The Log *of* Mystic Seaport®

Summer
2001

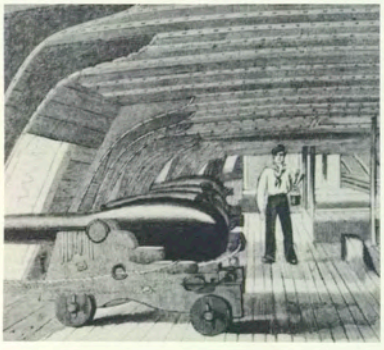
Volume 53, No. 1



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On the cover: Known for his keen sense of sail trim, Rod Stephens has his crew reef the mainsail of his New York 32, *Mustang*. Designed by Sparkman & Stephens in 1935, with a 32-foot waterline, the New York 32s were particularly handsome and seaworthy ocean racing and cruising sloops. (Neg. 126985F, ©Mystic Seaport, Rosenfeld Collection)

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Life is our life's work.

Sightings

It is a great honor to be the new President and Executive Director of Mystic Seaport, The Museum of America and the Sea. And it's a distinct privilege to be writing to you, our membership, in the justly famous *Log of Mystic Seaport*! The loyal support of nearly 30,000 memberships enables and enlivens the pursuit of the Museum's bold mission: "To create a broad public understanding of the relationship of America and the Sea."

I have some big shoes to fill. First and foremost, I extend a heartfelt tribute to Director Emeritus J. Revell Carr, under whose outstanding leadership Mystic Seaport has become one of the world's premier maritime museums. Capping Revell's abundant 30-year legacy are the inspiring *Amistad* project, the outstanding new *Voyages* exhibit, and the newly completed Collections Research Center. Even more importantly, Revell Carr gathered and built a terrific team of people who, even as I write, are building on the strengths created during his tenure. Their creativity, talent, hard work, selfless team play, and strong dedication to all that Mystic Seaport represents, culminate in a special magic that the Museum works on all who visit, especially children and lifelong learners.

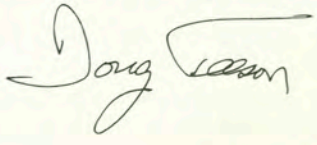
There is another big pair of shoes to fill. Trustee Emeritus Jim English answered the Board of Trustees' call for an interim president pending my arrival. On Jim's very successful six-month watch, advertising and visitor orientation have been improved and group tour bookings have expanded. The quality and efficiency of food services have been upgraded, and management of the Shipyard and preservation of the floating collection strengthened. As if all that were not heroic enough, Jim also saw to it that Franklin D. Roosevelt's family sailboat, *Vireo,* has been lovingly restored and put on exhibit. This issue of *The Log* includes a history of that stylish boat, which Jim had long admired for its graceful lines and its historical associations. This level of achievement, following an exhaustingly busy and productive year for the staff, is again indicative of the excellence of people in the full spectrum of roles here, and a measure of Jim's highly effective leadership, keen business acumen, and deep love for Mystic Seaport.

As the summer of 2001 moves into high gear, we can look back with pride to mid-June and the Museum's first Designer's Recognition Rendezvous, featuring Sparkman & Stephens, with its special tribute to the Museum's own Emeritus Trustee, Olin Stephens. And what a grand, historic event this largest-ever gathering of S&S vessels turned out to be, with more than 70 craft representing the seven decades of that influential firm's classic designs! Special thanks go to coproducers Heritage Marine Insurance and *WoodenBoat* Magazine, and to sponsor Rolex Watch U.S.A., without whom this milestone event could never have happened. As an extension of that event, this issue of *The Log* includes two articles on the history and traditions of Sparkman & Stephens.

The rest of the summer features interesting and engaging events for all members and visitors: our acclaimed Antique and Classic Boat Rendezvous in late July; the Melville Marathon, an all-night, straight-through reading of *Moby-Dick* aboard the *Charles W. Morgan,* which is fast becoming a literati insider event for those who wish to read aloud or simply to listen in the perfect setting for this American classic; the exciting Model Yacht Regatta, now in its second year and growing; our Antique Engine Exposition in mid-August; and, wrapping up the big September 22-23 Members Weekend, the popular gathering of vintage cars, trucks, and motorcycles, By Land & By Sea: Antique Vehicles at Mystic Seaport.

We must not forget the Museum's great accomplishment of completing the prestigious Kresge Challenge Grant—before the deadline and beyond the original goal! Congratulations and thanks to all the foundations, corporations, staff, volunteers, and friends who rallied to the cause and helped in this tremendous effort. In September, over Members Weekend, we will officially open the new Collections Research Center in the former Rossie Mill building that faces the Seamen's Inne. Our curators and collections managers—and our collections themselves—will at long last be in the world-class environment they deserve. Be sure to take advantage of the opportunity for a special member tour of this new facility during Members Weekend.

I look forward to seeing you then!



2001 GERALD E. MORRIS PRIZE ARTICLE

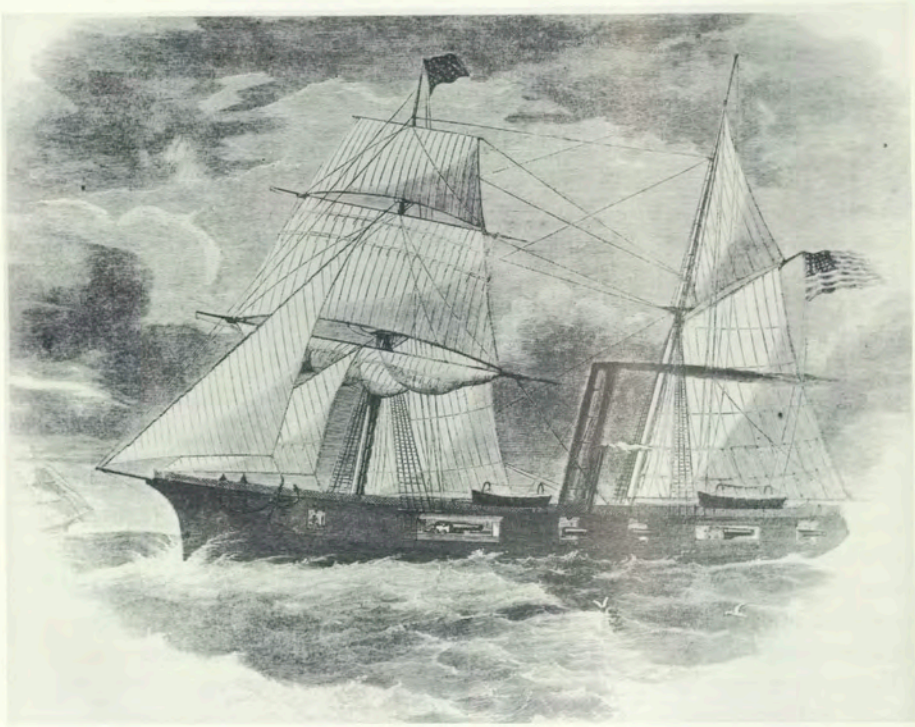
From the Drafting Table to the Front Lines

Designing, Building, and Utilizing the Ironclad USS Galena

STEVEN BILLER

The first ironclad battle of the Civil War, fought between the *Monitor* and *Virginia,* signaled the beginning of a new era in naval combat, one in which the role of iron technology and innovation would become increasingly important. This successful use of iron warships, however, was not an isolated incident but rather the product of many years of research by European and American naval engineers and architects. Armored vessels did not come about easily in the 1860s; the engineers who tried to utilize the strength of iron faced a myriad of new technical and political problems.

The construction and career of the USS *Galena*, one of the first generation of Union ironclads, reflects the challenges, triumphs, and failures of American shipbuilders as they moved into the era of metal warships. Built in Mystic, Connecticut, in 1861-62, the *Galena* had a short and inglorious career as an ironclad warship, with military history generally regarding her as a failure. However, far from a total failure, the *Galena*'s design stands as a testament to the knowledge and experience of her architects and builders and to the difficult choices they had to make. This vessel incorporated a range of successful innovations and emerged from the Mystic River as a symbol of Northern superiority, but design flaws and poor decisions by her captain in battle would transform the *Galena* into a symbol of technological failure.



