

CHAPTER VIII

Clippers—1846-60

‘CARRYING SAIL NEW YORK FASHION’



ONE OF THE most spectacular acts in the drama of American shipping was staged in New York in the two decades preceding the Civil War. On the verge of being superseded, sailing vessels achieved new heights in speed and design, while American sailing masters established amazing new records. New York builders and designers created hulls that are copied in the finest of today's ocean liners. The sailing masters remained obstinate and defiant to the end, refusing to recognize the dirty, noisy steamship as a rival.

In 1843 Captain Nathaniel B. Palmer was on his way home from China in the *Paul Jones*, carrying as passenger William Low, brother of Abbot Low, whose firm owned Palmer's ship. The opium war between England and China had just opened up four additional treaty ports besides Canton to foreign commerce. Palmer was aware of the new possibilities for trade and was especially impressed with the opportunities presented by the opium trade between India and China. During the course of the voyage home he had several discussions with Low on the type of vessel best suited for the China trade. Palmer made a model of a ship embodying speed, rather than cargo space, as the primary requisite. When William Low reached New York he introduced Captain Palmer to his brother, and as a result Palmer was given authority to have a ship built for the firm of A. A. Low and Brother, which would follow the lines and general design of his model.

The First Clippers

By the end of that year Palmer's model was serving as a pattern in Brown and Bell's shipyard in New York. On May 3, 1844, the ship was launched and christened *Houqua* in honor of a Chinese merchant. Steam-driven river and Sound boats made way for her as she glided down the river. Steam winches helped to load her cargo. For five years the *Great Western* had been crossing regularly between New York and Liverpool, yet neither Palmer nor his associates heeded the challenge of steam.

Though the *Houqua* is not always classified as one, she had the chief characteristics of the clipper. The sharper lines of her hull gave her greater speed and less cargo space than a packet, and she carried a greater spread of sail than a packet of her tonnage. Her lines were not quite so sharp as those of the later clippers. She had man-of-war bulwarks, pierced on each side for eight guns.

The New York *Herald* greeted the launching of Palmer's model ship with characteristic exaggeration. "One of the prettiest and most rakish-looking packet ships ever built in the civilized world is now to be seen at the foot of Jones Lane on the East River—we never saw a vessel so perfect in all her parts as this new celestial packet. She is about six hundred tons in size—as sharp as a cutter—as symmetrical as a yacht—as rakish in her rig as a pirate—and as neat in her deck and cabin arrangements as a lady's boudoir. Her figurehead is a bust of Houqua, and her bow is as sharp as the toes of a pair of Chinese shoes."

In defiance of shipbuilding tradition the *Houqua* was launched on a Friday. Her hold was soon full, though other China-bound ships were riding high. Four weeks after the launching Captain Palmer cleared for Canton, where the *Houqua* dropped anchor eighty-four days later—far less than the average time then required.

Impressed by the speed of this voyage, New York merchants began to figure the additional profits to be made in the China trade through savings in transportation time. Backing was now available for the completion of a new ship designed by John Willis Griffiths. Modern

authorities generally regard his ship, the *Rainbow*, as the first of the extreme clippers.

Son of a carpenter skilled in shipbuilding, Griffiths had attracted considerable attention among merchants in the late 1830s by his articles on ship design, though builders had ridiculed his idea of prefabricating the parts. Griffiths finally found a financial backer in W. H. Aspinwall of the firm of Howland and Aspinwall.

Griffiths had encountered plenty of trouble in building his dream ship. Aspinwall blew hot and cold on the proposition. Old seadogs shook their heads at the plans for a sharp concave bow and at the projected height of the masts. A ship so top heavy, they said, could never survive the winds and seas of the China course. Mechanics balked at Griffiths' insistence that everything should be cut to specifications; hitherto planking and other parts had been fitted into place as the building proceeded.

The Natchez

His troubles were ended abruptly by an event that threw the whole Port into a high pitch of excitement. On April 3, 1845, news raced from office to office that a ship was romping up the Narrows, having crossed from China in seventy-eight days, little more than half the average time. The vessel, which was wide and high-rigged, much like the *Houqua*, was the fourteen-year-old *Natchez*. That explained everything, for the *Natchez* was captained by Robert H. Waterman.

