

USS SHARK

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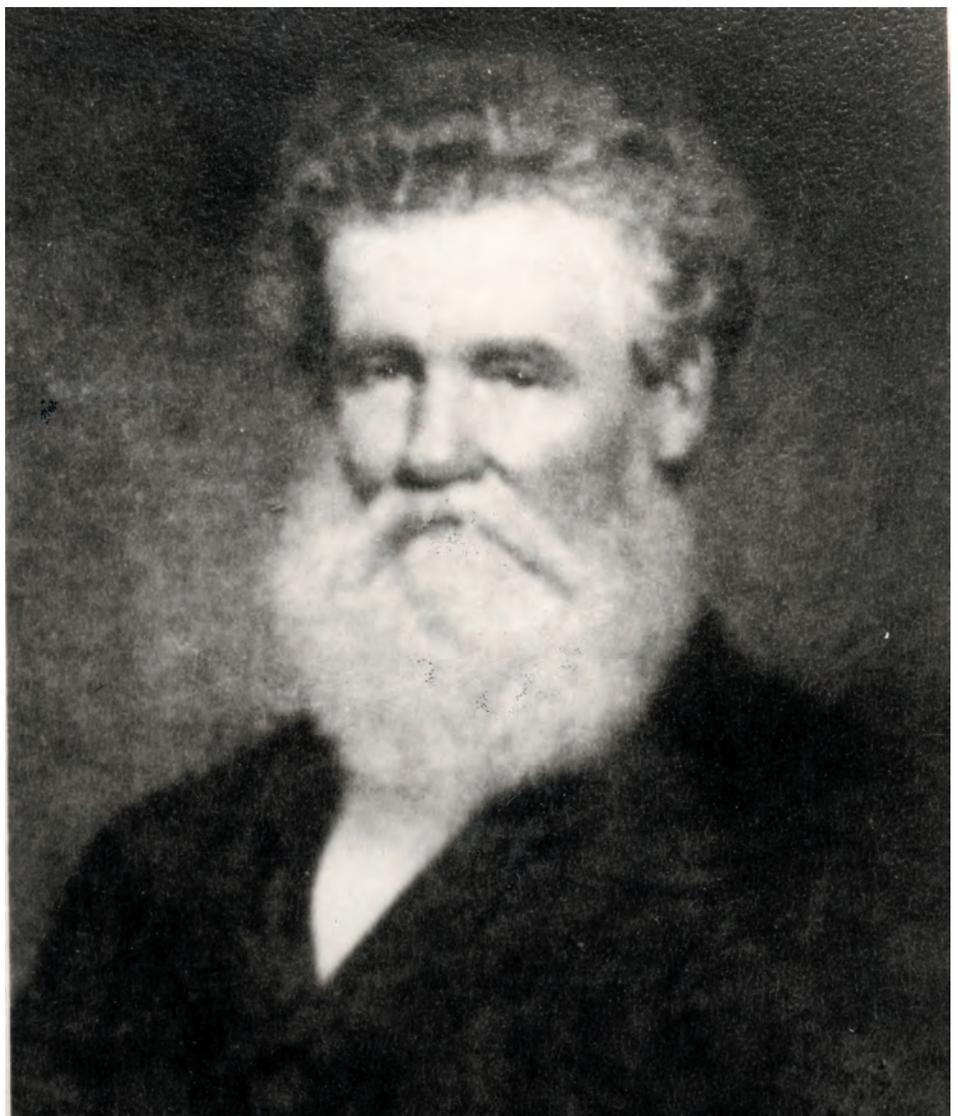
Stephen R. Mallory: the Southernmost Clipper Ship

By John Viele

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The brief but glorious era of the clipper ship during the California Gold Rush was the high-water mark of the Age of Sail. During this same period, Key West was the busiest seaport in Florida, and the wreck salvaging industry on the Florida reefs was in full swing. The wrecking industry brought much wealth to Key West; it also brought skilled shipwrights who could build the large sloops and schooners needed to salvage wrecks.

The first-generation clippers were called the “extremes” because of their narrow hulls, which limited cargo capacity, and their extremely tall masts carrying clouds of canvas. By 1855, the “rush” was waning and freight rates began to decline; the need for speed was overtaken by the need for more cargo capacity. The naval architects’ answer to this trend was the “medium” clipper. They were not as sharp in their lines as the extremes and did not carry quite as much canvas, but they could load more cargo and be handled by smaller crews. Nevertheless, they were still remarkably fast and completed voyages in record times,



Shipbuilder John Barthum. Photo credit: Monroe County Library.

nearly equal to those of the extreme clippers. After 1854, no more extreme clippers were built.

