

# Our NEW DEFENDER For The AMERICA CUP.



THESE are busy days in the Herreshoff shipyards at Bristol, R. I. for a new cup defender is being built.

It is almost as hard to get inside the yards as it is to see the Czar of Russia (and his ever-widening) at the gate stand several; at different parts of the yards are several more, and an army guards the portals of the shop where Morgan's new racing yacht is being built.

But in spite of all this, people get in and bring out the information they wish. And as it happens, this is the information wanted by the public. When the prospects for an international yacht race for the America's cup became a fact, and the probability of building a new craft to represent the New York Yacht Club formed the principal topic of conversation among yachtsmen. Designer Nat Herreshoff made the statement that, should he be commissioned to build the new boat, he was prepared to guarantee an increase of speed over the Defender of 1855 of six minutes over a thirty-mile course. From reliable data that have been received from yachtsmen who have kept in close touch with C. Oliver Iselin and others who have had access to the yard where the new yacht is being built, it can be stated that when the big cup defender is tuned up to concert pitch she will make good the prophecy of the noted designer.

Nearly three months ago a well-known naval architect said that he thought Herreshoff would probably take the lines of the Defender as a basis upon which to work, and that an increase of speed could be evolved from her model by the simple process of lowering and augmenting the amount of lead in her keel, thereby increasing the draught of the vessel and giving her a greater amount of stability. This improvement alone would give great sail-carrying capacity, and it will be remembered that it was by such improvements that greater speed was obtained in the Defender when compared to the Vigilant and Colonia.

Trustworthy information has been gleaned that Herreshoff has worked mainly on these lines, as a comparison with the principal dimensions of the Defender will show.

The over-all length of the new boat will be 121 feet 4 inches, or 7 feet 4 inches longer than the champion of 1855. She will also have eleven and a half inches more beam, one foot greater draught and nearly 2000 more square feet of duck in her working sails. She will have a trifle more displacement than the old Defender. Her complete sail spread will not be far from 12,500 square feet.

Tobin bronze and nicked steel are the sole materials used in the construction of the hull of the new defender, the latter being used for the topsides, with the underbody of bronze. The experiment of the Defender has proved that aluminum is not the proper thing for topsides of a big sailing yacht. It is compelled to bear a great deal of strain and becomes weakened through the action of salt water and air, and is especially bad when used in conjunction with another metal that will generate galvanic action. For this reason aluminum has been discarded in the construction of the new boat, and through the extra weight of the steel as compared to the lighter metal her hull will be somewhat heavier than that of the Defender.

Tobin bronze, which will sheathe the underbody or wetted surface, is the lightest and smoothest that the manufacturers have as yet made, and it will be riveted to the frames in the same manner as on the older boat. The bronze will be put on in five strakes, seven-fortieths of an inch thick, and the steel topsides will be worked on in two strakes, each one-quarter of an inch thick. She will not have as much freeboard as the Defender, but will have a crown to her deck of ten inches.

