

The Herreshoff Family

sail into

America's Cup History

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Meeting
#1968

Presented by

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From the age of 8 to 18, in the first week of every August my father and I went on a fishing trip. We lived in north-east N.J., with the New York border only ten minutes away. Most of our trips were to the Catskills and the Adirondacks. I didn't realize, till I was much older that I had fished some of the best and most historical rivers in the history of U.S. Trout fishing.

Sometime in the spring of 1974, I was perusing my *Field and Stream* magazine when I came across an article on the best fighting fish in fresh-water America. It was called the Muskellunge or Muskie for short; its habitat went from the northern lakes of Minnesota through the great lakes to the St. Lawrence River in N.Y. After showing my dad the article, we decided we would go after some Muskie in the St. Lawrence River on our annual trip.

We stayed in a hotel just a little west from a town called Clayton. On our first morning we put the boat in the water and headed towards Clayton to top off the tanks.

Soon we begin to notice wooden boats of every size in the river. As we got closer to Clayton their numbers multiplied and we found ourselves in an impromptu parade of wooded boats. We cruised around a headland to the port of Clayton, there to our astonishment was the largest collection of wooden boats we had ever seen. I vividly remember all the colors of the boats, their pendants flying and their polished hulls gleaming.

To my 12-year-old eyes it was if an aquatic circus had come to town. Many were in the water cruising, other were at anchor and all along the numerous piers of Clayton. We had stumbled into the Clayton Antique and Classic Boat Show. It is was and remains the largest assemblage of wooded boats in the country.

Our day of fishing became a day of sightseeing.

At that moment my love of wooden boats began. Over the next few years, my father and I went from South Carolina to Maine attending boat shows.

I have a very patient mother.

It wasn't long before I encountered boats built by the Herreshoff Family. The two brothers of that name, we soon learned, were the pre-eminent boat designers of their time and the winningest America's Cup designers in history.

John Brown Herreshoff was born in 1844 and Nathan Greene Herreshoff was born in 1848. The family was long associated with Rhode Island and Penobscot Bay in particular. On their mother's side they were descended from Moses Brown, a Revolutionary War soldier and successful captain. Moses' brother was John Brown, a Revolutionary War general and a slaver.

The Browns played major roles in the Revolutionary war, both as sea captains and generals in the army. Brown University, was either named for John Brown, slave ship owner, or Moses Brown, fevered abolitionist. Or their nephew Nicholas Brown in 1804 (Perhaps that is a good question to ask when I am through).

The great granddaughter of Moses Brown, Mary Brown, married Charles Frederick Herreshoff. The Herreshoff's were of German stock and did well enough in real estate that Charles Frederick listed his profession as "Gentleman Farmer." This is a nice way of saying it didn't matter if the farm made any money, because he already had plenty of it.

The Herreshoff farm was located on Penobscot Bay in Maine. The seven children of Mary and Charles all grew to be successful individuals. Nat, as Nathan would be known, and John, often referred to as John Brown, grew up in a sailing culture. They and their five older siblings spent much time on the bay. Their father was considered a good captain and the family owned and sailed many boats.

At the age of 15 John decided to build a sailboat. He had drafted the design of the boat and was beginning to lay down the frames.

John had lost sight in his right eye from glaucoma. While laying down a frame a piece splintered off and hit his left eye. It blinded him for the rest of his life.

The months of depression that followed finally took a turn when his father convinced him to take up the boat project again. He and his youngest son, Nat, became John's eyes and soon the boat was finished. They named it Meteor, and John began sailing on the bay with the help of Nat.

The Meteor was a single masted 12-foot cat boat. A cat boat is a sailboat with a single sail on a single mast set well forward in the bow of a very beamy and (usually) shallow draft hull.

In unofficial races it soon became clear that the Meteor was the fastest boat on the bay for its size. It's success quickly led to an offer; He and the Herreshoff team built a replica of the Meteor and almost immediately recede two further commission. With capitol raised from selling those two boats and money supplied by his Gentleman Farmer father, the 15-year-old blind boy created Herreshoff Manufacturing Company on the banks of Penobscot Bay.