About the time the American

shipping industry was shifting from extreme to medium clippers, leading

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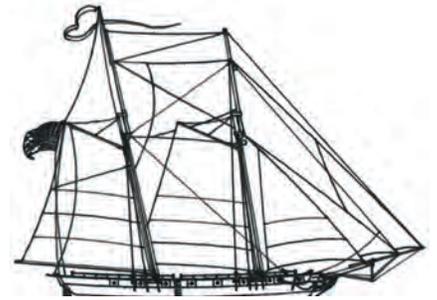


Pam and John Viele. Photo credit: Monroe County Library.

The Society's second President, Carole Heinlein, started me on researching the Stephen R. Mallory's story. Over a period of 20 years my late wife Pam and I traveled thousands of miles in the quest. We visited every seaport that the clipper called on in the United States with the exception of San Francisco. Shipping news of local newspapers provided us with the arrival and departure dates, cargo, sometimes crew-size and any unusual events on the voyage. In the National Archives, we found the original certificate of registration and the crew lists for her voyages

to the Philippines and the West coast of South America. In the Mariners' Museum, Newport News, Virginia, we found a copy of the Sailing Card distributed to merchants and shippers to announce her forthcoming voyage to San Francisco. In St. John, New Newfoundland we found much information about her voyages after she was sold to British and then Canadian owners. In the National Maritime Museum in Greenwich, England we found this story of her sinking after she was sold to Canadian owners.

And we had fun.



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Editor: Tom Hambright

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merchants in Key West, the firm of Bowne and Curry, conceived the idea of building its own clipper ship. Up to that time, nearly all the clippers had been built in the northeast, and none south of the Chesapeake Bay. Despite this, Bowne and Curry had complete faith in the ability of their master shipwright, John Bartlum, to undertake the task.

Bartlum was born on Green Turtle Cay in the Bahamas in 1814. As a boy, he frequented the island's boat yards and became fascinated by the process of building watercraft. At eighteen, he was already captain of a schooner engaged in salvaging wrecked vessels in the Bahamas and the Florida Keys. During visits to Key West to obtain supplies, he came to know Bowne and Curry. In 1845, despite his never having served as an apprentice in a shipyard, Bartlum became their master shipwright and a permanent resident of Key West.

Between 1847 and 1854 he built at least five schooners, the largest of which was the pilot schooner **Florida** at 171 tons and 90 feet. Impressed by the schooner Bartlum was building, in 1854 Bowne and Curry entrusted him with the responsibility of building a medium clipper of nearly 1,000 tons. It was a formidable task for a self-taught shipwright, but Bartlum did not hesitate to start work.

With the exception of the wood for the keel, which was purchased from New York, the ship was built from native timber of the Keys and south Florida, including madeira (mahogany) for beams, knees and timbers, and live oak, cedar, logwood, horsewood, dogwood, and yellow pine. She was said to be the only clipper in the world built with mahogany timber and came to be known as the "mahogany clipper."

Bartlum began construction in



Florida senator Stephen R. Mallory, the man from whom the new Bowne and Curry clipper ship was named in 1856, became Secretary of the navy of Confederate State of America in March of 1861, a position he held for the duration of the war. Photo credit: Library of Congress.

June of 1854. By December, many of her frames were in place, but there was still a long way to go. Construction continued through 1855 and well into 1856. Bowne and Curry set the launch date for 14 August 1856 and named their new clipper after Key West's most prominent citizen, Florida senator

Stephen R. Mallory, and had a life-size figurehead of the senator mounted on the ship's bow. A Key West correspondent for the New York Herald newspaper wrote, "After her launch we will give you a technical description of this vessel

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Key West in ca. 1856. Lithograph, Chandler and Company, Boston. The South was not known for shipbuilding, yet the Key West firm of Bowne and Curry decided to get in on the action taking highly profitable cargos to California's Gold Rush boom town by building their own clipper ship to do it.

(**Mallory** from page 3)

and satisfy the incredulous that the South can build fine ships as well as raise cotton.”

Stephen R. Mallory was 164 feet long, with a beam of 35 feet 9 inches, a depth of hold of 17 feet 10½ inches, and a draft of 20 feet. She had two decks and a round stern, and she displaced 959 tons. A deckhouse forward on the main deck housed the crew and another aft provided quarters for the master and mates.

William Curry asked his brother-in-law, Graham Joseph Lester, to take command of the ship. The 33-year-old Lester had made a successful career running wrecking vessels and, when the offer of command of the **Mallory** was made, was master of a 150-ton brig. He accepted Curry's offer and was soon aboard the **Mallory** supervising her riggers and preparations for sea.