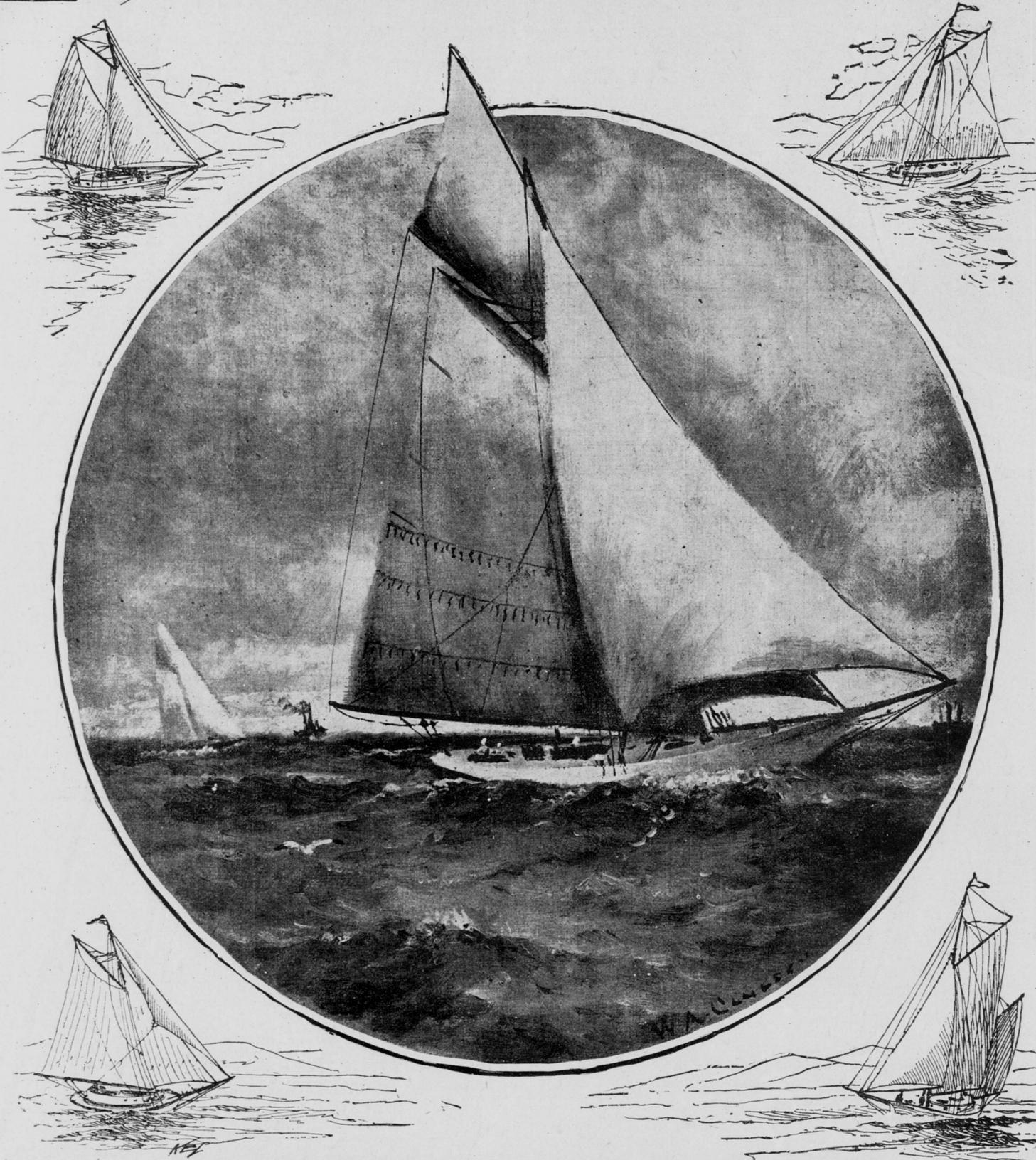
In building the new boat Designer Herreshoff will not depart materially from the design of the Defender. The frames in the waist are the same size, 3 by 2 1/2 by 1/4 inches, as used in the old champion, as are also those that are set up in the overhangs forward and aft, 2 by 1 1/2 by 3-16 inches. There are thirty-four frames on the stem, eighteen on the lead keel, eight on the sternpost, which rakes at an angle of 12 degrees, and seventeen in the after overhang between the steeve and the rudder post and the transom. The new yacht will also have two steel collision bulkheads, one at the forward end of the water line and the other just aft of the rudder post.

The mast will be stepped twenty-seven feet six inches aft of the face of the stem at the hull water line, and the frame directly under it has been curved upward to let the mast lie down in the bury, thus making the step additionally strong and rigid. The sectional view of the midship section is an improvement on that of the Defender. The greater beam permits of a rounder turn to the bilge and the form is wider both at the deck and the water line than that of the older craft and shows a marked "tumble home." The shape possesses more natural stability and, coupled with the lowering of the lead keel, explains how the designer worked to obtain greater power and ability to carry additional sail.

