were made taller than usual and the topmasts shorter in order to facilitate this novel operation.

Cold weather helped abate the yellow fever outbreaks; on November 5 the whole itinerary was undertaken—Charleston, Havana, New Orleans, and an extra stop at Savannah, Georgia. Southbound there was such a strong following wind that it carried away the fore and main yards soon after leaving New York; the new square sails were eliminated by the whims of nature. The steamer carried no freight other than gold or silver. Slaves and servants were in limbo; they were not listed as passengers. The slaves, like cargo, had to be declared at the Custom House before they could board.

Piracy was still a serious problem in the Caribbean in the 1820s and the coast of Cuba was a favorite haunt from which pirates emerged to prey on the steady stream of traffic between East Coast cities and New Orleans. Returning from that port, the *Robert Fulton*, on March 30, 1821, was chased and fired on by a "piratical" three-





Newspaper cut of the *Robert Fulton*. Courtesy of The New-York Historical Society, New York City.

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into a heavy sea under bare poles. On Wednesday, October 17 the New York pilot came aboard. Quarantine was passed without delay and the Battery reached at 3 P.M. The round trip took 17 days, including all stops and detentions. The newspaper account quotes 1,500 nautical miles in 12 1/2 days, 120 miles per day, or 5 knots speed, much of it against adverse wind and sea conditions. It continues:

She is beyond any question, the safest, most expeditious, and most comfortable of any species of naval architecture that has ever floated on the ocean; and experience has uniformly extracted the substance of this statement from any passenger who ever sailed on her.

The modern reader should realize that, for 1821, this is a completely true statement. The only through route from New York to the major cities of the Southeast, Charleston and Savannah, was served by small sailing packets, well below 100' long. Moreover, the usual passage past stormy Cape Hatteras resulted in an average speed below 5 knots. No sailing ship of her size ran to New Orleans and none had her passenger facilities. The open deck space when the weather was good, and the extensive cabin, galley, and steward's staff to look after creature comforts when it was bad, did not exist on any other seagoing vessel.

After four voyages in 1820 and five in 1821, the *Robert Fulton* was put up for sale and purchased by David Dunham on December 28, 1821. The *Commercial Advertiser* stated that it was "merely to quiet some old claims made by others." She continued to Charleston, Havana, and New Orleans with occasional additions, such as Pensacola or Savannah, and sometimes deletions, usually to avoid quarantine and delay when yellow fever epidemics were rampant.

Her twelfth voyage, in the summer of 1822, is also recorded in some detail, starting with her departure from New Orleans on June 28, 1822,<sup>19</sup> with 106 cabin passengers who paid \$100 each to go to New York. The sea was smooth, the weather warm; the engine and boiler made it hot below. The crew rigged up an awning over almost the whole deck, strung up eighty hammocks, and moved settees and mattresses up for the others. Even the ladies slept in the open to take advantage of the cooling breezes. On June 30 they breakfasted and dined there as well. When nearing Cuba, the ship's guns were got ready for action and a hose rigged to throw hot water on any enemy who ventured too close. No pirates appeared, but a Dutch galliot headed for Havana was nearly run down. Havana harbor was reached on July 4 and a salute was fired by the U.S. naval sloop *Hornet* anchored there. The local bumboat fleet surrounded the *Fulton*, offering pineapples, coconuts, oranges, limes, bananas, and other



produce. Twenty more passengers boarded. When she sailed she had with her three parakeets, fruit enough "to kill the passengers," and baggage "to fill a good sized ship." The author of the account was pleased that no monkeys were included. On the 6th, the day after leaving Havana, the weather became squally and the sea rough, and on July 7 torrents of rain drove the passengers below decks for the first time. Next morning everyone returned topsides, where they remained until Charleston was reached on July 9. Because there was one sick passenger, the ship was quarantined and no one was allowed ashore except to transfer to the fenced-off quarantine grounds. When the *Fulton* headed out on the 11th, the ship *Atticus* was crossing the bar to windward of her and drifted down on her, carrying away the bowsprit and jibboom. Despite this, she spent all day under sail on the 12th while some repairs were made to the engine. The fact that she logged 10 knots, despite missing headsails, is another example of her exceptional sailing qualities.