Harper's Weekly *published this artist's concept of the* Galena *in October 1861, while the hull was still under construction in Mystic, Connecticut. Many details, including the number of guns and the arrangement of gunports, would be altered before she was commissioned in April 1862.* (Harper's Weekly, *19 October 1861)*

The concept of an ironclad was not new to the era of the American Civil War. By late 1861 European navies possessed at least 12 iron-armored warships, many of which served as capital ships. The first vessel in the world with an armored hull was the French Navy's *La Gloire*, constructed in 1858. The French had intended to outfit their entire fleet with iron plating but were unable to realize this goal as their foundries could not produce sufficient quantities of iron.[1] *La Gloire* represented a direct challenge to England's naval superiority and the British did not take this challenge lightly, as expressed in 1861 by designer General Sir Howard Douglas:

In stating the conclusion at which I have arrived, that iron-cased ships are not invulnerable to the penetrations and

impacts of heavy solid shot, I do not deny that they are less invulnerable by being so protected than ships that are not covered; and although we would not have initiated such a system, yet so long as our neighbours—the French—persist in building iron-clad ships, we must *do so likewise, and* that *in a manner to keep well ahead of anything the French or any other power may do for aggressive purposes.*[2]

While the English may not have been completely convinced of the merits of ironclads, their desire to maintain naval superiority entered them into this arms race. Reacting to the French challenge, the Royal Navy constructed its first iron warship, HMS *Warrior*, which was launched in December 1860.[3]

Although European navies were the first to integrate iron vessels into their fleets, America had not completely ignored this material. In 1843, the United States Navy built an iron-hulled vessel, the paddle steamer USS *Michigan*, which served successfully as a Great Lakes patrol craft for many decades. A year earlier, the U.S. Navy had appropriated half a million dollars (a sum that would increase to nearly two million dollars over the next few years) to the Robert L. Stevens shipyard of New Jersey to build a true ironclad vessel. Between the yard's need to build a large dry dock and numerous design revisions and technical problems, Stevens only succeeded in building the ship's hull, and the project was eventually scrapped. This essentially failed attempt did not help legislators of the 1840s to see the merits of ironclads, and the government put further ironclad efforts on hold. When the Civil War broke out, Stevens petitioned the government to take the hull and complete her for active duty, but Congress refused funding so the "Stevens Battery" was never launched.[4]

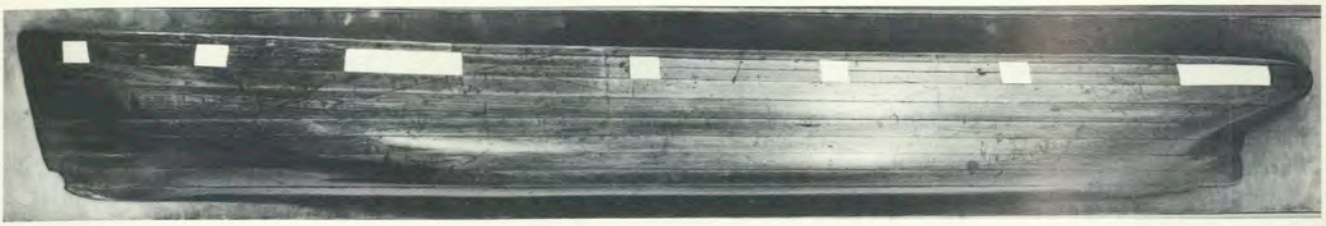
Many individuals in the naval design community, if not in the political sphere, still foresaw the importance of ironclads. This attitude is evidenced in a January 1861 *Scientific American* article stating that "the great interest in protecting naval vessels with shot-proof plates, which now prevails in England and France, is doubtless destined to be also felt in this country." *Scientific American*'s prediction would become a reality first in the Confederacy, where Secretary of the Navy Stephen R. Mallory began a program of ironclad construction. Mallory reiterated throughout the war that he would "'put his faith' in a few powerful ironclads" to strengthen the South's weak naval capabilities.[5] The Confederate ironclad program began in April 1861, when their forces captured the Gosport Navy Yard in Norfolk, Virginia, and recovered the burned hull of the 300-foot screw frigate USS *Merrimack*. From this starting point the South began construction on the ironclad CSS *Virginia*, the first of many armored vessels they would produce and use during the Civil War.



Samuel Hartt Pook (1827-1901), a brilliant young naval architect from Boston, was noted for his clipper ship designs and had experience with iron vessel construction. He had just designed the navy's emergency "90-day gunboats" when C.S. Bushnell asked him to design the Galena *and supervise her construction at Mystic. After operating a shipyard at Fair Haven, Connecticut, during the rest of the Civil War, he worked as a naval constructor at various navy yards following the war. (*National Cyclopedia of American Biography, *4: 532)*

Entering into an arms race analogous to the one between France and England, Union Secretary of the Navy Gideon Welles and his Connecticut associate Cornelius Bushnell realized that they would have to build a comparable ironclad fleet to stave off this new threat. These two men lobbied Congress to convince them of the Union's need for these vessels, and on 4 August 1861 President Lincoln signed a bill allocating $1.5 million for ironclad construction. Welles, Bushnell, and others had previously solicited a number of ironclad designs, and on 16 September 1861 the U.S. Navy's Ironclad Board recommended the construction of three ironclad designs: vessels that would later be named *Monitor*, *Galena*, and *New Ironsides*. While the board believed that the approved designs represented capable vessels, they cautioned that they approached the subject of ironclad designs "with diffidence, having no experience and but scanty knowledge in this branch of naval architecture."[6] In designing and building these ironclad warships, Union naval architects entered into new and mostly uncharted territory.

A few recent technological developments in the United States had made ironclad construction practical. First of all, the experiments with the *Michigan*, the Stevens Battery, and some iron-hulled merchant vessels had established a basic, if not extensive, familiarity with ironwork among some ship-builders. To help shipyards gain additional insight into using this new material, some naval officials imported information and techniques from more experienced British companies.[7] The development of the anthracite coal smelting technique also reduced the cost of iron to the point where large amounts of this material could feasibly be used on a vessel.



Pook's half model for the 210-foot Galena *shows the curvature of the hull. The white inserts indicate the planned gunort locations. The two elongated ports for pivoting guns were replaced by conventional ports for broadside guns. (Mystic Seaport, 1931.159)*

For the *Galena*'s design, Bushnell sought out the services of Samuel Hartt Pook. Pook, a resident of Boston, was known as the "young marvel" of clipper designers, and many of his ships were very well respected. At the age of 20 he had designed an iron-hulled, ocean-going steam tug, and this familiarity with iron construction made him an ideal choice to design an ironclad.[8] Pook developed a novel and exciting design, as the *Mystic Pioneer* reported on 10 May 1862:

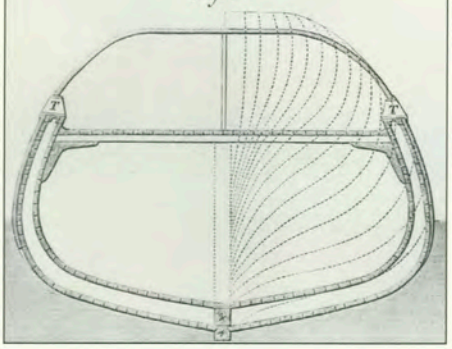
The object which it was designed to secure in the construction of this vessel has hitherto been deemed impossible of accomplishment, and the project was, therefore like the building of the Monitor, *an experiment. The novel proposition, and one that seems wholly inconsistent with itself... was substantially as follows: That a vessel could be built, two hundred feet in length, thirty-six feet breadth of beam, and of one thousand tons burthen–the size and description of a war vessel of the ordinary construction, which would require a depth of water of about twelve feet–and yet that the boat should be strong enough to sustain a shot proof covering, have a draft of water of but ten to twelve feet, and contain engines and machinery which would give her a speed of twelve knots per hour; in short, that she would be entirely seaworthy, as perfectly adapted to the purposes of cruising as the "wooden walls" in common use, and, in addition, be impenetrable.*[9]

In developing this design, Mr. Pook was faced with no simple task; the design of an ironclad war vessel brought up entirely new categories of problems to solve and required careful balancing between design options. As English naval architect J. Scott Russell wrote about ironclad design in 1861:

The naval architect [working on ironclads]... has everything against him. He is obliged to carry more weight than before, and that weight not only in the worst place *for being able to carry it, but also in the worst place for the proper motion of the ship which does carry it when in a heavy sea. He is first obliged to over-load his vessel with a large quantity of heavy armour which is of no service for anything else; and then he is tasked by his masters to go* faster *under all this load than any vessel of the kind has ever gone before. Further, with all the* top weight *he is ordered to preserve a perfectly* stable gun platform, *from which my friends around me may fire their large rifled cannon with a tolerable certainty of hitting the object they aim at.*[10]

All of these different considerations and more had to be factored into the final design, and Pook had little precedent and few rules to follow. The vessel's armor thickness, speed, fuel requirements, draft, number of guns, and height of the gun deck all had to be balanced against each other in order to create a ship that would perform to demanding naval specifications.

Fig. 1



*John Winslow's diagram of an armored ship shows the curving sides of the hull covered with iron plating to deflect shots. Dotted lines indicate the vessel's curvature. Notice the flat top. (*Scientific American, *2 November 1861)*

While individual ironclad designs varied substantially, there were some common traits shared by these vessels. In order to serve as a stable and effective gun platform, ironclads were wide; the *Galena* had a 36-foot beam, much wider than most vessels of its size. This extra width allowed her to have an unusually shallow draft, which facilitated travel in shallow waters, but the tradeoff was that she would be more "leeward steering," or more susceptible to being blown off course by the wind, as the keel had less water to press against. In general, ironclads were relatively long so that they could achieve the required high speeds and hold sufficient equipment and armament. Overall, the *Galena*'s "model above water [was] singular, as it was shaped partly to decrease the strain upon the hull while rolling . . . The bottom [was] like most other vessels, combining easy motions with stability."[11]

Another important design element was the role of the hull's shape in helping the iron plating protect the vessel. As *Harper's Weekly* commented,

The peculiarity of the model is that the hull presents every where a rounded surface. Looking directly at the stern, the

shape is very like the larger end of an egg. In fact an egg will give the best idea of the general form of the hull . . . The advantages of this rounded form are apparent. A ball striking a flat surface at a right angle–that is, in a direct line–exerts its whole force, and either passes through, or is stopped, or rebounds. Now if it strikes at considerably less than a right angle, it glances off in another direction . . . The chances are millions to one that a ball will not hit a curve at the precise point in the surface which is perpendicular to its direction. Practically, therefore, the Galena *can only be hit by a ball at a small angle.*[12]

The height of the enclosed gun deck and spacing of gun ports was yet another important design choice Pook had to make. If the openings were located too low then the guns could fire only in calm seas, whereas a higher deck, although adding more unstable top-weight and presenting a larger target to the enemy, would allow the vessel to fight in rougher conditions. On the *Galena*, "the fighting deck, which is fully enclosed, and apparently very low, (the sloping sides of the vessel almost lying upon it) is really quite roomy and there is abundant space for the working of heavy guns."[13]