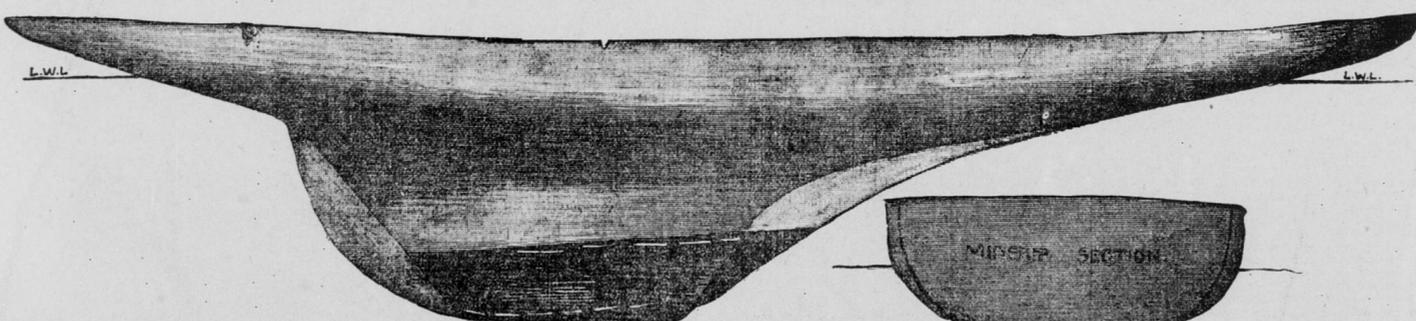
The line of the deck shows a trifle less sheer than the Defender, and the lines of the entrance forward of the midship section are fuller, making an easier turn to the frames and a longer floor on which to call when heeled to a breeze, and will have a tendency to sail over the water rather than drive through it. The lines of the run have been refined a trifle, but do not differ materially from those of the Defender. Nor is there any marked difference in the breadth of the lead keels of the two boats. The extreme width, where the lead met the underbody of the Defender, was twenty-four inches, which has been reduced to twenty-one inches in the new craft, and the bulb of both is about the same, nearly three feet. The new boat's lead casting is nearly two feet deeper than that of the old champion and weighs in the vicinity of ninety-five tons, or about ten tons more than the Defender's.

In displacement, Commodore Morgan's boat will be between six and seven tons heavier than the Defender, which, with the new design and various other improvements, will practically be that much weight as ballast. A new feature is a stempost that will be seven feet long and equipped with a steel mast as well as other spars, and the Defender will also have a metal mast to replace the Oregon pine stick that she carried in the races of 1855. The mast for the new boat will be of thin plates of steel riveted to longitudinal braces on the inside and will show the same smooth, cylindrical surface as did the steel boom and gaff of the old Defender. It will be twenty-one inches in diameter at the deck, and will be a great deal lighter and stronger than the wooden stick of the old yacht, which measured about seventy-five inches in circumference at the deck.

As far as can be discovered, this will be the first steel mast ever used in a yacht on this side of the Atlantic, and it is an experiment that will be carefully watched by all naval architects. It is understood, however, that a complete set of wooden spars will be made in case of an emergency, but no breakdown is anticipated for the reason that steel spars have received a thorough test by vessels in the merchant marine, where structural weakness would be equally dangerous to life and property. The spars for the two



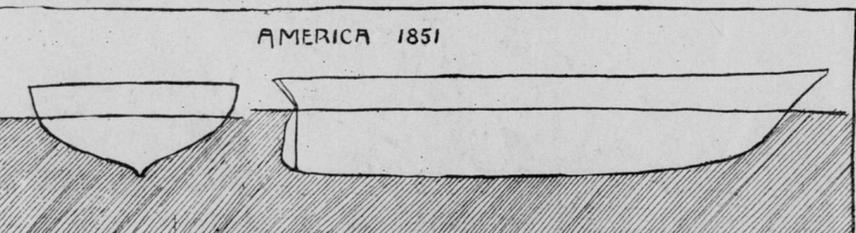
WINNING THE AMERICA CUP IN 1855—THE DEFENDER LEADING THE VALKYRIE III.