"Sea riggin'," changing sail while on a voyage, was a confirmed habit with Captain Waterman. It was said that he could "take a coal barge to sea and bring her home in creditable time looking, aloft at least, like a clipper . . . given a few spare spars, plenty of stuns'l poles, and an extra bolt or two of canvas." He was never satisfied until he had every stitch of sail aloft that his ship would carry.

Waterman was outstanding among the colorful characters of the clipper-ship era. A veteran of the sea at thirty-five, he had seen service

in many parts of the world. While driving packets he met Palmer. They transferred to the China trade at about the same time.

“In an age and service famous for supermen,” writes Carl Cutler, in *Greyhounds of the Sea*, “these two men would have made a very creditable clipper ship era by themselves. . . . Waterman and Palmer in some respects best represent the two leading but essentially different types developed in the hard school of the American merchant marine. Both were absolutely fearless ‘drivers,’ but where Waterman was wholly reckless of life and limb, Palmer felt his way carefully to the extreme edge of safety and stayed there. Waterman was all sailor. Palmer was that and a shrewd businessman besides, and something more than an average good ship designer.”

When Waterman brought the *Natchez* into New York after her record-breaking run the ship carried the masts and spars to spread a full clipper rig of sail. In less expert hands such an expanse of canvas might have torn the bottom out of a ship of the *Natchez*’ design.

W. H. Aspinwall, owner of the *Natchez* was fired with enthusiasm. He vowed he would build Waterman the “fastest and trimmest” ship afloat and ordered Griffiths’ ship rushed to completion.

The *Rainbow*, as the new ship was christened, was launched in the latter part of January 1845, sixty-one years after the sailing of the *Empress of China*, America’s pioneer in the China crossing. A great crowd had assembled for the occasion. The traditional bottle of wine was broken on the ship’s prow; the chocks were knocked clear, and the ship began to move. Gathering momentum, she thrust her graceful stern into the East River. The ship careened badly but righted herself and on a steady keel yielded gracefully to the restraining hawsers. She was described as the most beautiful thing that ever floated.

Records of the China Voyage

But Waterman did not sail the *Rainbow*. Aspinwall held that she was not large enough for his “champion master,” and command of the ship

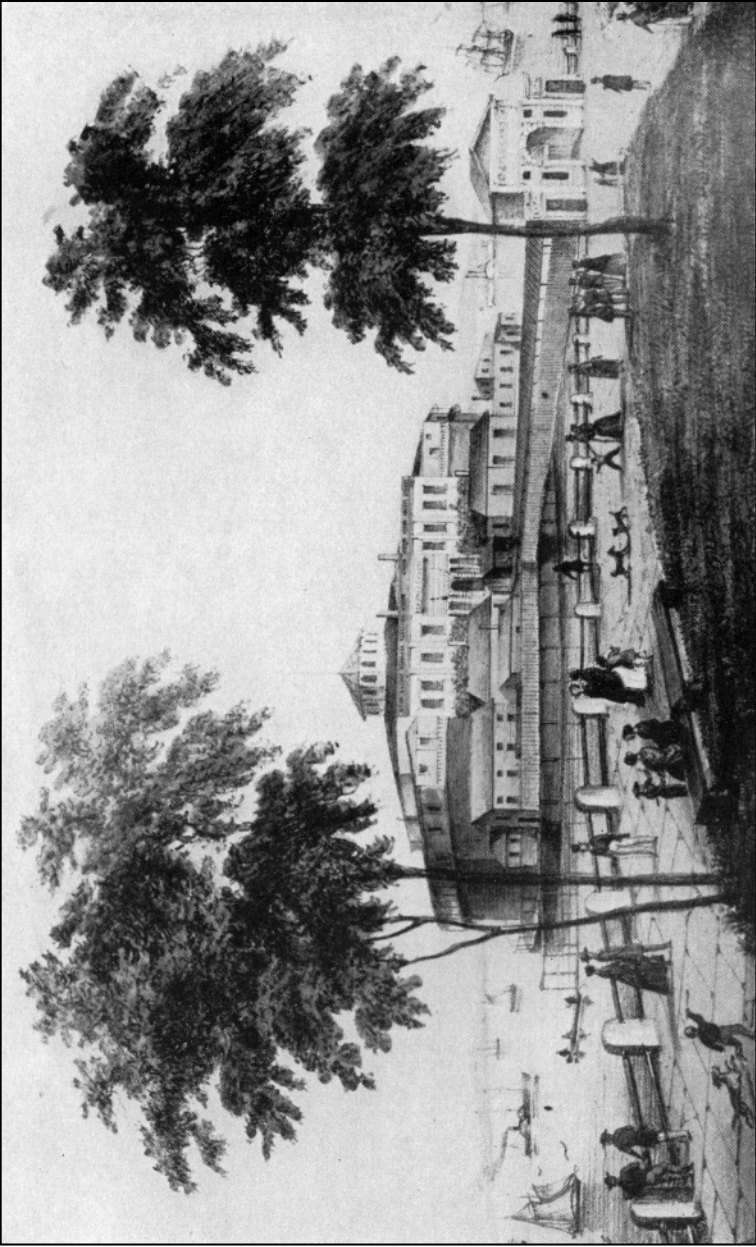
was given to Captain John Land. Four days out Land drove the top-gallant masts out of her. Once he drove her under head seas and nearly lost her, but destiny appeared to be watching over the *Rainbow*, for she made an out-of-season run to China in one hundred and two days and established a new round-trip record of seven months and seventeen days. Captain Land took her out again and made the return voyage from China in seventy-nine days. So stirred was Captain Land by his record that he “spoke up for the papers” for the first time in his life. “The *Rainbow*,” he insisted, “is the fastest ship ever to sail the seas, and what’s more, the ship can’t be built to beat her.”