Pook had to choose whether the hull should be made of iron, then cased with a layer of wood underneath the plating (an "iron-cased vessel") or be a traditionally built wooden hull covered with iron (an "ironclad"). The common design principle of the time was that "the bottom of a well-built copper-fastened timber ship scarcely ever wears out, but will at least wear out three tops. In iron ships it is the reverse. One top will wear out three bottoms." Iron hulls were strong, but the primary concern with these vessels was that the metal would rust and wear from both the outside water and internal bilge water. The thickness of the hull itself, whether wooden or iron, would also influence its eventual performance as a war vessel: a thicker hull was stronger but heavier and more expensive, and this could possibly cripple the ship's speed.[14]

Biological factors also concerned naval architects. "Why not construct the ships wholly of iron?" asked the *Mystic Pioneer.* "Because no preparation has yet been discovered that will prevent iron ships' bottoms from fouling, which hinders such vessels from becoming cruisers in voyages where no docks can be found to take them out of the water often enough to keep the bottom well cleaned." No anti-fouling paints were available at the time so numerous organisms could grow on the hull. Excessive growth could significantly slow down the vessel and require that it be pulled out of the water and scraped off every few months. In constructing the *Warrior*, England balanced all of these concerns by giving it an iron hull on top of which was a layer of wood and then the iron plates. This layered design was partly motivated by lack of wood resources, which was not a significant issue in the United States.[15]

Another design challenge, which would significantly affect the *Galena*'s wartime performance, was the design of the iron plating itself. The heavy iron armor significantly altered the weight distribution of the vessel (with the corresponding implications for stability), made it slower, and added a new set of construction problems to solve. Ironclads had relatively large steam engines to help mitigate speed concerns, and they only contained iron plating from just below the waterline to the top of the rail and deck to reduce the vessel's weight. As English naval architect Charles Lungley remarked,

It is well known to all who have investigated the question of the construction of iron cased ships of war, first that iron plates of at least 4 1/2" thick are requisite to resist the action of solid shot, and, secondly, that it is quite impossible to cover a ship all over with plates of this thickness, and at the same time to secure a high speed, without resorting to enormous size, and therefore enormous cost.[16]

Lungley's recommendation of 4 1/2 inches of armor was not the accepted rule; opinions on the optimal armor thickness varied greatly. Stevens, when designing his prototype iron hull, wrote that experiments had convinced him that "six inches thick of plates of iron bolted to the outside of a wooden ship formed a perfect protection against the heaviest artillery then in use." The *Galena*'s design specifications originally called for iron armor only 2 5/8 inches thick, backed by 1 1/2 inches of rubber, but even this seemingly reduced thickness requirement was complicated by the fact that iron technology of the era could not produce iron plates more than 1 1/2 inches thick. Large sheets of thin iron tended to be breakable and bendable, so these plates could only be made in small sections.[17]

Bushnell hired Corning, Winslow & Co. of Troy, New York, to develop a secure, strong method of applying the *Galena*'s iron in layers. John Winslow changed the original armor specifications to include solid iron plating just 3 1/8 inches thick, with no rubber backing.[18] To make this armor out of the thinner available pieces, he developed a system where one would bolt a "chair" layer of iron fittings against the wooden hull, which supported and locked a layer of "plate" pieces. The idea behind this system was to have the bolts hidden below a layer of iron whose interlocking design would make them secure even without the bolts in place.

While this general concept was borrowed from England, Winslow's particular design for the *Galena*'s armor was unique. As he wrote,

The object sought to be accomplished by the invention of this mode of putting on the armor of iron-clad ships, is to obtain a perfectly secure fastening for the outside plates without the use of bolts

running to the surface; these bolts have proved the weak places in the armor of the iron-clad ships in the English and French navies.[19]

A number of studies in England had clearly demonstrated that exposed bolt heads on the sides of an ironclad facilitated breaking and cracking of the armor, and holes at the ends of an iron plate resulted in significant weakening. To avoid this problem, designers used systems like Winslow's to give the vessel an essentially solid layer of protection which could not easily be penetrated. Winslow argued that this novel approach was not only stronger but easier to produce, cheaper, and "can all be rolled and so far finished in the rolling mill that nothing is left to be done but to fit them to the sides of the ship." This idea of completely prefabricated plates was an important advance over the plates used on the *Warrior*, which were attached and then shaped in place, at a great expense of time and money. No matter the thickness of iron used, naval architects almost universally agreed that iron should be backed by a layer of wood, which added to the hull's strength and prevented bending.[20]

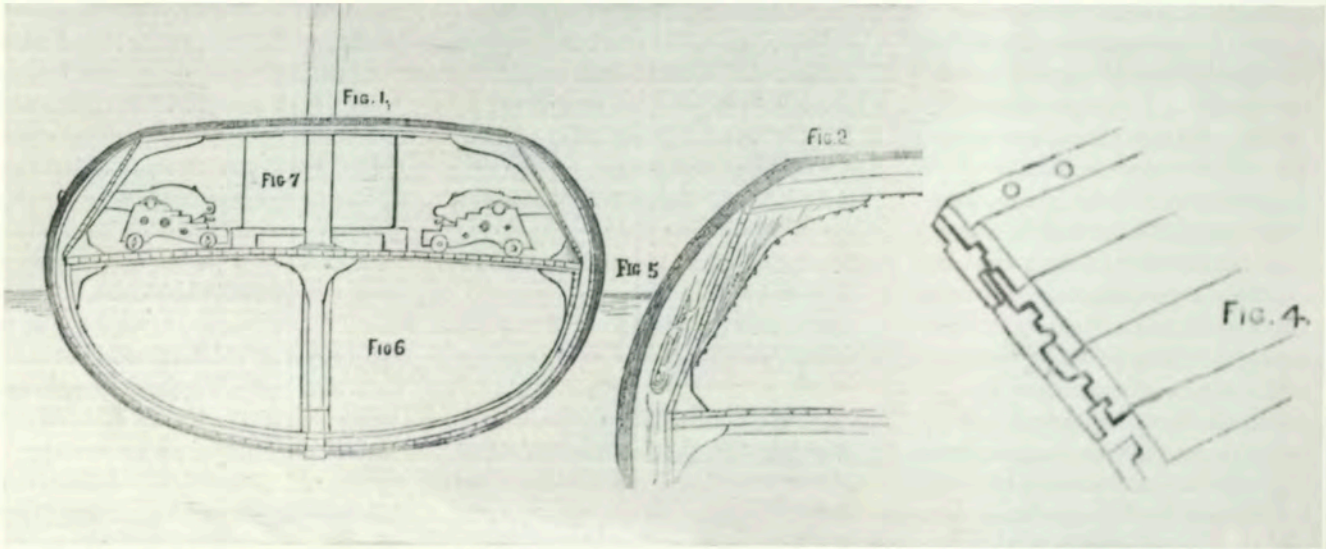
The armament had to be specially modified to accommodate the enclosed fighting deck's openings as well as to protect the other openings in the vessel:

The ports are covered with heavy armor, are divided horizontally, open in the middle, and are moved by levels . . . In the middle of the port covers holes are constructed of sufficient size to allow the muzzle of a gun to protrude; but these holes have covers carefully fitted, and deemed to be quite as impenetrable as the mailed sides of the vessel, which have in addition to the armour, an average thickness of fourteen inches solid oak.[21]

All hatchways and skylights on the *Galena* were covered with gratings, as were the vents in the pilothouse. Pook designed the smoke stack to withstand a direct hit by building an iron grating into its base, preventing any injury to the boiler even if the pipe itself was completely destroyed.[22]

One additional complication that arose on ironclad ships was the effect of the metal on ships' compasses and hence their ability to navigate. This was a significant problem: for instance, the British *Transactions of the Institution of Naval Architects* published six separate papers between 1860 and 1862 discussing methods of adjusting a compass. Early experiments with iron vessels found that the metal created significantly more compass deviation than had been originally expected, and there were no simple solutions to this problem. A number of studies suggested that to minimize this effect vessels should use hot-rolled iron plates, since cold-rolled iron appeared to hold a stronger magnetic field and have more of an effect on the compass. Other suggestions to mitigate this problem included constructing the vessel with the central beam facing either due north or south and installing a metal bar in the deck at an appropriate spot to compensate for the ship's magnetic field.[23] Ironclads sometimes used magnets to correct their compasses, but shipbuilders of the time did not have a precise way to adjust these, and the magnets frequently came loose during a voyage.