Lines of Old and New Cup Defenders Compared.

From the Scientific American.

The heavy outline and dotted white lines show the form of the old Defender. The shaded hull and the cross section are the lines of the new American yacht which will meet Sir Thomas Lipton's challenger Shamrock in the forthcoming international yacht race. Nearly three months ago a well-known naval architect said that he thought Yacht-builder Herreshoff would probably take the lines of the Defender as a basis upon which to work, and that an increase of speed could be evolved from her model by the simple process of lowering and augmenting the amount of lead in her keel, thereby increasing the draught of the vessel and giving her a greater amount of stability. This improvement alone would give great sail-carrying capacity, and it will be remembered that it was by such improvements that greater speed was obtained in the Defender when compared to the Vigilant and Colonia. Trustworthy information has been gleaned that Herreshoff has worked mainly on these lines, as a comparison with the principal dimensions of the Defender will show. The over-all length of the new boat will be 121 feet 4 inches, or 7 feet 4 inches longer than the champion of 1855. She will also have 1 1/2 inches more beam, 1 foot greater draught and nearly 2000 more square feet of duck in her working sails. She will have a trifle more displacement than the old Defender. Her complete sail spread will not be far from 12,500 square feet.



Lines of the Famous Yacht America, Which Won the Great Cup From England in 1851.

point of view has purchased the Aegæus, said to be one of the handsomest steam yachts ever built on the Clyde.

Many other prominent European yachtsmen will voyage across the Atlantic to view the races, and several of the most important yachts in British waters are expected here, among them the new schooner Rainbow and another big two-sticker from Watson's board. With the Colonia, Quisquama and a few others of the home fleet in commission it is hardly likely that they will carry many of the big trophies back to old Albia.

## CHAMPION FISH STORY.

THE Two O'clock Hunting and Fishing Club, which has already made a record for some novel possum hunts and fishing exploits, held a meeting last week, at the suggestion of Colonel Richard M. Johnson. The colonel proposed to present a fine bamboo fishing rod for the best hunting or fishing story told by any of the members, barring himself. The colonel is "away up in G" when it comes to story-telling, and he thought he would encourage some of the younger members of the club in the entertaining art of detailing, graphically, some interesting incident or novel experience connected with a fishing or hunting trip.

Accordingly, all the boys assembled, after due notice of the purpose of the meeting, last Monday night, says the St. Louis Globe-Democrat, each one determined to carry away that handsome fishing rod.

Promptly at 8 p. m. all were present. George Stumm jollied everybody until he was dared to start the ball rolling with the first story.

"Well, I don't mind," said George, "but I'd rather hear some of the other stories, because I'm afraid you'll all quit when I'm through."

"All right, Mr. Stumm," replied Colonel Johnson; "you have the floor."

"All of you know where Gilead's Slough is, don't you, boys? Of course you do. Lots of you have fished there, I know. It's a fine place to catch crappie and bass, too. If you only know how to do it, I'm on, and I'll just let you into the secret by relating my experience up there with some friends last summer."

"We were guests of Calhoun County Club and were eager to make a good catch of crappie and bass, but somehow or other the first day we could hardly catch enough to cook for supper. The next morning we all turned out early, determined to make a 'killing,' as sporting men say. Up to noon we had only nineteen crappie between the lot of us, and a big feeling of Uncle seized all of the boys but your Uncle George. Not one would return to the laze after dinner, concluding to have a social game where the breezes swept through the cool rooms of the club house.