Griffiths’ fame did not end with the *Rainbow*. Aspinwall was true to his promise to give Waterman the finest and fastest ship afloat. Soon after the *Rainbow* had been launched the shipyard of Smith and Dimon, where Griffiths was still chief designer, was commissioned by Howland and Aspinwall to design and build a world-beater. Griffiths’ answer was the *Sea Witch*, launched on December 7, 1846. The *New York Herald*, in reporting the event, stated, “The *Sea Witch* is, for a vessel of her size, the prettiest vessel we have ever seen, and much resembles the model of the steamer *Great Britain*, only on a smaller scale.

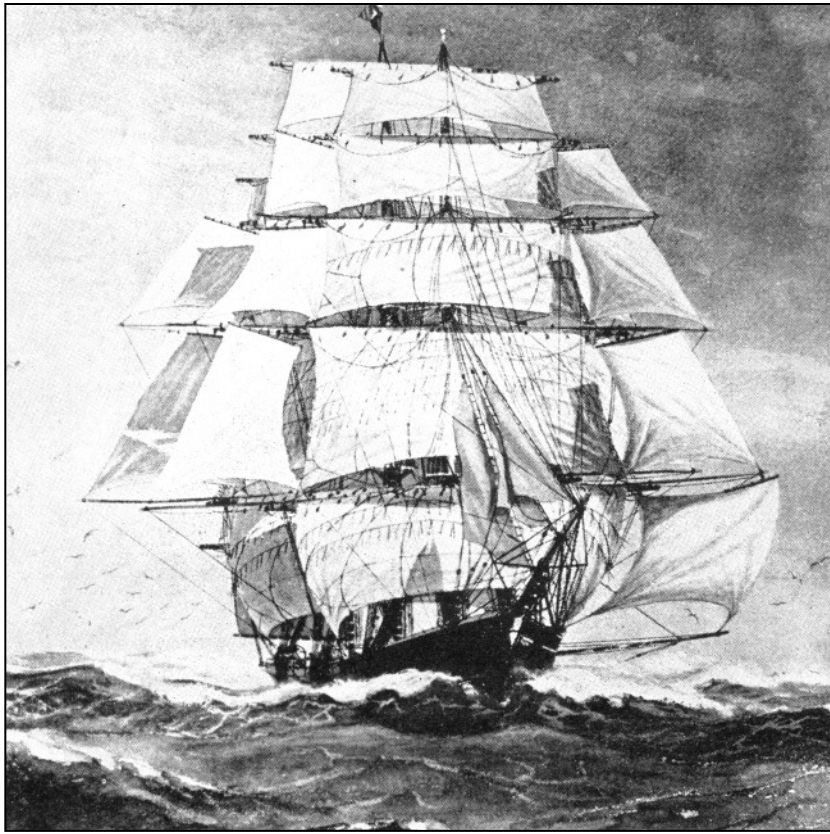
“She is built of the very best material, and although presenting such a light appearance, is most strongly constructed . . .

“Her length is 192 feet over all, 34 feet beam, 19 hold, and 900 tons burthen, making as fine a specimen of New York shipbuilding as we have seen in a long time.”