Although Pook, Bushnell, and others had some reservations about the *Galena*'s final design, an engineer at the Delamater iron works declared, "She will easily carry the load you propose, and stand a six-inch shot–if fired from a respectable distance," and the government gave its permission to build her. For this job, Bushnell chose the shipyard of Maxson,



These diagrams provide a cross-section of the vessel and illustrate construction details. The vessel was 56 feet wide at the levl of the gundeck. Very large knees reinforced the curved topsides. The sketch at right suggests the complicated, interlocking structure of her armor, which was designed to cover the heads of the bolts that fastened the iron plates to the wooden hull. (Harper's Weekly, *5 April 1862*)

Fish & Co. in Mystic, Connecticut. Established by shipbuilder William Ellery Maxson, merchant Nathan G. Fish, Fish's son Simeon, and several other investors in 1853, the yard had built seven vessels, including two clipper ships.[24]

The *Galena* had to be built quickly, so it was fortunate that the yard did not have any other vessels under construction at the time — though it would soon contract to build one of Pook's wooden "90-day gunboats" alongside the *Galena*. Pook came to Mystic and remained to oversee all phases of the *Galena*'s construction. One of his first priorities was to translate the model and plans into full-size patterns for use in the sawpit. Construction began in late September 1861, with co-owner Simeon Fish "Drafting and laying down [the] gunboat under Mr. Sam H. Pook." Fish wrote in his diary, "[I am] at work on Iron clad all this time until further notice," and this project quickly consumed the time of everyone involved.[25]

The yard had a large supply of timber on hand, but they required still more. To accommodate the arrival of materials, the company added a side track to the railroad line that passed near the shipyard; William Maxson wrote in his diary on 23 August 1861, "Went to Stonington PM to make arrangements for putting in a switch (R.R)." Maxson spent vast amounts of time obtaining and preparing the wood, this short entry in his diary being typical for the month of September 1861: "Worked at siding timber in yard. Mr. Pook laying down draft." Construction continued through the fall and the yard made significant progress. The *Mystic Pioneer* reported in November: "The iron-clad gunboat which is being built by Maxson, Fish & Co. is progressing very fast. One hundred men are employed in this yard."[26]

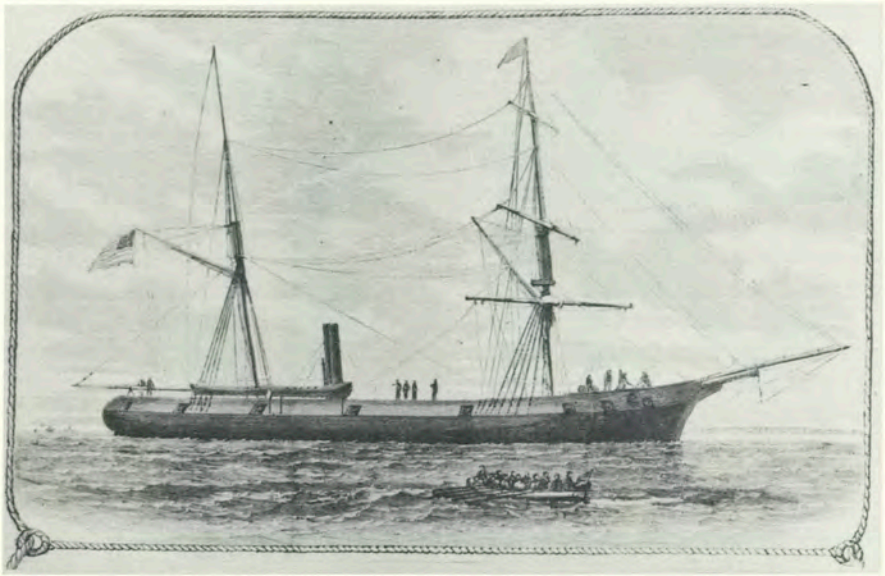
The first pieces of armor began to arrive in mid November, but a problem arose in that there were no ironworkers in the Mystic region qualified to deal with this type of iron. Maxson brought in Juan Pattison, a civil engineer, to supervise the application of iron plates, and he in turn sent off to Troy, New York, for men to help with this phase of construction. However, most of those who came to work this job were, in Pattison's words, the most "disfactory [sic] I ever knew," and the armor application took much longer than expected.[27]

The next setback in the *Galena*'s construction came about early in January 1862. On 6 January a major storm came through the Mystic area and halted work. To prevent further delays due to weather on this and future vessels, the yard built a large shiphouse over the hull to shelter the vessel and the workers. "This is a permanent improvement," noted the *Mystic Pioneer*. "The superiority of vessels built under cover at our government navy yards is well known. We regard its erection as a step in the right direction, and as proof of the proposition we have always maintained: Mystic is up with the times."[28]

Construction continued through January, and on Pook's advice the navy decided to launch the hull in early February with only the chair rails and a bit of the other armor in place. Many of those involved had concerns that the *Galena* might not float, so they decided to hold off installing the rest of the armor until after water trials.

She was launched on 14 February 1862 with most of Mystic in attendance. Despite the concerns of many, Simeon Fish could record that the day contained: "A launch and a most beautiful one too. Everything passed off in the most acceptable manner. Ship leaks somewhat from auger holes at first, but if nothing worse comes to light shall be well satisfied." The next few days were spent inspecting the hull and fixing leaks. Snow prevented the final sets of iron plates from reaching Mystic, so the navy moved the *Galena* down to the Continental Works yard in New York to receive her final plating, her two boilers, and the 800-horse-power engine and screw propeller that would drive her at eight knots. There the navy also outfitted the *Galena* with four 9-inch-diameter smoothbore Dahlgren guns and two 100-pounder rifled cannon, which fired projectiles weighing 70 to 100 pounds. During these last few days "things [were] being driven to the greatest extent. Everybody [was] worried to death," but the yard completed the vessel, and she received her commission on 21 April 1862. Pook and the builders were pleasantly surprised to find that the *Galena* had a foot less draft than they had calculated.[29]

The ironclad program's strength and effectiveness was partly influenced by how society perceived this new technology. By late 1861, the Southern public had embraced their ironclad program, and raising funds to help build these vessels became "almost a rage." Men's clubs, banks, and ladies' societies such as the "Ladies' Gunboat Fund" actively worked to earn money, and these funds eventually helped the Confederacy build a number of armored vessels. Although general public support for ironclad construction was not quite as zealous in the Union states, enthusiasm for the *Galena* was still apparent in the Mystic area and in the Northern press. *Harper's Weekly* lauded the promise of the *Galena* and her new technology, stating: "The strength, armament, light draft, and presumed speed of this new vessel, it is anticipated, will render her of special service in our Navy." The *Mystic Pioneer* continually praised the *Galena*, commenting that "One thing is certain, in a fight which would totally destroy a wooden vessel, an iron-clad one would come out but slightly damaged." Upon launching, the paper wrote: "For the benefit



When rigged for sea, the Galena *was a full-rigged brigantine, with conventional bowsprit and square-rigged foremast. Pook had designed a rather similar two-masted schooner rig for the "90-day gunboats" of the Unadilla class, one of which was built alongside the* Galena *by Maxson, Fish & Co.* (Harper's Weekly, *5 April 1862)*

of the country at the present crisis, it is to be hoped that the ship may prove a success . . . The whole work in detail gives evidence of an earnest endeavor to do justice to the government."[30]

A number of alterations and improvements were made to the *Galena* after its initial launching in order to address some remaining design concerns. Iron mail armor was extended over both the bow and stern, and the upper walls of the fighting deck received an additional 3 1/4 inches of armor, which increased the slope angle of the hull to almost 45 degrees. These changes were believed to "effectually protect the gunners, and render the vessel absolutely impregnable to ordinary projectiles."[31]

However, not everyone was as supportive of the *Galena* as the press. Upon her launching, Flag Officer John R. Goldsborough of the U.S. Navy described the *Galena* as:

a most miserable contrivance–entirely beneath naval criticism . . . She is a pretty good ram, and that, in general terms, is about the amount of her, unless she is kept bows on in fighting her guns. At best, however, she is a poor stick for an iron clad. Her moral is better than her physical effect![32]

Unfortunately, the *Galena*'s record during the Civil War would seem to bear out this prophecy. Under the command of Commander Alfred Taylor, she left New York on 22 April and traveled down the Atlantic Coast to Hampton Roads, Virginia, anchoring under the guns of Fortress Monroe. Taylor was relieved by Commander John Rodgers, who took the *Galena* out on her first real missions. Rodgers wrote, "I was convinced as soon as I came on board that she would be riddled under fire, but the public thought differently and I resolved to give the matter a fair trial." She spent the next few days prepared to engage the Confederate ironclad *Virginia* around Sewell's Point, on the south side of Hampton Roads, but the *Virginia* did not come out to fight. President Lincoln had come to inspect the war zone, and he ordered the *Galena* to proceed up the James River on 8 May with the gunboats *Port Royal* and *Aroostook*. The *Galena* fired 171 shots as the flotilla successfully attacked two Confederate batteries along the river.[33]

After temporarily running aground, the *Galena* continued up the river for the next six days as part of the Union push towards Richmond. Since the Confederates had destroyed the *Virginia* after the fall of Norfolk, the *Monitor* had joined the flotilla on the James. Early on 15 May, Commander Rodgers set out to engage the Confederate battery at Drewry's Bluff, about eight miles below the Confederate capital of Richmond. In the narrow river, Rodgers brought her to anchor and swung *Galena* around so that her broadside guns faced the battery on the 200-foot bluff, about 700 yards away. Sitting in this position for three hours and 20 minutes, the *Galena* "Kept up a brisk fire with shell, and had nearly silenced the battery when we found our shells all expended, and commenced firing solid shot with but little effect, and the battery soon opened upon us with terrible effect, every shot taking effect, going through the iron armor."[34]

Rodgers had made a serious tactical error by placing the *Galena* as if she were a "target practice object" directly under the battery's fire. To protect themselves, the unarmored vessels remained at a distance. The *Monitor* passed above *Galena* and tried to help, but her gunports were so small that she could not elevate her guns sufficiently to hit the Confederate position on the bluff, so all of the fighting was left to the *Galena*. Heavy Confederate shot pierced her armor 18 times in this exchange, killing 12 men and wounding another 15.[35] Rodgers described the damage in a letter the next day:

The result of our experiment with the Galena *I enclose. We demonstrated that she is not shot-proof; balls came through, and many men were killed with fragments of her own iron. One fairly penetrated just above the water line and exploded in the steerage. The greater part of the balls, however, at the water line, after breaking*

the iron, stuck into the wood. The port side is much injured; knees, timbers, and planks started. No shot penetrated the spar deck, but in three places are large holes, one of them a yard long and about 8 inches wide, made by a shot which, in glancing, completely broke through the deck, killing several men with fragments of the deck plating.[36]

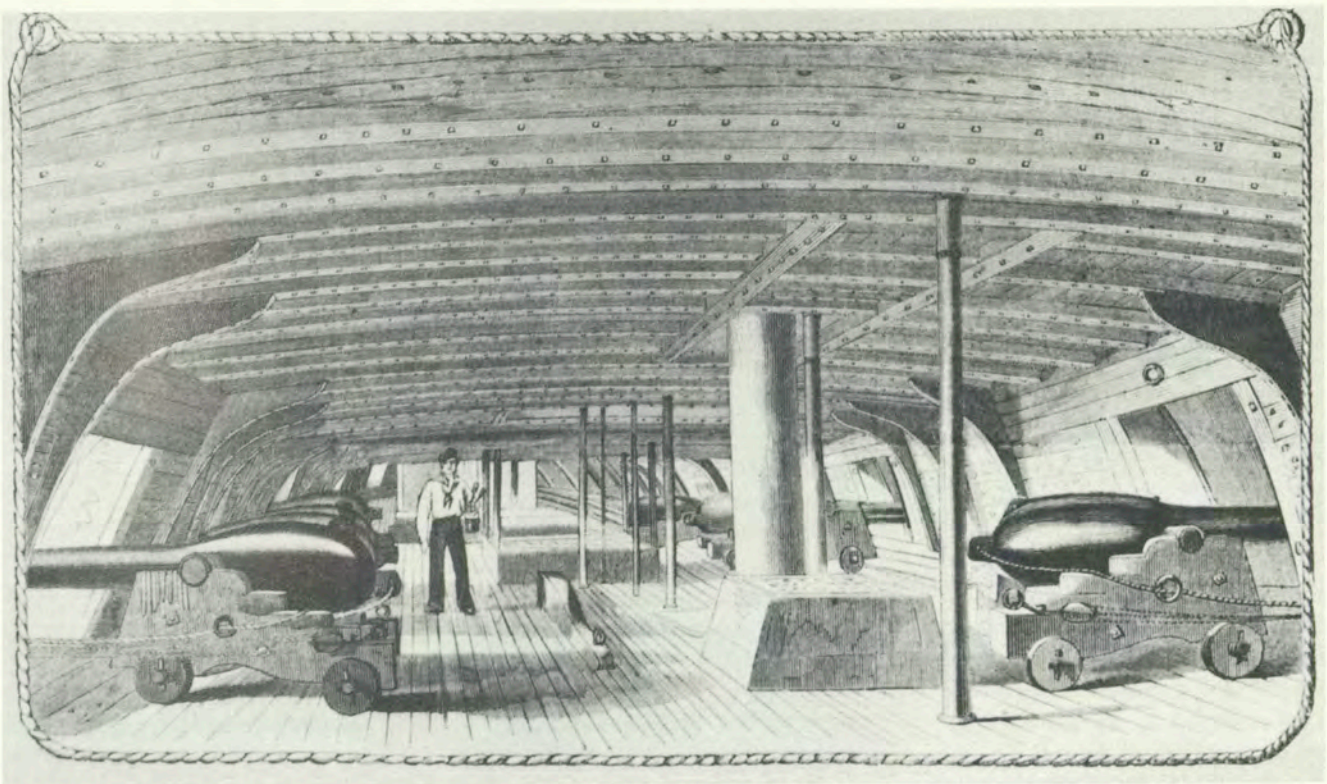
Besides being hit by heavier projectiles than a Confederate ironclad would have thrown at her, the *Galena* suffered because the iron plating on the exposed spar (top) deck was not sufficient to stop the large shot raining directly down from the battery. Despite the heavy price paid by the *Galena* in this battle, the other ships in the group survived with only minimal damage. The commander of the *Monitor*, Lieutenant Jeffers, wrote:

In conclusion, permit me to say that the action was most gallantly fought against very great odds and with the usual effect against earthworks. So long as our vessels kept up a rapid fire they rarely fired in return; but the moment our fire slackened they remanned their guns. It was impossible to reduce such works except by the aid of a land force.[37]

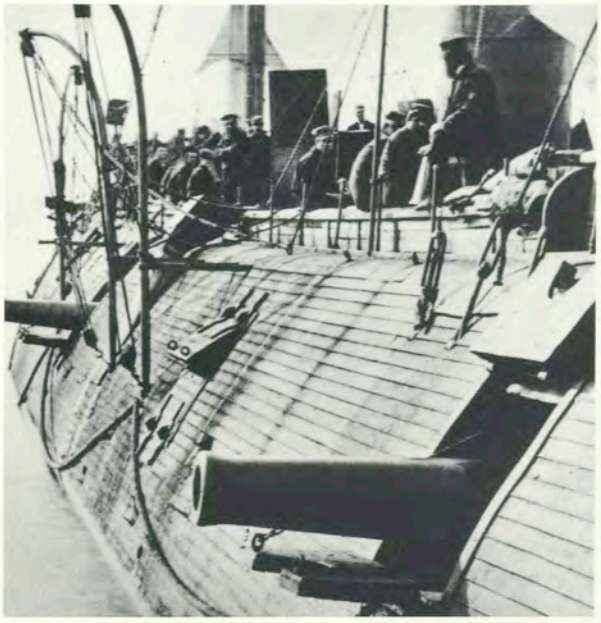
Although Jeffers viewed the ordeal as a "gallant" effort, the *Galena*'s failure to destroy the battery, combined with the heavy damages she sustained, would brand the ship a total failure as an ironclad.[38]

It is difficult to judge how the Mystic community viewed the *Galena*'s "failure" in this engagement. William Maxson kept up with her progress in his diary through the end of May, for instance noting her travel up the James River on 13 May and writing on the sixteenth that "The *Galena* silenced the two forts, or batteries, at the mouth of the James River in half a day, with 12 guns, without harm to herself." Upon learning of the defeat at Drewry's Bluff, Maxson wrote simply: "The *Galena*, *Monitor*, and other gunboats were repulsed from a high battery eight miles from Richmond." It seems surprising that after all of the time and effort he put into building this vessel there was no more detailed reaction to her performance. Perhaps he did not care, was not surprised, or maybe did not even know the extent of the damage. During the *Galena*'s construction, the local newspaper frequently lauded the vessel and its builders, saying that "[Maxson, Fish & Co.] deserve much credit for completing their contract in so short a time."[39] Regardless of the numerous compliments, after the launching the *Mystic Pioneer* no longer mentioned the *Galena*. This ironclad, despite all the effort which Mystic put into her construction, was now old news; the shipyards and town had moved on to new projects.

Due to the *Galena*'s alleged poor performance at Drewry's Bluff, the government nearly withheld the final $40,000 it owed Bushnell, although they eventually paid this sum. The *Galena*'s days as an ironclad were numbered after this point. The navy repaired her, but she only saw minor additional



This view of the Galena*'s gundeck shows the conventional broadside arrangement of her heavy guns, which actually numbered three on each side. From the inside, she appeared to be a typical wooden warship. (*Harper's Weekly, *5 April 1862)*



Some of the damage to the Galena's *armor can be seen in this photograph of the vessel, taken in the James River in the summer of 1862. The overlapping and interlocking iron plates resemble house clapboards. Part of the vessel's crew of 150 sits along the low bulwarks edging her narrow spar deck. Canvas ventilators have been set up to funnel fresh air below decks. (Mystic Seaport, 1991.2)*

action as an ironclad. In 1863 the *Galena*'s iron armor was removed and she continued to serve the Union as a wooden gunboat; in this form she protected the USS *Oneida* in the battle of Mobile Bay, 5 August 1864, and participated in the later bombardment of Fort Morgan. Decommissioned at the end of the war, the *Galena* was finally dismantled at the Norfolk, Virginia, Navy Yard in 1872.[40]

As Goldsborough predicted, in the end the *Galena* did serve as more of a symbolic than a physical weapon. Why would a vessel so carefully planned with innovative designs, and representing thousands of man-hours to construct, be so quickly branded a failure? A large share of the blame appears to rest on Rodgers's positioning and use of this essentially untested vessel at Drewry's Bluff. She was never intended to fight in a ship-to-shore battle; the *Galena*'s strength as an ironclad was in Winslow's novel paneling approach with its carefully rounded and armored sides designed to deflect broadside shots. The complex curvature and armor were of no use against shots raining down from above. As *Harper's Weekly* described, the gun deck was thought to be "impenetrable," but the armor was clearly not sufficiently thick to live up to this expectation. The fact that she was the only vessel present capable of firing at the high battery speaks well for Pook's design, but if this ability required foregoing extra armor then perhaps he sacrificed too much in this regard.