"I hadn't given up yet. I had seen some old green frogs blinking at me along the shore of the slough, so I concluded to take along with me a little .22-caliber rifle that was at the club house, and knock the eyes out of some of the croakers if they showed up during the afternoon while I was watching those red corals of mine. I took a tow-headed country boy along to handle the boat and by 2 p. m. I was at it again. Not a fish but a few small crappie rewarded my patience up to 5 o'clock. Then I began to get that feeling of disgust myself, but as I was looking down in the water I saw a couple of big bass looking up at me. I was leaning over the side of the boat at the time, when a large pearl button that was on my blue flannel shirt dropped into the water. No sooner had it struck the surface than a splash of spray was dashed into my face. Both of those durned bass leaped clear out of the water in their eagerness to get that button.

"Ah, ha!" I exclaimed; "now I know what you want. I'll give you all there is left on this old outing shirt. I will cast pearls before bass until they can't rest," and I did. I placed a button on my hook and dropped it down deep, where I could see several bass. They would not touch it. Then I let it go to the bottom, but the bass only looked askance and backed away. I saw those bass were not pearl divers, so I began trailing, but not a single strike. In utter disgust I took the button off the hook and cast it out ten feet. At least half a dozen bass just churned the water into butter-milk in their eagerness to get it.

"Then I determined to try an experiment. I tied a button on my line, and gently cast out. Without a single skitter a game old bass had it. He hung on until I got him almost up to the boat, then let go and slid off. 'Wise old bass of Gilead's,' I thought; 'you know when a fishhook is in sight. Now, I'll fool you.' I handed the rod to young Wilkinson, and instructed him to cast out the buttoned line when I told him to.

"I picked up that little 22 Stevens as the boy tossed out the button. Oh, what a beauty nalled my shirt ornament. He was a bulldog in tenacity, refusing even to take a down shot, but just shook away at the button like a terrier. The boy raised the bass' head above the water, and I cracked away with the rifle. In an instant I saw that bass turn belly up."

At this point in the recital the other members of the club began to fidget and make audible groans of incredulity, but it never feazed Stumm in the least.

"Another and another bass was served in the same way," continued George, "and when it was too dark to shoot we picked up thirty bronze daisies; all over two pounds in weight. And what do you

Table with 4 columns: Defender, Valkyrie III, New Defender, and a fourth unlabeled column. Rows include Length over all, Water-line length, Draught, Displacement, and Sail area.

has modified to a great degree the contempt that marked the comments of the English papers relative to Sir Thomas Lipton's yacht and a great deal of interest in her is being shown, if reports from the other side are to be believed. Will Fife has not received the greatest opportunity to display his ability in the largest class. With the exception of the Ailsa, which, by the way, is one of the fastest of the fleet under certain conditions, he has not been represented at all in the 100-ton class. He is, however, the leader in the forty and twenty-tonners, his products having won the largest share of valuable trophies against yachts by Watson and other of the crackjacks. Sir Thomas Lipton has determined to spare no money in order to make the contest next October the most popular one that has ever been called for that will-o'-the-wisp, the America's cup, and in order to see the races from the best

think, boys? Every blamed one of the thirty bass was shot right in the eye." Colonel Johnson arose, and, in a dignified manner, said: "Gentlemen, I move this contest be closed. You are all pretty good liars, and I'm no slouch myself, but we must all take off our hats to George," and they did, and the colonel presented the rod with a profound bow, but without a remark. The club was wetting that rod at 2 o'clock Tuesday morning.

Immigrant Inspector—We have information that you came over here on contract. Lord Fitzmud (indignantly)—Aw-what-er-why, you wude, impudent fellah! I came ova here to marry Miss Angelina Goldust of New York. Immigrant Inspector (triumphantly)—Well, what's the matter with yer? Ain't marriage the hardest kind of contract? You'll have to go back.—Harlem Life