When the rigging was nearly complete, Lester and his first mate climbed aloft on the foremast to inspect its fittings. On deck, riggers were setting up (tensioning) the

forestay when the strap attached to one of the tackles parted. The mast surged back, catapulting the two men from the mast. The mate landed on his back on the main deck while the captain fell through the cargo hatch to the lower deck. A newspaper article reported that the captain was very seriously injured, while the mate was only slightly hurt. Nevertheless, despite his fall, Lester made a rapid recovery and was back on board, ready to take the **Mallory** to sea just two months later.

During October and into November, dock workers loaded cotton that had been salvaged from the wreck of a barque. When loading was complete, the **Mallory** sailed for Charleston to finish filling her cargo holds. The Charleston Courier reported, “[The **Mallory**] has been constructed of the best materials, has all the latest improvements, and everything about her gives evidence of skill and care in her build. As a specimen of Southern workmanship she will repay a visit and her gentlemanly commander, Capt. Lester, will be

pleased to see all on board his ship at Central wharves who may wish to look at her.”

On 23 December 1856, the **Mallory** sailed for Liverpool with a crew of eighteen, carrying cotton and oak barrel staves. The transatlantic passage was uneventful and completed in 24 days. At that time, an eastward passage under sail from New York to Liverpool of 30 days was considered fair time.

With 4,099 sacks of salt on board, the **Mallory** cleared Liverpool on 3 March and sailed for New Orleans with a brief stop at Key West. At New Orleans, the **Mallory** offloaded the salt and then returned to Key West. There, dockworkers offloaded 100 tons of coal for storage and sale to steam vessels calling at the port.

Soon after her arrival, the county sheriff came aboard, arrested twelve free black crewmembers, and hauled them off to jail, charged with entering the state of Florida in violation of a state law prohibiting the entry of free blacks unless their ship was in distress. Lester could not sail with two-thirds of his crew

missing. He was able to replace them with crewmen from a ship that had been destroyed by fire in the Straits of Florida. The **Mallory** sailed six weeks later for New Orleans, loaded with 1,050 tons of railroad iron from a wrecked ship.

The **Mallory** made two more voyages to Liverpool from New Orleans. After the second, she returned to New York instead of Key West—Bowne and Curry had decided that a New York-to-San Francisco voyage might pay handsomely. Loading for the voyage was completed two months later. The cargo consisted of a wide variety of manufactured goods for the booming population of San Francisco: candles, flour, butter, clothes, tobacco, soap, hand tools, guns, and even a buggy (but no horse!).

Departing New York on 4 September 1858, the ship encountered unfavorable sailing conditions and did not reach San Francisco until 2 February 1859—a slow time of 151 days. Other clippers sailing at the same time made passages from 135 to 191 days, when the average time for that route was 130 days in “normal” conditions. The famous clipper **Flying Cloud** did it in 89 days, a record never surpassed by sailing vessels.

In the early days of the Gold Rush, ships arriving at San Francisco would soon be abandoned by their crews, who would often desert and head for the gold fields. As a result, hundreds of ships lay idle at anchor in the Bay, abandoned and slowly rotting away. By 1859, however, gold fever had subsided, and enough of the **Mallory's** crew remained or were able to be replaced to sail her home. With more favorable winds on their return voyage, Lester made good time around Cape Horn; he entered Key West for orders, 73 days out. The orders sent the ship to Havana to load sugar and tobacco; and from there to London, smack at the peak of the

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Sailing card distributed to shippers announcing the Mallory's forthcoming voyage from New York to San Francisco in 1858. Photo credit: the Author.

North Atlantic hurricane season.

Two days after getting underway on the return trip from London, the **Mallory** was struck with gale-force winds, which quickly increased to hurricane strength. On 12 October they suddenly shifted from NNE to NW, creating a heavy confused sea. The violent rolling caused the boards in the cargo hold, installed

to hold the ballast in place, to give way. The ballast shifted to the lee side, throwing the ship on her beam ends, and a boarding sea stove in the after deck house. The ship lay heeled over for nearly sixteen hours. To get her back on an even keel, her crew cut away the main topmast and the backstays. The

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Clipper Ship Stephen R. Mallory by David Harrison Wright. Photo credit: the Author.

(Mallory from page 5)

mainmast snapped and fell to the deck. The mizzenmast broke about 20 feet above the deck. Half the men clambered down into the hold and began shoveling ballast back to the windward side. Two days after they were knocked down, two ships sighted the **Mallory** and signaled, “Do you want assistance?” Lester signaled back “Do not want assistance,” and continued with efforts to put a jury rig in place.

On deck, the men rigged shears and hoisted and rigged a

spare topmast at the stump of the mainmast. The completed jury rig consisted of a jib and spinnaker on the forestay; a skysail, royal, topgallant, and fore course on the foremast; and an upper topsail on the jury mainmast. Lester set a course for Key West and reached his home port two weeks later on 28 October 1859.