Turning now to Nat, he was one of Johns first employees and worked with him for two years. In 1864, turning 16 he went off to MIT to obtain a degree in Mechanical Engineering. While getting his degree he often captained boats and became well known in the New England area for his sailing. After graduating MIT at the age of 18 Nat became chief engineer for the Corliss Company. His main work was designing steam engines for boats. He also traveled home every weekend to help his brother build boats. He continued this brutal pace for 10 years but in 1874, he had what we would call a mental breakdown.

James Herreshoff one of Nat's older brothers, by ten years, organized a trip to Europe for himself and Nat. James wanted to get Nat away from boats and engine building. They would meet up with another brother Lewis who was blind and currently studying Philosophy in Weimar, Germany, to go on the Grand Tour.

James at this point was the most financially successful of the family. He was the chief chemist of Rumford Chemical Works, with 14 patents to his name. While working at Rumford he invented Cream of Tartar, which was the foundation to his wealth. So, if you ever wondered who invented Cream of Tartar, now you know.

The two brothers left for Europe on February 10th 1874. They landed at Cherbourg then went on to Paris. While touring Paris, Nat noticed a beat-up old sloop called Helen floating in the Seine. The brothers purchased the sloop and then took a month restoring her. She was renamed the L' Onda and they sailed for the Mediterranean and the South of France in her.

So much for getting away from boats.

While in the South of France, they met up with Lewis and they bought another boat. This was a larger boat called the Riviera. The Grand Tour that was planned, had morphed into a boat building and sailing tour.

After a few months cruising the Mediterranean, they sailed her up the Atlantic to Rotterdam. On August 11th with the Riviera in the hold, they sailed for home.

On Nate's return to America, John convinced him to become the full-time designer for Herreshoff Manufacturing. Soon they had gained a reputation for building some of the finest sailing vessels in New England. Deciding to branch out from sailing vessels, they built their first steam launch. They named her Stiletto. The engine and boat were completely designed by Nat.

After several months of trying, they still had not sold the Stiletto. Then they got an idea, one that today, we would call a publicity stunt. The fastest boat on the Hudson River was the Vanderbilts, named Mary Powell. It made trips from New York City to Albany at speeds no other boat could match. Many of the politicians and businessmen of the time, took her to from New York City to Albany.

Here's the stunt: Nat and John cruised from Rhode Island to New York and up the Hudson River. On October, 18, 1874, they were anchored off of Rhinebeck N.Y., where they waited for the Mary Powell. As the Mary Powell cruised past, the Stiletto raised anchor and followed. In short order they were cruising beside the pride of the Vanderbilts, then pulled ahead. They crossed her bow and slid down the starboard side. They then crossed astern and came up the port side. They continued to run circles around her. After an hour of this, the Stiletto put on more steam and beat the Mary Powell to Albany by two hours.

Orders for steamboats quickly came into the yard. Even though they would build many steamboats, their beautiful, sailing vessels were what most customers wanted most.

Now for the racing Yachts: One of their first was a catamaran called Amaryllis. The Amaryllis raced in the summer of 1876, winning every race she entered. At the time it was considered the fastest sailboat ever built. However, she did so well that she was ruled and an illegal craft, due to her multi hull and banned from racing. Even so, she was a portent of the future.

Next, Nat designed a sailing yacht, Clara, for a local Rhode Islander. Its performance was so remarkable that Commodore E.D. Morgan of the New York Yacht Club asked the Hereshoff's to design two similar boats for him. Morgan was so pleased with Pelican and Gannet, as they were called, that he asked Nat to design a large racing yacht. The result was Gloriana, a yacht that set the direction for the design of racing yachts for many years to come.

One of the most revolutionary things about Gloriana was the hull designed. Most yachts at this time had a large bow, with a straight side hull finish in a smaller stern. Nat designed what he called the Pumpkin seed hull. It had a smaller prow, wider sides coming back to a narrower stern. This designed proved faster in the water and is still used today.