The *Galena*'s armor was certainly inadequate to repel the Confederate firepower; Winslow apparently ignored the theoretical work in England that said armor should be at least 4 1/2 inches thick, or else disregarded this due to weight and speed concerns. It is unclear whether this change in armor thickness, the lack of the proposed rubber layer below the armor, or some other additional armament would have made any difference. Nevertheless, Rodgers did not utilize the *Galena* as effectively as he could have, and perhaps if he had better understood the design considerations that went into the *Galena* he would not have made so gross a blunder during his "experiment." In spite of these decisions, Rodgers's performance at Drewry's Bluff was "conveniently blamed on poor design and construction," and he went on to become a respected naval officer.[41]

Although the USS *Galena* did not play as important a role in the U.S. Navy as originally intended, she nevertheless served in a number of important roles as a symbol of Northern technology. Her construction also helped to revitalize the Mystic shipbuilding business during the Civil War: the Maxson, Fish & Co. yard alone went on to construct 19 more vessels during the war era, independent of the boom in business for the Mallory and Greenman yards. Pook's career was not hampered by the *Galena*'s performance either; he later became an assistant and then full naval constructor, working at numerous yards across the country. The *Galena* was an innovative gunboat, and her plans represented the state-of-the-art in armor plating technology and a unique balance of design elements to accommodate size, speed, stability, height, and armor thickness. Although there is little record of the influence of her features on later ironclad designs, the *Galena* and *New Ironsides* would be the only seagoing broadside ironclads built by the Union. Her failure at Drewry's Bluff, combined with lobbying by a number of individuals including Bushnell, helped steer the navy towards building *Monitor*-style turreted ships for the war's duration. Ironclad vessels played a significant role in the Civil War and in the development of American naval technology, but the United States abandoned the ironclad program shortly after the war ended. Despite her short life, the USS *Galena* remains an important part of Mystic's shipbuilding history and a testament to the difficulties involved in designing and building these important early armored vessels.[42]

Acknowledgments

The author would like to thank Professors John Jensen and Glenn Gordinier of the Williams-Mystic Program for their invaluable guidance and help with all aspects of this paper. He also thanks the staff of the G.W. Blunt White Library, especially Andy Price and Kelly Drake, for their assistance in researching this topic.

Endnotes

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4. Bradley Rodgers, *Guardian of the Great Lakes: The US Paddle Frigate Michigan* (Ann Arbor: University of Michigan Press, 1996), 4, 85; this was an iron-hulled vessel where the entire hull was made of iron as opposed to an ironclad that had iron armor placed on top of a wooden hull; Baxter, *Introduction of the Ironclad*, 124; the Stevens Battery was never completed, but the smaller 1844 steamer *Naugatuck* was fitted out by Stevens on the same principles and loaned to the U.S. Revenue Cutter Service as the *E.A. Stevens* in 1862. She served with the *Galena* in the Drewry's Bluff expedition while on loan to the navy, see Paul H. Silverstone, *Civil War Navies, 1855-1883* (Annapolis: Naval Institute Press, 2001), 10, 76, 140.

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34. *ORN*, 7:706.

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Before "S&S"

CHERYL B. CHAPUT

Now in its seventy-third year of operation, the firm of Sparkman & Stephens is frequently recognized simply by its initials and widely known for the design of innovative sail- and powerboats. When more than 70 of these craft came together at Mystic Seaport in June 2001, they comprised nearly a history of competitive yachting and America's Cup competition for more than half of the twentieth century. Even as the firm continues under new generations of designers, it is informative to look back on the origins of the team that founded the company and developed its reputation for excellence.

Roderick Stephens Sr. was a successful coal dealer in the Bronx, New York, in the early years of the twentieth century. Like many city dwellers, the Stephens family escaped the heat of the summer for cool waters. In 1914, with sons Olin II, age 5, Rod Jr., age 3, and infant daughter Marite (short for Marguerite, after her mother), their destination was Lake George in upper New York State. There, during several summers, the boys learned to swim and row a boat, and became comfortable on the water. As young boys, the Stephens brothers saw the famous Gold Cup Races for early motor speedboats, with all the noise and excitement they could wish for.

By 1920 a change of pace was in order, and the Stephenses went to Cape Cod, Massachusetts, for the



Six-year-old Olin and four-year-old Roderick Stephens practice rowing in June 1915, during their second summer on Lake George. (Mystic Seaport, 1995. 24.331.14)



Always ready for boating, Rod Stephens drives the family's outboard-powered skiff near Sandy Neck, Cape Cod, about 1920. (Mystic Seaport, 1995.24.330.75)



Ensign Drake Sparkman on the deck of the USS Montana, *1918. (Courtesy the Family of Drake Sparkman)*



Sharpening their racing skills on the schooner Alicia *in July 1927, Olin* (at tiller), *friend Bob Moore, Roderick Stephens Sr., and Rod smile for the Rosenfeld camera. (Mystic Seaport, 95.24.401; Neg. 23658F, ©Mystic Seaport, Rosenfeld Collection)*

salt waters of Sandy Neck, near Barnstable Harbor. Here, Olin, at 12 years, and Rod, at 10 years, learned to sail aboard the 16-foot sloop *Corker*. During the family's three summers at Sandy Neck and three at Edgartown, Martha's Vineyard, the boys sailed a series of successively larger boats each year, none of which was a "gem" to sail, but each of which offered lessons about what makes a fast racer, and what improvements could be made.

In 1925, now members of the Larchmont Yacht Club near their home in Scarsdale, New York, they were introduced to the pleasures of the 6-Meter sloop and the qualities of a responsive boat. They were also introduced to many of their father's friends, club members such as sailors and naval architects Sherman Hoyt and Clinton Crane, and others who taught the eager boys the fine points of sailing and racing.

Olin graduated from high school in 1926 and spent one semester at the Massachusetts Institute of Technology. The naval architecture course there focused on commercial vessels, but he was much more interested in sailboats. He left school to recuperate from an illness and did not return, choosing instead to work as a draftsman in the firm of yacht designer Henry J. Gielow, and later that of Philip Rhodes.

Olin showed promise as a yacht designer. In 1928 his father introduced him to fellow Larchmont Yacht Club member Drake H. Sparkman, a well-known sailor who had recently opened his own yacht brokerage firm. Sparkman was the son of James D. Sparkman, a New York businessman whose



Drake Sparkman's yacht brokerage remained part of the firm after the incorporation of Sparkman & Stephens in 1929. In this 1936 photograph, Sparkman (left) *poses with a number of the firm's brokers, including* (from left) *Bob Garland, Bob Rice, and Porter Buck. The office staff included long-time secretary and office manager Ida Arthur* (right). *(Neg. 73907F, ©Mystic Seaport, Rosenfeld Collection)*



Olin Stephens and Drake Sparkman (left) *at the launch of the firm's eighth design, the 8-Meter racing sloop* Conewago, *in April 1930. (Neg. 38830F, ©Mystic Seaport, Rosenfeld Collection)*

own father, James T. Sparkman, a Brooklyn merchant, had owned the Mystic-built schooner *Mystic* in the 1860s. Having spent a year at sea, young James was active in yachting at both the New York and Larchmont Yacht Clubs. He married Edith Hoyt of New Rochelle, where they raised their two sons: Drake, born in 1898, and his younger brother James, who would work as a broker at Sparkman & Stephens specializing in powerboats. Drake grew up as a competitive small-boat sailor and joined the U.S. Naval Reserve when the U.S. entered World War I. He served as an ensign aboard the armored cruiser USS *Montana* during 13 transatlantic convoy missions. Discharged in 1919, he went to work for a boatbuilder and joined the Larchmont Yacht Club, becoming the regular skipper of the Victory Class sloop *Blue Jacket* from 1920 through 1926, and winning the Victory Class championship, 1923-25.

Having left the boatyard to work in an insurance firm in 1921, he was well prepared to join naval architect Roger M. Haddock's design, yacht brokerage, and insurance firm in 1923. After four years of selling sailboats and yacht insurance for Haddock, and accumulating plenty of friends and boating acquaintances among the New York, Larchmont, and Long Island Sound yacht clubs, he was ready to take over the firm upon Haddock's retirement in 1927. In the office at 11 E. 44th Street in New York, near the New York Yacht Club, Sparkman went to work under his own name, with yacht designer Fred Hoyt providing design services.

A year later Drake was ready to take on a new designer and joined up with Olin Stephens, who was just 20. They formed the informal partnership of Sparkman & Stephens, and Design #1, the Sound Junior One-Design, later called the Manhasset Bay One-Design, was dated July 1928. Drake continued to find clients for Olin's designs, and Olin and Rod continued to build their reputations by winning races. In addition, with his interest in small boats and skill at racing them, Drake would be instrumental in the firm's development of the Lightning, Weekender, Interclub Dinghy, Blue Jay, Shields, and other popular small one-design class boats. The firm of Sparkman & Stephens was incorporated after Olin's twenty-first birthday in 1929. Rod left Cornell



The Sparkman & Stephens design office at 11 E. 44th Street included makeshift tables for an increasing number of draftsmen. In this 1936 view of the busy office, Olin Stephens works at left while Rod Stephens (in jacket, center) *confers with one of the draftsmen who scaled every detail of the designs. (Neg. 73906F, ©Mystic Seaport, Rosenfeld Collection)*

after a year to work at the Henry B. Nevins yacht yard in City Island and would join Sparkman & Stephens three years later.

In the beginning, the design office for Sparkman & Stephens was a board in the drafting room at the Nevins yard. In 1929 the design office moved to 205 City Island Avenue, near the Nevins yard, and in 1934 moved to the 44th Street location of the brokerage office. There, near both Grand Central Terminal and the New York Yacht Club, it was well situated for clients to drop in and talk about boats, as was the City Island office, which they retained until World War II.

Despite the stock market crash in the fall of 1929 and the worsening economic depression in the nation and around the world, people with money continued to buy boats. Rod Stephens Sr., who had sold the family coal business before the stock market crash, was able to back his sons' abilities by ordering Olin's seventh design, *Dorade,* an ocean racer with a decidedly different look. Where other deep-water yachts were beamy to survive ocean conditions, *Dorade* was narrow and deep. She proved herself, and changed the concept of the ocean racer, after she won both the transatlantic race and the Fastnet Race in England in 1931.