Captain Waterman, with the *Sea Witch*, set the tempo for the clipper era—and more than once established records which still stand for sail in the various courses of the China route. He sailed for Canton on December 23, 1846, and on the return voyage brought the *Sea Witch* back in eighty-one days against the monsoon—a record at the time. Outward bound, the *Sea Witch* sailed 8894 miles in forty-two days, at an average speed of about 212 miles daily for six consecutive weeks. On the return voyage Waterman sailed from Anjier, Java, to the Cape of



Castle Garden



The Clipper Ship, *Flying Cloud*

Good Hope in twenty-six days and Anjier to the pilot boat off New York in sixty-two days.

Steam Subsidized

In 1843 the Cunard Line of steamships received a subsidy from the British government. Two years later President Polk, aroused by this challenge, sent a subsidy message to Congress, stating that a “national policy by which rapid communication with the distant points of the world is established, by means of American-built steamships, would find an ample award in the increase of our commerce. ... A just national pride, no less than our commercial interests, would seem to favor the policy of augmenting the number of this description of vessels.”

Though the proposal was supported in Congress, the only subsidy granted (to a new American steamship line to Le Havre and Bremen) amounted to two hundred thousand dollars—less than half the sum received by the Cunard Line.

Edward K. Collins, head of the Dramatic Line of sail packets, did his best to convince New York that the future of ocean navigation was in steam. In 1845 he announced that all his sail packets were for sale and declared his intention of going into steam exclusively.

Collins’ move did not impress New Yorkers. He was known as the man who had applied to President Van Buren in 1838 for a government subsidy to help launch a line of transatlantic steamships. Among the benefits that would accrue to the country from this project, he had emphasized a ready-made navy. Van Buren had scornfully turned him down, declaring that America needed no navy. Early in 1847 Collins placed a contract with the Brown shipyards in New York for the construction of four steamships—roomier, more comfortable, and higher powered than anything then afloat. Jointly with James and Stewart Brown, Collins received a contract from the Postmaster General, granting \$385,000 for twenty annual round trips between New York and Liverpool.

Collins' transfer to steam might have attracted more attention had it not been for the records being made by the clipper ships. The Cunard steamers were achieving no spectacular speeds. They carried only a few wealthy passengers, leaving the steerage trade to the clippers. In 1847 the potato crop in Ireland was a complete failure, and scanty crops were harvested elsewhere in Europe. The demand for supplies from "the granary of the world" busied every ship in New York Harbor. Before the grain rush was over gold had been found in California. This created a new demand for speed, which only the clippers could satisfy.

The Gold Rush

In the fall of 1848 one Midshipman Beale arrived in Washington after a dashing trip from the Pacific, bringing news of the discovery of gold in California. Respectable businessmen now lost all sense of caution and decency. Ships barely fitted to cross the harbor took on a number of passengers that pushed them below their safety draught. Gold-hungry multitudes were crowded into unbelievably dirty and cramped quarters. Weeks were required to beat around the Horn; none of the ships carried sufficient supplies for the feeding or comfort of the passengers. Half-starved adventurers were landed in San Francisco months after the advertised or promised one hundred days.

The wreckage of ships and men strewed the seventeen-thousand-mile course to the "gold coast." By March 1849 more than one hundred and forty ships—many of them pitifully inadequate for the journey—had left on the long, grueling voyage to California. Thirty-seven more had cleared for Chagres, a port on the eastern coast of the Isthmus of Panama. These ships carried out of New York eleven thousand passengers, who were dumped at Chagres and had to make their way across the Isthmus as best they could. More than half succumbed to hunger or tropical fevers.

Yet nothing could stop the rush save the end of the gold itself. New York's shipyards could not meet the demand for ships for the California run. Places close to the lumber supply offered quicker deliveries. Maine,

with shipyards on the edge of the forests, soon wrenched the leadership away from New York, which, with 44,104 tons, was second to Maine's 82,256 tons in production.

By 1850 the human wave rolling to California had become tidal in its proportions. A total of seven hundred and seventy-five vessels cleared from New York before the close of 1849. Rio de Janeiro was full of stranded passengers from crippled ships.

To this reckless traffic the *Sea Witch* contributed the first record. Waterman, who had returned from Canton in the record-breaking time of seventy-four days and fourteen hours, turned the vessel over to his first mate when she was put into the San Francisco run; George Fraser was a driver of whom even Waterman could be proud. On April 13, 1850, Captain Fraser took the *Sea Witch* out of New York Harbor and on July 24 arrived in San Francisco in ninety-seven sailing days.