In 1893 Morgan approached the Hereshoff's to design their first Americas Cup yacht. It was named the Vigilant. It would be the first steel hulled boat to race for the Cup. After sweeping the preliminaries, the Vigilant faced Lord Dunraven's Valkyrie 2 in a best of three out of five races. The races were sailed on October 7, 9, and 13, 1893 off Sandy Hook N.J., just south of New York City. All America's Cup races in the 19th century and the first six in the twentieth were held off New Jersey.

Lord Dunraven's daughter Lady Aileen May Wyndham-Quin became the first woman to sail in an international yacht race. The Vigilant handily won the first three races. The *New York World* reported that the third race was the fastest race ever sailed; she won the that race by an hour and 18 minutes.

Not only did Nat design the Vigilant, but he captained her. After winning he became the only designer of an America's Cup Yacht to also captain it to victory. This is still true. At this point Nat became known as Captain Nat.

Building America's Cup yachts and pleasure boats was not always a financial winner. Most yards could only work on one boat at a time and they were all bespoke. When you were finished with a commission, you hoped to have another ready. If not, you had to let your craftsman go until you received another commission. Then you had to rehire, and often you did not get the same experienced people back.

This effected all boat yards. Boatwrights became traveling craftsman going for yard to yard to work on boats. John Brown came up with an idea to keep the yard constantly working and profitable.

In 1896 he approached the Booth Bay Yacht Club in Maine with his idea. Booth Bay had a long history of racing. Yacht racing at this time was done by different types boats. You attempted race boats similar in size to each other. But there were no standards in place to compare boats. Boats rarely won because of the captain and crew. It was all about the boat. The winner was often the wealthiest person, who could build the fastest boat.

John Brown sold the Club on the idea of purchasing a fleet of the same boats. This would test the skill of the captains, not just the size of their wallet. The club agreed and the boat yard built them thirteen, 12 1/2-foot sailing boats. This created the concept of Class racing. The Boston Yacht Club order twelve, thirty-foot yachts. The New York Yacht Club, seeing Boston's order for 30-footers, upped the ante and placed an order with Herreshoff for fifteen, fifty-foot boats. If you are from the East Coast, you know how important it is to one-up Boston.

The 12 1/2 foot class is still the most popular racing class in America. Now, of course, they are fiberglass shells and are relatively affordable.

These Class boats allowed Herreshoff Manufacturing to have constant work. It guaranteed steady work for the boatwrights, and guaranteed financial stability for the lifetime of the yard. Those who worked at the Herreshoff yard received the highest wages in the industry.

In 1895 the Lord Dunraven challenged the U.S. again, and the Americans turned to Herreshoff again. The Herreshoff designed the Defender, a suitable name for an America's Cup defender. The Defender was the first multi-metal Cup yacht. She was made from steel, aluminum and magnesium. She was 123 feet long and 23 feet at the beam. The Defender swept the preliminaries, then went on to trounce Lord Dunravens Valkyries in a three-race sweep.

Lord Dunraven ordered the yacht to be sailed to Boston the next day after its loss and then back to England. Even though he was trounced he felt Americans lacked the class to appreciate his yacht.

He was the model of a sore loser.

The win made the Herreshoff the first designers to win back-to-back America's Cups.

In 1899 the Brits were back again. The New York Yacht Cup, custodian of the Cup, once again asked the Herreshoff to design a yacht. They named the new yacht Columbia. She would race against Sir Thomas Lipton; it was his first entry in Americas Cup racing. His yacht was the Shamrock, the first of five named challengers.

Let's take a moment to head down the Lipton alley.

Thomas Lipton was born in Scotland to a poor family. At the age of 9, he began working in a tea house. Over the next forty years he bought the tea house, then started hundreds of other tea houses around the world. He bought tea plantations and became one of the richest men in Great Britain and you guessed it he loved sailing.

His boats raced throughout Great Britain and he gained even more fame from this racing. Having been knighted and an exemplary career in racing, he applied to join the Royal Yacht Club. As a friend of Prince Albert, he felt sure he would be offered a membership. He was not. It was the first time in his life he did not succeed at a goal he set for himself. He then decided that if he won back the America's Cup, the Royal Yacht Club would have to grant him membership.