The **Mallory** remained at Key West for four months undergoing repairs. An article in the Key West newspaper said, “We have examined the **Mallory** very closely and have no doubt that her preservation

is due to the superiority of her materials and the care and fidelity of her builder, Mr. John Bartlum, in putting it together, her keel is as perfect as the day she glided from the ways.”

On 25 March 1860, the ship sailed for Liverpool. With a little help from the Gulf Stream, she made the crossing in the very fast time of seventeen days. Returning to New York, Lester once again prepared his ship for a long voyage around Cape Horn, or “Cape Stiff” as the sailors called it, to the west coast of South America.

Departing New York in mid-December 1861, the **Mallory** rounded Cape Horn without encountering severe weather and made port at Valparaiso, Chile, without incident. Over the next four months, she called at the ports of Callao, Peru; and Caldera, Flamenca, and Chanaral, Chile. Loaded with cowhides, goat skins, regulus (metallic antimony), and 800 tons of copper, she sailed for Baltimore in mid-October. After offloading there, she got underway for New York in ballast.

While the **Mallory** was cruising the west coast of South America, the American Civil War broke out and President Lincoln ordered a blockade of the Confederate coast. Key West, the only southern port in Union hands, was made the headquarters of the East Gulf Blockading Squadron, charged with intercepting and capturing Confederate ships attempting to evade the blockade.

To bolster the defense of Key West and its approaches, the government chartered the **Mallory** to carry Union troops to reinforce Fort Jefferson in the Dry Tortugas. After a brief stop in Key West, the **Mallory** reached the Dry Tortugas on 25 March 1862 and promptly ran aground on Middle Key Shoals. Lester engaged a fishing sloop to carry out one of the clipper's anchors so that it could be used to kedge the ship off the shoals. Four other fishing sloops came alongside, took off approximately 300 troops, and set them ashore at the fort. In the meantime, the **Mallory's** crew succeeded in heaving her free of the shoal. Lester put the remaining troops ashore at the fort and got underway for Havana.

The **Mallory** made two more Atlantic crossings and a voyage to Vera Cruz, Mexico. Returning to Key West in early 1863, she



FOR GREAT BRITAIN.

For LIVERPOOL.—The remarkably fast sailing A 1 ship **S. R. MALLORY**, Lester, master, having part of her cargo engaged and on board will meet with dispatch. For freight apply to
836 **J H ASHBRIDGE & CO, 120 Common st.**

Advertisement in the New Orleans Price Current and Commercial Bulletin, 26 September 1857, for cargo for the Mallory, ready to sail for Liverpool. Photo credit: the Author.

loaded cargo seized from captured Confederate blockade runners. Half the cargo was arms and ammunition; the remainder was, as a newspaper reporter wrote, “a miscellaneous assortment of goods, just the kind they want most in Dixie land.” Because of the threat of capture by Southern commerce raiders, the **Mallory** was ordered to sail in convoy under the escort of the gunboat USS **Sonoma**. Just north of the Bahamas, the **Mallory** became separated from her escort, but continued on her way, arriving safely in New York seven days out of Key West.

Soon after the Civil War began in early 1861, the Confederate navy had commissioned a number of steam-driven commerce raiders to prey on Union shipping. Although there were never more than five raiders at sea at one time, their impact on the Union merchant fleet was devastating. While they captured and burned only 257 Yankee vessels, a small fraction of the entire Union merchant fleet, they caused insurance rates to skyrocket. Shipowners, unable to make profitable voyages and fearful that their ships would be captured or sunk, began selling them to foreign owners, most of them British. All told, one half of the American merchant fleet was either lost to commerce raiders or sold foreign. Among the latter was the **Stephen**

R. Mallory. On 20 November 1863, Bowne and Curry sold the ship to British owners and the clipper was renamed **Ansel**.

The **Ansel** sailed under the British flag for another seven years. She made one more voyage around Cape Horn to the Philippines and eight more Atlantic crossings. In a North Atlantic gale in 1870, she sank 300 miles off the Irish coast. The master, his wife, the stewardess, and ten men were lost. One of the mates and seven men in a ship's boat managed to reach the Skelligs Isles on the southwest coast of Ireland and were rescued.

After building and launching the **Mallory**, John Bartlum continued building, owning, and serving as master of wrecking and pilot vessels. During the Civil War, he made important contributions to the Union war effort in refitting and repairing ships of the East Gulf Blockading Squadron stationed in Key West. When he died in 1871, all the flags in Key West and on the ships at anchor in the harbor were flown at half-mast to pay honor to one of Key West's most respected citizens.

John Viele is a retired naval officer, former submarine commanding officer, and author of a three-volume history of the Florida Keys, where he now resides.

Opening the Over Sea Railway to Key West



The arrival of the First Train in Key West. Photo credit: Monroe County Library.