The Collins Line

Collins had spent three years and considerable money in building the four ships that were to take up the schedules of his United States Mail Steamship Company to Europe.

Contracts for the construction of the ships were divided between the shipyards of William H. Brown, where the *Atlantic* and the *Arctic* were built, and Brown and Bell, who were commissioned to build the *Pacific* and the *Baltic*. Service was inaugurated between New York and Liverpool on April 27, 1850, by the *Atlantic*. In the same year the *Pacific* was put on the same run, followed a little later by the *Arctic* and the *Baltic*. They were the first steamers with straight stems instead of clipper bows. A patented device called the annunciator provided the staterooms with bell service.

These New York-built steamers soon established their supremacy on the seas. They were not the first to operate a regular European schedule out of New York, for the Ocean Line had put the *Hermann* and the *Washington* into operation on a New York-Southampton-Bremen route in 1847, but the Collins steamers proved unbeatable in luxury and speed

from the day they were launched. When the *Baltic* made a run from Liverpool in nine days and thirteen hours the commercial supremacy of the line was established. From that time on the Collins ships carried forty per cent more passengers than the Cunarders.

The speed contest between the Collins and Cunard steamers attracted international attention. Newspapers and magazines published reports of individual races. The Collins ships, however, were not built to withstand the speed at which they were driven. After virtually every trip they were subjected to secret repairs. This was an expensive method of gaining supremacy, yet in 1853 Collins' subsidy was increased to \$33,000 a round trip, making an annual total of \$858,000, a figure slightly above the subsidy allotted to the Cunard Line by the British government.

Despite the fury of these contests, both sides displayed unusual fairness. One magnanimous act of the Collins Line was given considerable play in the English press. A Cunarder had been detained in the Port of New York for customs irregularities on the part of its crew. The ship was required to post a bond for one hundred and fifty thousand dollars before it could clear the Port. The Collins Line put up the bond in order that the rival line should not miss a scheduled sailing.

In 1849 the Cunard Line commissioned construction of the *Asia* and *Africa*, to replace the *Britannia* and *Acadia*. These two ships, with their indicated horsepower of twenty-four hundred, were expected to offer a serious threat, but when launched they failed to equal the Collins speed and regularly arrived twelve to fourteen hours behind their rivals.

Faster and Finer Clippers

Yet it was the clippers that had caught the popular imagination. The profits of the California and China runs had turned the heads of American shipowners. Some vessels had more than paid for themselves on their first voyage. The *Samuel Russell* earned well over seventy thousand dollars in freight charges on a single voyage.

The argument that such conditions could not last went unheeded. No one could expect the once conservative firm of A. A. Low and Brother to worry about the future when the firm's *Surprise* made a fifty-thousand-dollar profit, net, from a two-hundred-thousand-dollar cargo because it was docked in San Francisco in quicker time than other ships. In the early 1850s the fantastic profits to be made from speed alone changed the pattern of New York ship construction. Cargo space was definitely sacrificed to speed lines.

The *Celestial*, launched early in June of 1850 by the William H. Webb yards for Bucklin and Crane, and the *Mandarin*, launched a week later by Smith and Dimon for Goodhue and Company, exemplified this development. The *Mandarin* "was as nearly flat-floored as it was possible to build a ship, while her sides were almost perpendicular." The *Celestial*, compared with the sharply built *Samuel Russell*, was relatively flat-bottomed and was very similar to the later packets, although much sharper in line. Both the *Mandarin* and the *Celestial* are classified as extreme clippers by most authorities. The *Mandarin* has been described as the sharpest ship built up to that time. Here were three ships, built within three years, differing considerably in appearance, yet all three built for speed.

The early part of this decade saw a burst of ship-building such as New York had never before witnessed. In Brooklyn's Williamsburg, Jabez Williams was putting the finishing touches to the *Eclipse*. Smith and Dimon were busy on two clippers in addition to the *Mandarin*. William H. Webb announced that he had received a commission for the building of the largest merchantman ever projected. This ship, the *Challenge*, proved to be the most extreme clipper constructed thus far. She was the first three-decker turned out by an American shipyard.