The Shamrock was a beautiful boat. She was painted white, stem to stern. Her sails were brilliant white, except for her spinnaker, which was dark green. When she was coming down-breeze with her spinnaker set, she made quite the impression. But impressions don't win races. The Shamrock lost to the Columbia in three straight races.

After the race the Herreshoff's received a contract from the Navy to build the first torpedo boats. It was a very lucrative contract.

The prototype was built with the steam engine defined by Nat. They were testing it on Penobscot Bay, when the steam boiler burst killing one of the crew. The Herreshoff paid the man's family \$50,00 and Nat never designed a steamboat again. This was the last steamboat Nat would ever design. They canceled the commission and he solely designed sailboats after this.

In 1901 Lipton was back. He had Shamrock 2. It was designed by Thomas Fife, the winningest designer in Great Britain. No surprise, the Herreshoff were once again commissioned to build a yacht. They created the Constitution. It was assumed that the Constitution would sweep the preliminary trials, just as all the other Herreshoff boats had. However, a rival syndicate had bought the Columbia. Surprising most people, she won the trials and the right to defend.

Even though Captain Nat had designed the Columbia, he felt badly that his new yacht had failed to win. The Columbia went on to win the Cup 3 to 2 and became the first yacht to win two Americas Cups. She is still one of only two yachts to do this, the other being Ted Turner's, a.k.a. Captain Outrageous, Intrepid.

Because the Constitution failed to win, John and Captain Nat decided to retire from America's Cup racing.

John, as President and CFO of the company, priced out all the boats. Remember, he is blind. John would have an assistant read him all the price catalogs and price sheets that came in. When Nat had design specifics of the boat they were building, he would read them to John. John would then go into his study at home and price out the boat. A steam boat could have a thousand different parts. On occasion he would ask for a specific part price. After a few days, he would emerge from his den with the price of the boat.

Think about the mind you must have to do this. I'm serious, think about that. It is never easy being blind, but this is a time of no speech to text programs, no computer to keep track of pricing and add everything up for you. He couldn't write a note to himself with an equation.

He would probably be a tech billionaire if he were alive today.

Two years later in 1903 Lipton challenged again. This is before the rule allowing challenges only every four years. The New York Yacht Club was tired of continually mounting a defense against Lipton. Even with all the wealth in the New York Yacht Club, it was still an expensive proposition. The Club went once again to the Hereshoff's, but at first, they declined the commission. With the Constitution failing to win in the last Cup defense, even though their yacht Columbia did, they felt that modern yacht design had passed them by.

After several months of searching the New York Yacht Club could find no one with the skills to build the yacht they wanted. They came back once more to the Hereshoff's.

This time Charles Iselin, a friend of Nat's, and the man who was manager of every syndicate that hired Hereshoff's, convinced the Hereshoff's to design them a boat.

A moment to explain the syndicate. All Cup challengers at this time came from the British. There was enough wealth in Britain that one individual bought the boat and paid for its campaign, i.e., Lord Dunraven and Sir Thomas Lipton.

In America a group of wealthy sailing enthusiast spread out the cost of the build and campaigning the boat. There was usually one member of the syndicate who actually manager the build and the campaign with the others acting as absentee owners.

The syndicate proposed that they build a boat that would win so convincingly that no one would challenge them for several years.

The Hereshoff's began building the Reliance.

Since 1893, all America's Cup boats had to conform to what was known as the Seawanhaka Rule. To explain the Seawanhaka rule, I would need a degree in math. And if I had a degree in math, I wouldn't be selling wine. The Seawanhaka gave a rating to a boat that was based on the load waterline length, plus the square root of the sail plane divided by two. You-all get that? The most important part of the rule was restricting boats to no longer than 90 feet at the water line, with penalties given for those who exceeded the length. However, they did not punish you for overhangs you had stem or stern.

In 1903 we did have wind tunnels and water tanks to help design boats. Lipton's new yacht the Shamrock Three was being designed again by Thomas Fife. Hull design was subject to wave tests and spent time in a wind tunnel. The Shamrock would be designed with the most modern methods possible.