Off the New Jersey coast, the last night at sea was celebrated by hot whiskey punch and suitable toasts. New York was reached on July 15 but a four-day quarantine was established because of sickness; everyone had to stay aboard. In this case, with good weather and sea conditions, a 1,800 nautical-mile trip had been made in thirteen days at sea at an average speed of about 6 knots.

Thereafter, the *Fulton* was withdrawn for four months while the hull and rigging were repaired, overhauled, and a new boiler installed.<sup>20</sup> Under a new master, Captain Chase, she started on a voyage that was very long in time. Leaving New York near the end of November, she did not get back until February 3, 1823.

For over a month before her return she was advertised as sailing beyond New Orleans to Vera Cruz, Mexico, provided enough passengers appeared.<sup>21</sup> In fact, when she left New York on February 9, it was for her usual ports. During her absence David Dunham was lost overboard from a Hudson River sloop and an auction sale was arranged at the Tolentine Coffee House by the administrators of his estate.<sup>22</sup>

Despite the sale she returned to her regular route, still managed by Dunham and Company, leaving New York on June 8, 1823, and not returning again until October 4th. Without the senior Dunham in charge, the sailings became irregular and no real attempt seems to have been made to keep her running. Yet, on her arrival just after his death, she had a quite acceptable passenger list of fifty-two from New Orleans, eleven from Havana, and five from Charleston. There is no reason to believe that she had been unprofitable. The year 1823 saw only three voyages and 1824 two, the first marred by a boiler leak that forced her to return to New York and spend four days repairing it.<sup>23</sup>

August 16 of 1824 saw the arrival of the Marquis de

Lafayette, the Revolutionary War hero, returning to America. The U.S. Navy put two hundred sailors aboard the *Robert Fulton* to man her yards and fire a fifteen-gun salute as she led a grand procession of vessels steaming up the harbor.<sup>24</sup> The Marquis was aboard the *Chancellor Livingston*, which followed the *Robert Fulton*. The smaller *Bellona* and *Nautilus* came next and towed the ship *Cadmus*, which had brought Lafayette across the Atlantic. Finally, on either flank, came the *Oliver Ellsworth* and the *Connecticut*. A memorable event it was.

On her final arrival, January 10, 1825, she brought not only passengers from New Orleans, but also a cargo of hides and cotton. Prior to 1823, only specie had been carried.

In all the *Robert Fulton* made eighteen voyages in five years of active service, thirteen of them under David Dunham's direction in her first three years. The public was regularly informed by advertisements of her plans, usually well in advance, and any delays or changes were announced as soon as the information became available. Starting in 1821, a rather large cut showing the steamer in her ship rig was inserted to catch the reader's attention. The surviving watercolors of her, at the Peabody Museum, New York Historical Society, and Mariners Museum, all appear to be later reconstructions by Richard V. deWitt, based on the cut with further details added by the artist.

In 1827 she was sold to the Brazilian Navy for 152,000 milreas, and converted to a 24-gun sailing sloop; as late as 1838 she was still operating and some time thereafter was wrecked on the Brazilian coast.<sup>25</sup>

The *Robert Fulton* as a steamship, and her short commercial life, 1820-25, are somewhat difficult to place in their proper perspective. One point of view is to consider her the culmination of the James Watt, Robert Fulton, Hudson River type of craft. Without doubt she was just this. Her hull was a direct development from the *Chancellor Livingston*, with the necessary changes to make her seaworthy, fast under sail, and an admirable craft for the unprotected waters of the Atlantic. Her crosshead engine was, the year it appeared, the ultimate step in a direct development starting with the *North River's* Soho-built cylinder, air pump, and valve gear. The boiler was an improvement, since it had internal furnaces and flues, but was still a large, low-pressure, copper affair containing tons of boiling sea water. The chief engineering change was the exclusive use of coal instead of wood, an essential feature to enable her to stay at sea for the 1,250 nautical miles from Charleston to New Orleans without refueling at Havana.