The *Challenge* registered two thousand and six tons. Her mainmast measured two hundred ten and a half feet from heel to truck. The lower studding of the *Challenge* was one hundred and sixty feet from leech to leech. Even in those days of supermasters not many could be found

who would sail this giant in the rig supplied by the designers. There was one man, however, who had no hesitation, and that was Robert H. Waterman. After Waterman left the *Challenge* her spar plan had to be reduced several times before other captains could be induced to take her out of port.

The Webb yards started work on three other clippers, the *Gazelle*, *Comet*, and *Invincible*. Westervelt and Mackay turned out the *N. B. Palmer* and the *Eureka*, while Perine, Patterson, and Stack were building the beautiful *Ino*. Before these were completed the keels of other ships had been laid, and before these reached the launching stage commissions for still more ships had been awarded the various yards.

On June 2, 1851, the *Flying Cloud*, Captain Josiah P. Cressy, cleared from New York for San Francisco. The log of her first voyage discloses that "two auger holes had been boared in the Deck close to the after sill of the fore Castle" which was "done by some one of the sailors." The culprit was "seen coming out of the fore Castle with an auger in his hand" and clapped in irons; the "main mast was badly sprung four feet below the hounds" when the ship was but twelve days out of New York and had to be "releaved" later in "Gales and Harder Squalls"; the wind carried away the "Main Topsail tie & Truss band round the mast"; and "light, baffling and squally airs" caused frequent tacking. There was "Much & very severe thunder and Lightening" as the ship wester-ed around the Horn. Yet Cressy brought his beauty into San Francisco on August 31, just eighty-nine days and twenty-one hours from anchor to anchor.

Waterman's Last Voyage

The *Challenge* was ready to sail before the *Flying Cloud* had hung up her San Francisco record. The crew shipped for the maiden voyage were sailors only in the sense that they had been supplied by crimps under that classification. Few of the fifty-six men and eight boys who had made their mark on the ship's roster could by any stretch of the imagination be

classified as seamen. The rest were the dregs and sweepings of many world ports. Waterman's mates were not to blame for having accepted such a crew, as New York was scoured clean of sailors. It is doubtful that any one except Waterman could have made the voyage. Even he considered "taking the ship back into New York for another crew," but this would have involved a heavy expense to the owners, and Waterman was not the kind who invited responsibility for piling up costs.

Having made his decision to reach San Francisco or go under in the attempt, Waterman called all men aft as the *Challenge* was still in sight of Sandy Hook. There he gave a twenty-minute sample of his oratorical power, although he did not expect to convince his audience of anything. His motive was to hold their attention until his officers could search the crew's dunnage. The officers combed the forecastle thoroughly. They broke open chests, emptied sea bags, and found an amazing assortment of rum, knuckle-dusters, slingshots, bowie knives, and pistols. The mates dumped this collection over the side with the exception of the knives, which were needed for work aboard the ship. These were rendered less effective as weapons by breaking off their points.

After a physical examination of the crew seventeen men were immediately ordered into sick bay. Five had died, and eight were still in the sick bay when the voyage ended. Of the forty-seven men and boys who passed the physical test, only six were found who had sufficient knowledge of the ways of the sea to act as steersmen. "For some time after sailing from New York," writes Captain Arthur H. Clark in *The Clipper Ship Era*, "Captain Waterman and his officers were always armed when they came on deck, but after a while the crew appeared to be in such good shape that this precaution gradually became neglected, until, one morning off Rio Janeiro, while Captain Waterman was taking his sights, he heard shouts for help from the main deck. He at once laid down his sextant and hurried forward to find the mate, Mr. Douglas, with his back to the port bulwark just abaft the main rigging, defending himself with bare fists from four of the crew armed with knives, who were attacking

him. As Captain Waterman ran along the main deck he pulled a heavy iron belaying pin out of the rail, and using this with both hands as a club, he dealt a terrific blow on the skull of each of the would-be assassins, which laid them out on deck—two of them dead. Mr. Douglas had received no less than twelve wounds, some of them of a serious nature; indeed, he barely escaped with his life. From that time the officers always carried arms, and there was no further trouble with the crew.”*