The following article by John Maurer Rockwell is reprinted from Collier's magazine of January 20, 1912.

January twenty-second will be a great day for Key West. President Taft will be there—at least, he has been invited - and the army and navy, and representatives of foreign powers, and they and all the people of Key West, and Henry M. Flagler, who made it possible, will open one of the most remarkable railways in the world.

By the opening of the Key West Extension of the Florida East Coast Railway, Key West, which is built on a little island far out at sea, will be joined to the Florida mainland.

It will be joined to Cuba—ninety miles away—by the nearest thing to a bridge - ferries which will carry trains across so that you may get into a Pullman in New York and not get out until you alight at Havana or Santiago. Key West will be the nearest American city to the Panama Canal, and, it would seem, the natural gateway to it as far as passengers and mail are concerned. People will know it as a naval station, coast artillery post, and railroad terminus just as they know it now as a place where cigars come from. No wonder Key West is interested.

This curious little city is built on the last of the low reefs which curve round the lower end of Florida far out into the blue waters

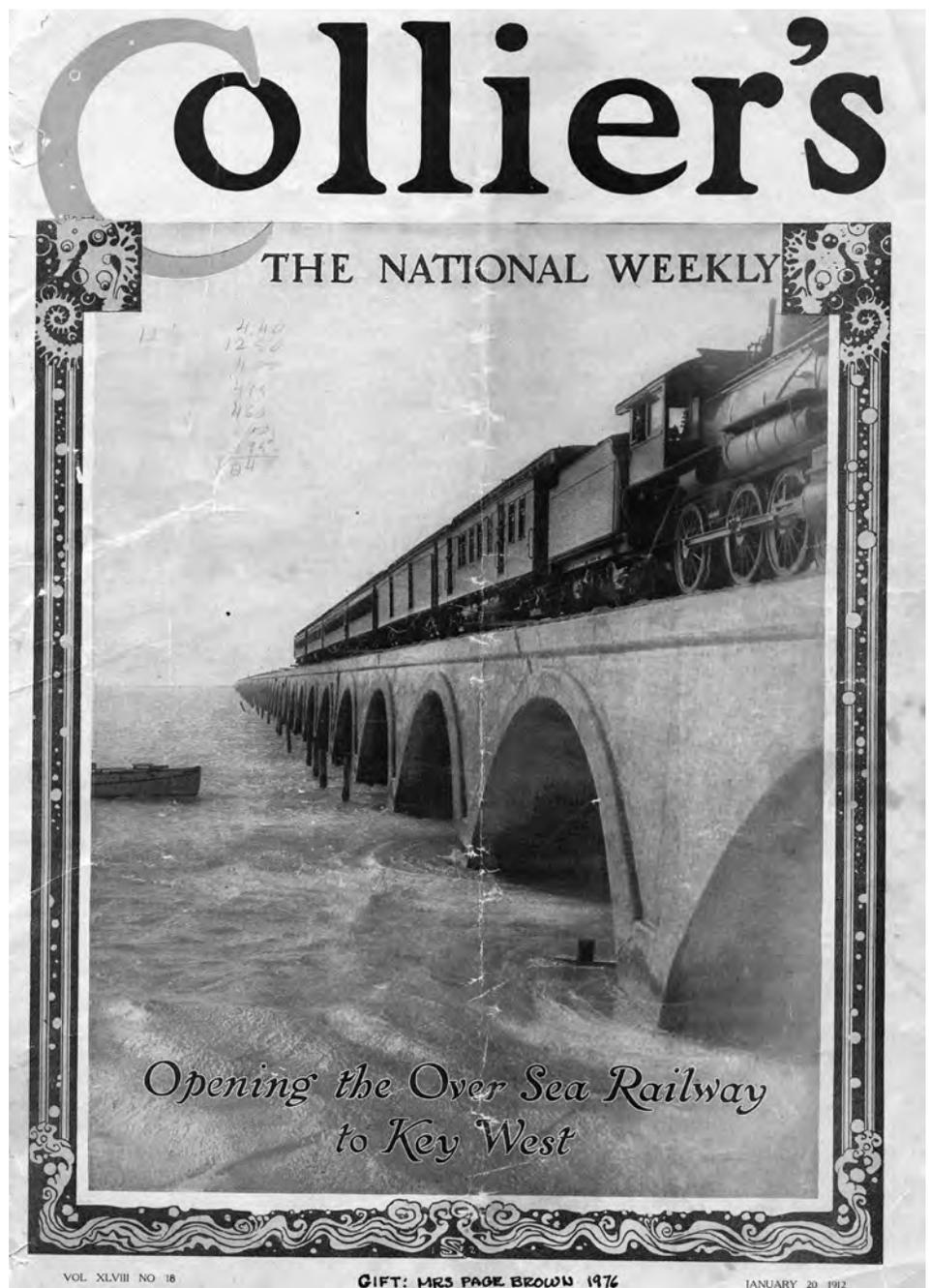
the Gulf. From Key West to Cape Sable, the nearest mainland is sixty miles of open water. It is 150 miles to Miami on the east Florida coast at the other end of the keys.