Dorade's success made a name for Sparkman & Stephens, and was followed by other notable yachts, including Mystic Seaport's own schooner *Brilliant,* until the number of "S&S" designs approaches 3,000. The firm's many projects were a major stimulus for the boat business, providing jobs for their own staff and for boatbuilders and others during the hard years of the Great Depression. This was followed by work for the military during World War II, and the postwar boom years with a host of successful ocean racers and America's Cup defenders. Beyond Drake's death in 1964, Olin's retirement in 1979, and Rod's death in 1995, the firm has continued to uphold the traditions of its founders, who took a love of boating, an innate sense of design, and a way with people, and brought them together as "S&S."

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Olin Stephens's thoughtful memoir, *All This and Sailing, Too* was published by Mystic Seaport in 2000. It may be obtained through your local bookstore, or by calling the Mystic Seaport Bookstore at 860.572.5386 or 800.331.2665. Don't forget your 10 percent member's discount

"We Were Both Interested in Doing the Same Thing..."

Rod and Olin Stephens in Their Own Words

FRED CALABRETTA

In 1986, Mystic Seaport's Yachting Committee established the Yachting Oral History Project. The purpose of this project was to create a unique resource by conducting and preserving oral history interviews with individuals who had been prominent in twentieth-century yachting and recreational boating.

From its inception, the project benefited from the strong support of Olin and Rod Stephens. Olin was interviewed four times and Rod twice. In addition, Rod, as a member of the Yachting Committee, suggested a number of interview candidates and assisted the interviewer by providing contact information and introductions.

The Yachting Oral History Project produced a collection of about 150 oral history recordings. The tapes, transcripts, and related material are located in Mystic Seaport's G.W. Blunt White Library, where they are available for use by researchers and other interested persons. Considering their remarkable record of achievement, it is highly appropriate that Rod and Olin are well represented in the Yachting Oral History Collection. Their personal comments offer insight into their individual personalities and highly successful working relationship—an alliance that had an enormous impact on twentieth-century yachting. Additionally, comments by their contemporaries



Olin Stephens (center) *Rod Stephens* (left), *and Drake Sparkman, look over the sail and rigging plan of the New York 32 design in 1936. The three made a very effective team in designing, building, and selling Sparkman & Stephens boats. (Neg. 73905F, ©Mystic Seaport, Rosenfeld Collection)*

help reveal how and why the Stephens brothers achieved such notable positions of influence and respect in the yachting world.

Olin and Rod, who was two years younger, admired and respected each other from an early age. They also realized that they each had distinct talents that, when combined, made them a formidable team.

> **Rod:** I know when we were kids we had a boat. . . we were all learning together. . . It was organized so that we took turns being skipper. But after several weeks, I said look, I think he can steer the boat better than I can and I think I can set the spinnaker better than he can, and that kind of settled it. . . .
>
> That was the big thing. . . I was quite satisfied in anything he was going to do and to a certain extant it worked the other way. . . .
>
> To give you an extreme, after the war I bought this New York 32 and sailed the 1946 Bermuda Race, but I said I'd like it if you'd be skipper. . . . He was awfully good on judging the weather, as well as being good for steering and all the rest of it. I think that's typical of the way we got along when we worked together in business. . . . Because he knew one part of it very well and I never questioned that at all, and I knew another part and he didn't waste his time worrying about that.
>
> **Olin:** I think we were both interested in doing the same thing, but our principal interest was in separate parts of it. . . in our work in the office and on the boats too. We each had confidence in what the other was doing.

Working together, the young brothers quickly established an impressive presence in the yachting world. One of their earliest designs,



At the start of the 1930 Bermuda Race, the crew of the new yawl Dorade *poses before their second-place finish in the race, to be followed by a transatlantic victory in 1931. Designer Olin Stephens is at the tille, far right. Standing second from left, next to Rod Jr., is Roderick Stephens Sr., who put up $28,000 to build the boat. (Neg. 40292F, ©Mystic Seaport, Rosenfeld Collection)*



Just returned after Dorade*'s winning transatlantic passage to England in 1931, Olin Stephens and his father prepare for a ticker-tape parade on New York's Broadway. (Mystic Seaport, 1995.24.292)*



Rod and Olin Stephens (at left) *were integral members of the "afterguard" of the J-Class sloop* Ranger *during the 1937 America's Cup competition. The others, from left, are Professor Zenas Bliss, the navigator; Mrs. Vanderbilt; Harold S. "Mike" Vanderbilt, the owner and helmsman; and Arthur Knapp. (Neg. 81798F, ©Mystic Seaport, Rosenfeld Collection, Image Acquired in Honor of Franz Schneider)*

the 52-foot yawl *Dorade,* was an outstanding success. Rod and Olin, both barely out of their teens, and a crew of friends sailed the boat to victory in the 1931 Transatlantic Race. Yachting was a high-profile sport in New York and elsewhere during the years before World War II, and the victory received considerable coverage in the newspapers. It also earned *Dorade*'s designers and crew a ticker-tape parade in New York City when they and *Dorade* arrived back aboard a liner. Though proud of their achievement, Rod at least, found some amusement in the day's proceedings.

Rod: We sort of enjoyed it. When the ship came in through quarantine, there was a tugboat escorting. We were taken off there. We didn't have to wait to go to the dock and our bags clearing. We just dropped the boat, ran and got into a car. We went to City Hall and a little speech-making, but not much. Then, we got back in the car and went on up to 138th Street in the Bronx. . . .

We went all the way from the Battery to my grandfather's office in Stephens Fuel Company on 138th Street and never had to stop for a red light. We had a squad of bicycles ahead, and they stopped traffic and kept the lights green for us. And that impressed me more than anything else. . . .

Rod and Olin's working relationship solidified during the 1930s. In 1929 Olin formed a design partnership with Drake Sparkman, whose social and business contacts helped bring clients to the firm. Rod joined Sparkman & Stephens three years later. A high point during this period came in 1937. Commissioned by Harold "Mike" Vanderbilt, Olin and Starling Burgess co-designed the legendary J-boat *Ranger.*

Olin: Not that Mike Vanderbilt wasn't very interested and serious about what he did, but that particular thing was, except for making models and trying to pick the best one, very straightforward. It had to be. It was done very quickly, and there were no arguments, problems, really no instructions because we agreed in the beginning, both Starling and I and Mike Vanderbilt agreed, that the boat should be right up at the top of waterline length permitted in the class. . . . He and all of us were quite satisfied that we were on the right track in going for the big boat.

The 87-foot *Ranger* proved spectacular in both appearance and performance, and easily claimed the America's Cup in 1937, with Rod and Olin on board as members of the afterguard. More successful designs quickly followed.

Olin: I was lucky in the boats that came after [*Ranger*], which were, of course, strictly my own as *Ranger* had not been. They were good boats too, in racing terms. The year after *Ranger* we had two new twelves, *Nyala* and *Northern Light,* and we had the 6-Meters *Djinn* and *Goose. Goose,* of course, was really a big success. The two good new offshore racing boats, *Baruna* and *Blitzen,* they both did very well in the Bermuda Race of that year. So, it was certainly luck involved, but with that to carry things along, why, we got through the thirties.

By combining their talents and recognizing each other's strengths, Rod and Olin had established one of the most successful and significant yacht design enterprises of the twentieth century. Their personal philosophies and approaches to their work merged to create a winning formula for success, with Olin specializing in lines and overall design and Rod emphasizing the mechanics and

rigging details.

Olin: I'd say a good boat is safe and relatively comfortable and that's what I call good manners; that is, it's balanced under most if not all conditions. Not too wet in the seaway. But I think safety and structural strength, certainly that's a very important thing. I'm unhappy about the fact that it seems to take the second or third place now. . . .

I tried to think of the boats, not as they come out of the shop, but if they were allowed to run down a little. How they would look, and I hoped they would look just as nice with a few bumps and a kind of a poor coat of paint as they did when they were all polished up. And also, I think when I was starting in I was influenced by boats, which I'm sure people today would also agree, that were very handsome boats, the type that were designed by [William] Fife and [G.L.] Watson, in England. The *Britannia,* of course is one of the absolutely ideal boats, and I thought the Fife 6-Meters were much better-looking 6-Meters than any of us designed in this country. . . .

Of course when it came to 6-Meters, I tried to take a pretty utilitarian point of view, in thinking only of what might be the fastest and best under the rule. Whereas with the boats of the more of a cruising type, even thinking of racing I didn't like to go so far. I want them to be fast, but I mostly thought the appearance was a big part of it. I'm afraid today appearance doesn't mean very much. . . .

I never got much pressure for anything except "go fast" on the racing boat. Cruising boats are much more complicated because one does have to accept the idea of compromising and has to certainly incorporate, think twice, and carefully accept ideas from the owner. It does make it go more slowly and with more difficulty than racing boats. . . .



Combining their skills at the helm and in sail trim, Olin Stephens steers while Rod adjusts the mainsail of the sloop White Cloud *in 1937. (Neg. 79865F, ©Mystic Seaport, Rosenfeld Collection, Image Acquired in Honor of Franz Schneider)*

I would say, broadly speaking, I often made a sketch on a piece of yellow paper, something like that. Generally a profile and often an arrangement plan. Then fill in the dimensions from the calculations. I did most of that work on a slide rule, but when the little electronic calculators came along, I really did have a feeling that it put me in charge once again! Because I could work it all out in a very short time on a little electronic calculator, without making any drawings, except as I say a very little sketch on a piece of yellow paper. I could say just about what the boat would be about.