Captain Waterman made what was considered very good time in reaching San Francisco. The ship was one hundred and eight days out of New York when she came through the Golden Gate, but it was an out-of-season sailing. His crew left the ship immediately after dropping anchor, as was the custom then, and spread hair-raising stories of brutality and hardship on the voyage; one paper declared that such a captain “should be burned alive.” A mob went searching for Waterman, but when the vigilantes turned out the mob dispersed. Waterman offered to appear as a witness before any legal body, and when no complaint was filed with any of the constituted authorities he insisted upon an inquiry. The inquiry was held and, largely through the testimony of crew members, Waterman was exonerated. Several days after Waterman’s trial and exoneration a San Francisco newspaper carried the following: “A gentleman of this city informs us that nine of the seamen who have just arrived in her (the *Challenge*) have waited on the consignees of this ship and informed them that they are willing to make a voyage to China, in the *Challenge*, with Captain Waterman as master. Five of these seamen are Americans and four are foreigners. The same gentleman states that the passengers are unanimous in justifying the course pursued by the Captain on the way out.” Waterman, however, retired after this voyage and, with Captain A. A. Ritchie, founded the town of Fairfield, California. In 1852 he was appointed Port Warden and Inspector of Hulls for San Francisco, a position he held for twenty-eight years, when he retired to a farm on which he remained until his death at seventy-six.

* From *The Clipper Ship Era* by Arthur H. Clark

The scarcity of men that plagued Waterman was also felt in the shipyards of New York. Ship carpenters and calkers were paid two dollars a day during the decade 1840-50. In 1853 the wage rate for these skilled workers rose from two to three dollars a day, but even with this increase the city's shipbuilding firms experienced great difficulty in engaging a sufficient number of men to fulfill their contracts. In this year clipper construction should have declined. The California-rush demand had subsided. Freight rates were still high, but cargoes were fewer. Yet New York shipowners, intoxicated by the ease of past profits, continued to order clippers. The demand for speed was as great as ever, since a one- or two-day lead over a rival might result in the sale of a cargo. Non-shipping capital had also come into the market. Clipper building attained its peak in 1853.

Up to 1850, since most of the clippers having New York as a home port were built in local shipyards, it was possible to measure New York clipper tonnage by the number of locally built ships. In 1853 New York owners increased their shipping tonnage by the addition of thirty-eight new vessels, of which thirty-five were clippers and three barks. However, only twelve of the clippers and two of the barks were New York-built.

The McKay Clippers

The supremacy of New York-built ships had been maintained up to 1853, but early in May of that year a Boston-built ship, owned by Andrew F. Meinke of New York, came inbound past Sandy Hook only eighty-two days out from Honolulu. In establishing this world's record Captain Lauchlan McKay had driven the *Sovereign of the Seas* to new records between all points on the Hawaiian route. Then, having demonstrated his ship's ability in the Pacific, the same captain drove her to an Atlantic record by sailing from New York to Liverpool in thirteen days, twenty-two hours, and fifty minutes.

These two performances turned the eyes of the shipping world to the designer of the *Sovereign of the Seas*, Donald McKay of Boston, who

turned out more clipper-ship tonnage and more “uniformly successful” clippers than any other builder.

Meanwhile William H. Webb was preparing to launch the *Young America*, his last extreme clipper. She was towed to Pier 28, East River, where she hoisted the familiar “Up for California” pennant. Webb challenged the owner of the *Sovereign of the Seas* to a race to San Francisco for a purse of ten thousand dollars, but the challenge was turned down because of the depressed condition of the California market.

In the same year, however, a New York-built clipper was to have its chance against a McKay design. This contest developed into the closest race ever run by clippers. Involved were the *Flying Cloud*, designed and built by McKay, and the *Hornet*, built in New York. Both were New York-owned. The *Hornet* closely followed the design pioneered by Griffiths in the *Rainbow*, while the *Flying Cloud*, most famous of the McKay clippers, was a perfect example of the Boston designer’s art as a builder of ships. The *Hornet* left New York several hours ahead of the *Flying Cloud*, but so closely was the course contested that Captain William Knapp brought the *Hornet* into the San Francisco anchorage but forty minutes ahead of the *Flying Cloud*. Two thirds of an hour advantage for the winner of a race over a sixteen-thousand-mile course! Before the year ended several records had been set by New Yorkers. The *Comet*, an extraordinary performer which appears to have received less than her share of laurels, was built by Webb in New York and launched in 1851. In her brief career of about five years she established three world’s records. Her 1853 record of thirty-five days and seven hours from San Francisco to Cape Horn still stands for sailing ships, and her twelve days from San Francisco to the equator established a record which “is believed to have been beaten only twice up to the present time and then by some twelve hours only.”