A Web-Footed Proposition

These keys are low reefs of coral or limestone, with the ocean between—sometimes so much of it that you cannot see across. White gulls wheel about in the sunshine above, the creepy gray shapes of sharks glide so close that you may sometimes see them from the shore. You are almost as much at sea as if you were on a raft, with the Bay of Florida and the Gulf stretching to the north and west, and to the south and east the Atlantic, and at night the flashing lights of Alligator Reef,

Sombrero Key, and American Shoal. And it is out across these keys and the water between them, for 128 miles from land solid enough to be called mainland, that the Key West Extension has been built.

Seventy-five miles of it have been built over water, more than seventeen of which could properly be called the sea, itself. Between the nearest key and the mainland was another seventeen miles, here of marsh, through which steam dredges had to wallow slowly, digging their own channel and piling up a railroad embankment as they went. Many of the keys were merely ledges of swamp just above the surface of the ocean, and over these dredges had to waddle, to - all in all, forty-nine miles were dredge work. The rest of the construction, if not unusual in itself, was made so by the character of its surroundings. Hurricanes had to be reckoned with and to be met. Four of them have swept the work, the famous one of 1906 costing the lives of 130 men. The laborers' camps have been floating camps; fresh water had all to be brought in tanks from the mainland; in short, it was "a web-footed proposition from start to finish," with those unique and picturesque difficulties which come when the water is salt water and the surrounding country the shifting sea. The Key West Extension is the appropriate conclusion to Mr. Henry M. Flagler's long line of constructive investments on the east coast-a monument to the rich man who went to Florida after the work of his life seemed over, and there discovered a second youth. A quarter of a century has passed since Mr. Flagler began the development of the east coast, and he has spent between forty and fifty millions there. Twelve millions went into hotels, eighteen into old railroads, another million



The cover of Collier's weekly of January 20, 1912. Photo credit: Monroe County Library.

or so into steamships, and the rest into the Key West Extension.

The Man Who Began Life Over Again

Mr. Flagler was fifty-five years old when he first went to Florida. He had grown up in the hard, dry Rockefeller school, and, like his associate in the oil business, had more money than he knew what to do with. The son of a Presbyterian - clergyman, a man who scarcely knew what pleasure for its own sake

meant, he had given his whole life to business. He had never been to Europe nor even to California. He went down to that semitropical coast with its palms and red poinsettias, its white beaches and blue water, and, so to speak, began life all over again.

The Ponce de Leon and the other huge hotels which have made the "American Riviera" rose one after another down that shimmering,

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(Railway from page 9)

dreamy coast. Orange and grapefruit groves began to break the wilderness, people poured in, and the east coast began, as it were, to be. It was in May, 1886, that Mr. Flagler bought the Jacksonville, St. Augustine and Halifax River Railroad. He bought other old properties and then, in 1892, he began to push southward his own line. By '94 it was completed to Palm Beach; by '96 to Miami.

The road across the keys to Key West was, apparently, the direct result of Mr. Flagler's visit to Cuba in company with Sir William Van Horne. The man who had pushed the Canadian Pacific through to the coast was enthusiastic about railroads in Cuba, and Mr. Flagler saw the importance of Key West as a link in such a scheme. It was not a case of making money, however—the idea appealed to him; it seemed the logical climax of his work in Florida, and he determined to put it through. He called in Mr. Parrott - Joseph R. Parrott, once a famous Yale oarsman and, since 1885, in charge of Flagler's Florida interests—his-viceroy, so to speak, along the east coast. Parrott was a bronzed, square-jawed man who had had as many as fourteen thousand men on his payrolls at one time, and was used to big things.

Flagler did not ask him if the extension would pay. He asked if it could be built. Parrott said it certainly could, and the work began. The first plan was to find a way across the Everglades to Cape Sable. Engineers spent several desperate months at this, but finally gave it up as impossible. The surveying parties turned then to the labyrinthine keys, and, after all sorts of difficulties, would have saved weeks of time, they say



William J. Krome. Photo credit: Monroe County Library.

now, if the aeroplane had been in its present stage of development—they finally selected forty-one across which to run the road.

The Engineers

That was in 1905. Mr. Flagler had already spent thirty millions in Florida and he was seventy-five years old. He is not a man who says much, nor one given to being conscious of his emotions—if he has any—but there is no doubt that he has been anxious to see this last impressive link in his chain completed and that this desire of his has spurred his faithful lieutenants on.