The Hereshoff's were different. They had no wave tanks or wind tunnels. They were more artisanal in their design. Even though Captain Nat had a degree in engineering from MIT, he would carve a model of every hull he designed from a block of wood. And that was it. It wasn't wave-tested or run through a wind tunnel.

The story is that after taking the commission to design the Reliance, he waited several weeks before carving. He was eating dinner with his family and suddenly left in the middle of the main course and went to his study. He did not come out to the following evening. When he did, he had in his hands the carved version of the Reliance's hull. (I suppose there was a pile of wood splinters left in his den.) The final version would be 90 feet at the waterline, but have large overhangs both front and back. These overhangs got him around the Rule and allowed the boat to be significantly larger than many expected.

From bow to stern, it would measure 201 feet. The hull was cast bronze, with an over lay of nickel below the water. She was a single mast cutter. The mast was the equivalent of a 16-story building, the largest single mast sailboat ever built. I don't think I would like to be the sailor who had to climb that mast while sailing. Her sail plane would be 16,160

square feet and weighing four tons, another record yet to be matched. As she was under construction, she gained the name of, "a temple to the wind." To this day it is the largest boat to sail in the America's Cup.

Racing yachts at this time were still built for cruising, not just racing. All America's Cup Yachts before the Reliance had finished interiors. They had sleeping areas, small galleys and a head. The Reliance became the first America's Cup yacht to be unfinished inside. It was purely made to race.

A boat of this design can be dangerous to sail. She could dive into oncoming surf and not come out. She could twist and break in half. Her captain, Charlie Burr was one of the most experienced captains at sea. He'd won two America's Cups already. He said, at the time, it was the most dangerous yacht he'd ever sailed. It had a crew of 32.

Cornelius Vanderbilt the 3rd was a member of the syndicate that built her. He wrote: "Call the boat a freak, anything you like, but we cannot handicap ourselves, even if our boat is only fit for the junk heap the day after the race."

And win she did. She swept the trials setting records for speed. She then went on to race Shamrock Three. The boats were not even comparable. The Reliance was 60 feet longer than Shamrock Three and her mast was 55 feet taller than Shamrock's. She beat the Shamrock Three so badly that in two of the races, Shamrock Three retired from the field because she was so far behind.

The Reliance still holds the record for the fastest mono hull in America's Cup history. Once again, this was in 1905. It was the high point of Captains Nat's design imagination.

Many consider her the most beautiful yacht to race in the America's Cup.

After winning the Cup, in 1905 the Herreshoff's asked for a change in standards for the America's Cup. They proposed what came to be

known as the Universal Rule. The Universal Rule mandated length and sail area as chief factors but also imposed penalties on overhangs, draft, freeboard, and other dimensions. By adopting these rules, it made yachts such as the Reliance unable to participate.

The Universal Rule established letter classes, such as the J-Class that were used in the America's Cup competition in the 1920's thru the 1950's. The J class boats are probably the most recognizable of Americas Cup Yachts.

It seemed odd for the Hereshoff's, who gained fame and wealth building these extreme yachts, to submit the new rule. But with typical Yankee parsimony, they felt America's Cups Yachts were getting to expensive and impractical. They wanted boats that could continue to race after the Cup.

At this point there was not a single of the Hereshoff's America's Cup yachts still in existence. The Reliance had won all six of the races it participated in and that was it. She never raced again. She sailed to Charles Islen's home on Long Island where she stayed at anchor for two years, then was sold as scrap.

The Reliance had accomplished what the New York Yacht Club wanted; no challengers for several years. It wasn't till 1915 that Lipton came back with another challenge and another Shamrock. Once again, the New York Yacht Club came to the Herreshoff. Once again, they refused. They still lacked a wave tank or wind tunnel.

Once again Charles Iselin came and asked for friendship's sake, they agreed to one more boat. The yacht the Hereshoff's built would be named the Resolute. It would be last Americas Cup Yacht; John Brown would build. He would never see it race. It was built in 1915 within the confines of the Universal Rule and qualified as the first J Class boat, which meant the boat was 103 foot in length with overhangs of only 15 feet front and back. From deck to topmast, she was 110 feet.