New York ships continued to establish new records in 1854. The *Flying Cloud*, under Captain Cressy, went to China from her home port, via San Francisco, in one hundred and twenty-seven days, and Captain

Gardner drove the *Comet* to New York from San Francisco in an even seventy-six days.

This year ended the era of speed records. Although clipper tonnage reached an all-time high in 1856, both the California and China markets had begun to decline. The year also witnessed dramatic episodes in sailing history. In the late spring of 1856 the ship *Rapid*, Captain Phineas Winsor, left the Port of New York bound for San Francisco. Several weeks later Captain Joshua Patten, accompanied by his young wife Mary, sailed from New York for the same port in the *Neptune's Car*. Another ship, the *Intrepid*, captained by E. C. Gardner, weighed anchor at the same time, also bound for the Golden Gate. The three ships ran into violent storms in approaching the Horn. The *Rapid* received such a battering that two of her crew were killed, and four remaining members of the crew and the officers turned tail to the storm and ran back to Rio de Janeiro. Captain Winsor of the *Rapid* later reported that the *Intrepid* had been close by and had paid no attention to his distress signal, but Captain Gardner's log showed that the *Intrepid* had been more than a thousand miles from the *Rapid* at the time.

The *Neptune's Car* encountered bad luck almost from the moment she left New York. Captain Patten became ill but stayed on duty until his ship was approaching the Horn. There his first mate was put in irons "for incompetence and neglect of duty." Under the strain of his double duties the young captain broke down and at the worst of the storm was confined to his bunk, delirious. His wife took command and brought the ship into San Francisco, arriving almost ten days ahead of the much larger *Intrepid*. In that day of superseamanship there were few who could have matched her navigation, yet she was apparently so modest about it that her name was nearly lost to history.

Decline of the Clippers

The gold rush had been chiefly responsible for the great mass of clipper-ship building. When California began to produce her own food

supply and land travel to the Pacific coast became a routine instead of a dangerous adventure, the need for speed was ended. The roomier, bulkier freighters became profitable once more.

Furthermore, the maintenance cost of clippers was found to be excessive. The wide spread of rigging put a strain on the hulls that very few of them could stand. After two years of driving nearly all required dry docking and expensive repairs. Ships in dry dock earn no money. Rigging was reset and cut down until the wave-battered and wind-strained hulls could withstand the pull of the canvas. This reduced the clippers to a speed not far superior to that of the roomier cargo ships.

A third factor which entered into the decline of the clipper was, of course, the advance of steam. Where the paddle-wheelers had required so much space for machinery that there was no room for steerage passengers, the application of the screw propeller to transatlantic ships removed the inequality between sail and steam. The sail-driven ships held this form of passenger trade for years. With the enlarged space released upon installation of the screw propeller, steerage passengers took to the steamers.

Gradually one trade route after another went to the steamers. The California and Australia trades were the last to go. Steamers had not yet reached the point where they could compete on distances which required recoaling. Ultimately the opening of the Suez Canal threw the China trade to the steamers, and the completion of transcontinental railroads lessened the demands on coast-to-coast navigation. Meanwhile economic factors were working against American shipping. America was becoming self-sufficient. Public attention was turning to land frontiers. The financial panic of 1857 virtually signed the death sentence of the sailing ships.

Thousands of firms failed, among them numerous shipping concerns. New York shipyards languished for want of new accounts. When general business recovered in 1858 and 1859 an attempt was made to revive the clipper traffic. But of ninety clippers which cleared

for San Francisco during 1859, eleven were turned out at Mystic, Connecticut, while New York supplied nothing which even resembled the clipper mold.

Collins had kept the United States supreme in steam as long as he received government subsidies equaling those of his competitors. Then in the mid-fifties the Collins boats ran into a series of disasters. On September 27, 1854, the *Arctic* collided in the fog with a small French steamer, the *Vesta*, off Cape Race and sank with nearly all on board. Collins' wife, son, and daughter were among the victims. Despite this personal tragedy, Collins replaced the *Arctic* with a larger boat, the *Adriatic*, in 1855. But still disaster pursued him. The *Pacific* sailed from Liverpool in January 1856 and disappeared without trace. Seven months later Congress withdrew its subsidy from Collins. This was a blow from which he could not recover, and in 1858 the last three ships of his line were sold at auction to satisfy creditors.

At this time those clippers still in use were functioning as tramps, many of them carrying guano fertilizer from South American ports, a dismal finish for the former queens of the sea.