A constructing engineer, J. C. Meredith, was found over in

Tampico, where he was building a pier for the Mexican Government. Meredith was a quiet little man who knew all about re-enforced concrete. They expected him to ask a month to look over the ground - or, rather, water - and more time to make up his mind, but Meredith said that he was ready to begin that afternoon. Nevertheless, he did go home to Kansas City to say good-by. to his family and to pack up a few things, and then hurried back to his work—his last work, as it turned out, for he died in service and was succeeded by William J. Krome.

It was not a simple job that he had tackled. Before ever they got



Knight's Key, Fla. Knight's Key Dock, view showing steamer and train

The Knights Key Dock south of the Seven Mile Bridge. Photo credit: Monroe County Library.

down to the keys and the ticklish business of figuring the effect of hurricane winds and waves, and building bridges and track to withstand them, there were the Everglades to cross. They put in dredges with enough water to float them, and made them eat their way toward the sea, throwing up the mud between them as they went. Meanwhile Parrott was assembling men and steamers and barges for the main attack on the keys. There were eighty tramp ships to carry crushed rock. There was another fleet for coal, and camps and a transportation system had to be arranged to care for five thousand men.

It was hard to get men. Heat, mosquitoes, and the company's rule that there should be no whisky in the laborers' quarters were not enticing. As Key West and Miami

were too far away to be reached on foot, the bosses were able to enforce this rule, although "booze boats" skulked about the keys like the smugglers that have so often haunted them. and took their chance of being handled with as little ceremony as actual pirates if they were caught. Some Spaniards and men from the Cayman Islands have been used-and very steady workmen they have made-and now and then a Norwegian, although the latter generally wouldn't stay long unless they were made foremen, but the bulk of the men were shipped down from New York and Philadelphia - derelicts and "hoboes," who got away as soon as they were paid and drank up their earnings. Although less than four thousand men was the average number employed on the work, twenty thousand were carried down

to the keys in the first three years.

The Great Hurricane

Then in October, 1906, came the great hurricane. Many of the laborers were living in huge barges with two-story superstructures, which were towed from key to key as the work advanced. One of these was torn from its moorings at Long Key, with 145 poor fellows aboard, driven out across the Hawk Channel, and smashed on Florida Reef. Eighty-seven of these men were picked up, clinging to bits of wreckage. The Italian steamer **Jenny** and the British steamer **Alten** picked up many others, and for days and weeks after, the news of other rescued castaways kept coming from distant ports, as far away, even, as London and Buenos Aires.

The work, however, stood, and

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A Florida East Coast Railway Company train leaving the station at Key West. Photo credit: Monroe County Library.

(Railway from page 11)

as soon as the sea was calm the line began to crawl southwestward again. Some of the reefs were far enough out of water and solid enough so that their coral and limestone could be blasted and piled up as in ordinary railroad construction. Some of the shallow open water stretches were bridged by suction dredges, and these ramparts, ripped with rock. Between Lower and Upper Matecumbe Keys there was four miles of open water. This was shallow, and a trestle was sufficient, to be filled in solid later on. At Long Key, about fifty miles out, there was a more difficult gap, and here a solid reinforced concrete viaduct had to be built. For more than two miles it stretches across the blue waters - 180 massive arches, with no land

in sight except the narrow keys.

One of the reasons for this cement construction was what has been alliteratively spoken of as Mr. Flagler's "passion for permanence." And, of course, there is this practical advantage that cement carries almost no charges for upkeep, while steel must be kept painted and replaced after fifteen or twenty years.

Viaducts of Concrete

The building of these concrete viaducts was, naturally, one of the most interesting phases of the work. The water was from ten to thirty feet deep in most places and exposed to the full gales of the Atlantic, and at times the concrete had to be mixed in barges and placed in position by powerful boom derricks. In other places molds were formed by driving piling which held water-tight framework in place, or caissons

were sunk or cofferdams built.

Between Knight's Key, whence steamers have been running to Havana for several years, and Bahia Honda there is seven miles of almost unbroken open water. Roughly speaking, it is one long bridge 35,815 feet in length, although it is divided into four sections-the original Knight's Key Bridge, Pigeon Key and Moser Channel Bridges, and Pacet Channel Viaduct. The first three are concrete piers with steel girder spans laid on top to carry the track. The fourth is composed of arches of unreinforced concrete. The longest section, that across Moser Channel, is 13,947 feet, well over two miles. There are ten other gaps after Knight's Key-one the Bahia Honda Bridge, nearly a mile long, and another, the Boca Chica Viaduct, half a mile long, but most



Henry Flagler and party inspect the work on the railway in 1906. Photo credit: Monroe County Library.

of the remainder are shorter than this.