Her Captain was Charles Francis Adams, grandson of one president and great grandson of another. You don't get much more Yankee than this.

The Resolute won all the preliminaries without losing a race. But before the Cup races began, World War one postponed the race.

On July 15th 1915 John Brown Herreshoff passed away. He'd run Herreshoff Manufacturing for over 50 years. Nat had become the most famous member of the family, but remember John Brown started the company as a blind 15-year-old boy. The company he built, went on to become the winnings ship yard in America's Cup history. He created Class racing. He was known as the soul of the company. His daughter said he learned all his employees' names by the sound of their voices. The company would never be the same without his guidance.

The next America's Cup race would occur after the war in 1920. In the preliminaries many felt the Resolute could not compete against newer yachts. She went on to sweep the field in three straight races.

Her challenger for the Cup was once again Sir Thomas Lipton and the Shamrock Four. The course was once again off Sandy Hook, New Jersey. This would be the first race covered live for the radio. Major newspapers from as far away as Australia sent reporters to cover the race.

In the competition, the Resolute went down two to nothing. There were hopes were raised in Britain, that Lipton would bring the Cup back home.

Captain Nat had not attended an America's Cup race since Columbia's first victory. Nat decided to take a train down to N.J. on the free day, before the third race. He just wandered out on the dock unannounced and unnoticed. It was Captain Adams who spotted him standing there. Adams took him aboard and asked him to sail with them the next day. Even though Nat was not in good health and 62 years old.

As she sailed to the starting line, coming abreast of Shamrock four, the sailors aboard noticed Captain Nate, standing near the wheel. A cheer

erupted from the Shamrock; the N.Y. World said it could be heard aboard all the spectators' boats.

With Adams at the wheel and Captain Nat aboard the Resolute won the race. Captain Nat was aboard for the next two races all won by Resolute, and another Cup captured. This would be the last Cup race for Captain Herreshoff. Many scholars considered it the end of Golden Age of America's Cup racing.

Sir Thomas Lipton would try one more time on the Shamrock 5, but would not succeed. Even though Lipton had lost again, he was finally granted membership in the Royal Yacht Club.

But not before he was given a membership in the New York Yacht Club. It was bestowed on him for his "Superior Sportsmanship and Honor." He is in the America's Cup Hall of Fame, the US Sailing Hall of Fame, and the New York Yacht Club Hall of Fame.

In 1986, I was fortunate to sail on the Shamrock 5. In 1986 the Statue of Liberty celebrated her centennial. Ships from all over the world came to participate in the Parade of Sails. Through connections my grandfather had, I was able to sail on her. We sailed down the Hudson from her anchorage, into New York harbor. It was fascinating to look at all the skyscrapers in one the most modern cities in the world, and our mode of locomotion was the same way Henry Hudson had when he sailed this same river in 1609.

We sailed down and around Bledsoe Island as the Statue of Liberty towered over us. Then across the harbor to Battery Park, the southern tip of Manhattan, then out to sea. At this point we raised her dark green spinnaker and flew. After two hours we tacked back into the harbor, up the Hudson to the George Washington bridge. It was spectacular to turn under the bridge and see all the sails in front and behind us. A vision I will never forget.

The Shamrock five is the only pre-World War two America's Cup still afloat.

After John's death, Captain Nate sold an interest in Herreshoff Manufacturing to Bristol Boats. Captain Nat stayed on as chief designer. They say his heart was never in boat building after his brother John had died.

On June 2nd 1938 Captain Nat died of a heart attack. He remains the winningest designer in America's Cup history. He never built a boat that lost the Cup. He only lost a grand total of six races in all his campaigns. He is also the only man to design a winning America's Cup yacht and captain it to victory. He helped create the idea of Class racing and his design for the 12 ½ foot class sailboat has been the most prolific built sailboat in history.

Six weeks after Captain Nate died, the storm of '38 came roaring up the coast. The storm is still considered to be one of the biggest to strike New England. It came ashore at Penobscot Bay. When it cleared, there was not a single building left of Herreshoff Manufacturing. Every piece of the boat yard was swept out to sea.