The *Robert Fulton* was the first successful American oceangoing steamship. Although we have no financial reports, the fact that she continuously operated, that

New York newspapers listed anywhere from seventy to one hundred passengers on her arrival (a further group of servants and slaves should be added), and that the income warranted a number of improvements in rig and interior, and a boiler replacement, proves that David Dunham had the profits to finance the changes and was convinced that she would pay off any additional investment.

All this is a far cry from the *Savannah*, of 1819, which sailed for Europe without a passenger, could not find a buyer abroad, returned to the United States under sail, was sold to pay her debts, and had her engine removed, all within eighteen months.

Yet the *Fulton's* career changed abruptly after Dunham's death. There were few sailings and long delays at New York or New Orleans, all without explanation. She obviously was not a success in her last two years, for which no clear reason emerges except the apparent loss of interest of her managers, Dunham and Company, once the senior member of the firm was no longer present. As in *Fulton's* case, Dunham's enthusiasm and continuous attention to the details of operation were the essential part of his steamship's success. Without his personal attention she sank into obscurity; when she became a sailing ship even her new name was lost; she just vanished into South American waters without any reported sailing date. Worst of all, there were no direct descendants. When she stopped running, the only oceangoing steamship in American waters ceased to exist. For two decades there was no real successor; Americans devoted their energies to filling the rivers, bays, sounds, and lakes with lightly built steamboats of ever-increasing size and speed,

but long-distance travel by sea was put aside until the late 1840s, when the seagoing steamship had to be redeveloped by another generation of shipbuilders.

## Notes

1. *New York Evening Post*, March 4, 1820.
2. *Ibid.*, March 2, 1820.
3. Jean Baptiste Marestier, *Mémoire sur les bateaux à vapeur des Etats-Unis d'Amérique* (Paris, 1824; partial English translation by Sidney Withington, Marine Historical Association, Mystic, Conn., 1957), pp. 8, 9, 14, 34, 58.
4. *New York Evening Post*, March 4, 1820.
5. *New York Commercial Advertiser*, April 17, 1820.
6. *Ibid.*, April 26, 1820.
7. *New York Evening Post*, May 29, 1820.
8. *Ibid.*, June 15, 1820.
9. *Ibid.*, July 22, 1820.
10. *New York Commercial Advertiser*, September 5 and 11, 1820.
11. *Ibid.*, October 25, 1820.
12. Francis B. C. Bradley, *Piracy in the West Indies and its Suppression* (Salem, 1923), pp. 33-36.
13. Frank M. Bennett, *The Steam Navy of the United States*, (Pittsburgh, 1896), p. 16.
14. *New York Evening Post*, December 13 and 14, 1822.
15. *New York Commercial Advertiser*, August 2, 1821.
16. *Ibid.*, August 16, 1821.
17. Preble, *History*, p. 109. The footnote identifying the vessel as the Long Island Sound steamer *Fulton* is incorrect.
18. *New York Commercial Advertiser*, October 13, 1821.
19. *Ibid.*, July 15, 1822.
20. *Ibid.*, October 4, 1822.
21. *Ibid.*, December 20, 1822.
22. *Ibid.*, April 30, 1823.
23. *Ibid.*, May 28-June 3, 1824.
24. *Nautical Gazette*, January 6, 1910, p. 15.
25. John H. Morrison, *History of American Steam Navigation* (New York, 1903), p. 437; Henry Howe, *Memoirs of the Most Eminent American Mechanics* (New York, 1846), p. 213; *New York Evening Post*, December 21, 1827.