The peculiar difficulties of this web-footed construction developed new schemes of construction in several places. Previous to the 1909 hurricane, the roadbed north of Knight's Key was protected at exposed points by a heavy riprap of rock. This is the usual way of building an embankment, to put the comparatively soft material on the inside and then riprap it with rock. It was found, however, that the receding waves during storms sucked the comparatively steep riprap awry, and the usual plan was, therefore, reversed.

The rock was put in first and then protected by a heavy layer of marine marl dredged from deep deposits near by. This material, when first applied, was in the form of a very soft mud, and gave the

embankment a long, flat slope. It hardened on exposure into a solid homogeneous mass, which is very resistant to wave action.

Another novelty was a gasoline-engine dredge which Engineer Meredith evolved when he found it impossible to use ordinary dredges because of the difficulty of getting: coal and fresh water. It was in the keys west of Bahia Honda - many of them so low as to be mere swamps covered with mangrove - that these dredges were first tried. They were set up on barges, and the latter waddled across the key when there was enough water to float them, and when there wasn't, they were hauled out, mounted on wheels, slid on to a steel track, and so continued their work.

The providing of proper terminals at Key West was in itself

a large piece of work. There was no place for deep-water terminals along the water front, so enough mud was dredged up from the shallows to cover 200 acres with it.

The Key West Terminus

When the Navy Department protested that maybe it might want some mud someday to fill in one of the nearby keys for a torpedo station, and that if the railroad dredges kept on they might sweep Key West Harbor clean, Mr. Parrott amiably replied that if the Government should find itself so embarrassed, he would put the mud back where he got it.

The plans for construction at Key West include one large dry-dock and ten wharves, each 800 feet long and 100 feet wide, with basins

(Continued on page 14)



The railroad car ferry Estrada Palma at the pier on Trumbo Point. Photo credit: Monroe County Library.

200 feet wide between, in which the depth of water will be from 20 to 40 feet. The piers will afford berths for 40 vessels averaging 400 feet long.

It has often been said that the Flagler enterprises practically gave Florida 1,300 miles of new coast line. The value of the taxable property in the counties exclusively reached by the Flagler roads is said to have increased over fifty millions since he began, and only a small fraction of the land available for the cultivation of fruit and vegetables on the east coast is now under cultivation-25,000 acres, perhaps, out of 3,500,000.

The Industrial Side

In 1897 the railroad moved 76,000 crates of vegetables; in 1909 about 1,500,000 crates of tomatoes alone; 150,000 barrels of Irish

potatoes from one station alone; 700,000 crates of pineapples, besides other fruit and vegetables. The road earned, gross, \$819,000 in 1907 and over \$3,000,000 in 1908. Over 1,000,000 passengers were carried in 1908. Steamship service was opened with Nassau in 1895 by the Florida East Coast Steamship Company, owned by Flagler. In 1896 the Key West line was opened and, in the winter of that year, operation was extended to the Havana line. There is now a daily service. In 1902 the Florida East Coast Steamship Company was consolidated with the Plant Steamship Company - Flagler owning one-half the stock. There is foundation for the jest that on the east coast "Fla." stands for Flagler. The extension, while it can

scarcely be said to have continued this coast line, at least creates a new "farthest south" point for the United States, and brings into the bright, critical light of civilization a queer

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Henry Flagler in Key West on January 22, 1912. Photo credit: Monroe County Library.

corner, of our country which long has shifted peculiarly by itself.

It is along these keys that the Florida wreckers have hovered, to pounce like buzzards on a lost ship as soon as it was deserted by its crew. Here, indeed, they have waited after arranging with some ship's master to run his vessel ashore. The keys have hidden all sorts of queer people. from the inquisitive-smugglers and revolutionists to, perhaps some strange renegade as anxious that the world should forget him as was he to forget the world.

And now their strange inhabitants, their white and shimmering silences broken only the cries of gulls and the long roll of blue waves breaking on the coral rock, are to know the shriek of the locomotive and the roar of passing trains. Fruits fresh from

the Cuban plantations - there must be some things in Cuba that Florida doesn't grow - will doubtless be hurried across the keys on their way to northern markets. Passengers southbound, to Havana, to Panama, to transact the business that someday we shall be doing with the west coast of South America, will, unless time is no object, come this way. Florida, known only for its climate and fruit and alligators and turtles, will then, perhaps, be shipping to Peru and Chile the products of its mills. The novelists will have to move over to the West Indian islands. or across the Caribbean to find homes for their smugglers, absconding cashiers, and the lone lovely daughter of the irascible, civilization-hating hermit. The whistle of the locomotive will be heard in the land and another queer corner of the earth put on the civilized map.

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Train on the Seven Mile Bridge from Pigeon Key. Photo credit: Monroe County Library.

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