Rod: I'd start, to begin with, in our own office, to try to keep things simple. That's a hard thing to sell. Anybody deciding to spend X dollars for a boat which he wants to be a real winner, they want all these things. They go to a boat show and grab everything they can see—never mind what it costs or the trouble of installing it and how it makes it difficult for maintaining the things you need. That's why I don't like especially too much electrical stuff. That's where it's changed

so much. Nowadays, they all have everything electronic. . . . After the trials were over, then I'd do a lot of thinking, and I could pretty well reconstruct everything that bothered me and try to get it taken care of.

By the end of the 1930s, Rod and Olin were realizing that there were certain tradeoffs for their record of achievement. The weight of their success took several forms, and Olin in particular was feeling the strain.

Olin: I will say frankly, that by the end of the thirties, I was almost running out of energy. I think I was going through some kind of psychological problems that weren't altogether happy. But while I certainly didn't like either the fact of the war, or the war work, I guess I was lucky again. It was a very good time to make a fairly radical change from what I'd been doing. So it didn't amount to anything important. . . .

During the time of the war, somewhat before and after, I worked pretty hard on painting. I did quite a lot of painting, and I went to painting classes in New York. And spent weekends at it and was pretty serious about it. But, I've sometimes said, if I was permitted to sort of semi-psychoanalyze myself, it was because there wasn't much opportunity to do very much original work in the war. And it seems as though as soon as that period was over, and I was thinking a lot about designs, and had what I think was the type of satisfaction I was looking for in doing something more original, I kind of gave up, or slowed down a lot, on the painting. I thought I'd get back to it when I retired and moved back to the country, but I made the mistake of getting a computer.

In the years after World War II, Rod and Olin continued to build upon their earlier accomplishments and add to their remarkable body of work. In the 1980s and 1990s, as they reflected back upon their careers, they cited a few regrets, many favorite boats, and a great deal of satisfaction.



Living up to her name, Stormy Weather *surfs through the swells under full sail at the start of the 1936 Bermuda Race. Sparkman & Stephens design number 27, this 54-foot yawl proved her qualities by winning the 1935 transatlantic and Fastnet races with Rod Stephens in command. (Neg. 69055F, ©Mystic Seaport, Rosenfeld Collection)*



Having raced 6-Meter sloops in the 1920s, Olin Stephens designed some exceptional ones in the 1930s. The best was Goose. *Launched in 1938, she quickly proved herself in international competition with four-boat teams. This 37-foot racing machine was especially fast to windward. (Neg. 88529F, ©Mystic Seaport, Rosenfeld Collection)*



Designed in 1967, the 56-foot aluminum sloop Equation *was an extremely successful ocean racer, even when new International Offshore Racing rule changes put her at a disadvantage. (Neg. 185423F, ©Mystic Seaport, Rosenfeld Collection)*

Olin: People ask me if I miss having a boat of my own. When I was really active, I never felt I would have time enough. And even Rod who did have a boat of his own and used it a lot for a certain period, it got so that he just didn't have time to go out in his own boat, so he had to give it up.

Rod: I was a little sorry that I couldn't use the boat enough to really justify keeping it, when we finally did sell it. But that was the last year or so. There were quite a few weekends we didn't even take it off the mooring, and I didn't like that at all. . . .

I still read things that I was credited with doing which I never did or could do or ever would do. That bothers me just a little bit, but not very much. People talk about how I went all around the rigging on the J-boats just hand over hand and stuff, and I did a little bit, but not a whole lot. I don't like to be credited with things which are not totally true.

Olin: I spend a lot of time nowadays with the computer. I'm not awfully good with it, It's really the only thing I regret. I don't feel, as far as the period from 1930 to 1965, that I lost anything I'd gained, by not having the education that maybe a naval architect should have. But from 1965 to 1988, I've regretted it terribly. I wish I had the math. If I was a good mathematician, I'd give anything almost, to be really adept at calculus and that sort of thing. . .

People ask me fairly often whether I have any favorite boats. . . there are half a dozen I can think of that are better than others. . . but I don't feel any particular preference for one. It's just some turned out well and some turned out not quite as good as others.

Equation is certainly one of them. I think that *Stormy Weather* was one boat that would be on the list of the first few. Among the racing boats, the relatively recent boats, *Intrepid* and *Courageous*. Of course the 6-Meter *Goose* was a very successful boat and a very nice boat, as a 6-Meter. I think she was pretty and she was nicely balanced, and also not extreme, that is, she could win under almost any weather conditions. It's much easier to design a boat which will win in either light or heavy weather but may not do very much in anything else.

Rod: I particularly enjoyed two things. I did my first sailing invariably on boats without engines, so we were quite used to sailing in or out of anywhere. The second thing is the navigation. I'm glad I didn't learn it this year, where they just push a couple of buttons and it tells within a couple hundred yards of where they are. I'm used to sweating it out with a hand lead.

Although I didn't navigate in that first Bermuda Race, I did several years later. Olin usually navigated. But then, that first trip I took when he wasn't there, then I was navigating. I've enjoyed it, and I've found that I had fantastic eyesight. I have books in the cellar where I'd take seven or eight sights. I never would average anything. I always would work them out and see what they were. Some of them are within a tenth of a mile, which meant they were pretty accurate. At that time, a lot of people said you couldn't get that close. On *Ranger,* there was never a mark that we had to go around that I wasn't the first one on the vessel that saw it. Zene Bliss, the navigator, he knew that. He'd eat out of my hand, because he welcomed that ability.

When asked if he always enjoyed his work, Rod summed up the passion both he and Olin had for what they were doing:

Rod: For all the years I worked there, and they've been quite a few, I've pretty near always been there by 6:00 or 6:30 in the morning. And that was only because I enjoyed the work and enjoyed what I was doing.

Did he ever tire of what he was doing?

Rod: Never. Never, never, never a second or a moment. No.

Arthur Knapp was one of the most successful competitive sailors of the twentieth century. He first sailed with Rod and Olin in the 1920s, and then joined them on *Dorade* in 1931 and *Ranger* in 1937.

I've known Olin and Rod Stephens since about 1927 or '28. In 1929 Olin designed *Dorade,* and they built it in Minneford's Yard, and Rod went over there with the workers, and had a lot to do with the building of *Dorade*. . . . A lot of the old guys said, "Oh, that boat will never get to Bermuda, the mast will fall out, she won't be any good in a seaway." We were all young; I think the average age, except for Mr. Stephens, was something like 19. And I mean, the ocean, we were too damn dumb to know how rough it could get, but we got away with it. . . we did rather well. . . .

I think Olin is the greatest yacht designer this country has ever known, and he and Rod had something that the other guys didn't have. They complemented each other. Olin was the theoretical man and Rod was the practical man.

Rod laid out the winches, laid out the deck layout, laid out the construction and all that sort of thing, and he really did a job. And the combination, the 6-Meters, the 12-Meters, the ocean racers that they built were absolutely marvelous. They designed all kinds of boats, from dinghies. . . the 6-Meters were all tops, and there were of course many others. . . . I think Olin has been the greatest designer. . . I'm still a Sparkman & Stephens man.

Carleton Mitchell is a noted sailor, yachting journalist, and photographer. His Sparkman & Stephens-designed *Finisterre* won the Bermuda Race an unprecedented

three consecutive times between 1956 and 1960.

> Well, as a designer, my greatest respect is for Olin Stephens. I think he was absolutely outstanding in the time frame that we're talking about. There were great ones before him, Herreshoff. There are great ones now. But none, I think that had his combination of the artist's eye and the mathematician's or the precise scientific approach. He made it an art as well as a science.
>
> He and Rod were, to me, the greatest around. Rod, with his knowledge of rigging and the deck layouts and all the rest. . . when it came to knowledge and seamanship, I think he was great. And so was Olin. I mean, their exploits in the early transatlantics and Fastnet races, they completely broke open the whole thing. And I don't think anybody contributed more to design in sailing than they did.
>
> Then came along *Finisterre*. . . she was an innovation at that time, because of the extreme beam and displacement. . . . She was a fabulous boat.

Emil "Bus" Mosbacher Jr. was an outstanding competitive sailor and two-time winning skipper in America's Cup competition, winning in 1962 and sailing Olin Stephens's *Intrepid* to victory in 1967.

> Olin was tremendously helpful. I remember in those days, people would say, "Tell me about Olin." I'd say, "I can tell you half a dozen things that I think are great about Olin." Another Renaissance man. Such a gentleman, and in the true sense of gentle man. Thoughtful, considerate, dedicated to the job at hand, great sense of humor.

Halsey Herreshoff has ably carried on the traditions of one of yachting's most celebrated families, achieving success as a competitive sailor and yacht designer. He sailed with Rod and Olin on *Columbia* in the first 12-Meter America's Cup series in 1958.



With her short bow and innovative keel with trim tab, the 12-Meter sloop Intrepid *easily defended the America's Cup in 1967 and 1970. Here the 64-foot racer, with her crew of 11, flies along under mainsail and spinnaker. (Neg. 183427F, ©Mystic Seaport, Rosenfeld Collection)*

> I had a tremendous admiration for Rod Stephens, who was the one who ran the entire deck, and we all admired him, and looked up to him, and appreciated him. He was a task master, but he was a good one.
>
> I remember admiring tremendously Olin Stephens, not only for his role on the boat, he. . . was in the cockpit. And he was always calm, cool, and smart. But what I remember particularly about him was, that after it was all over, instead of Olin being arrogant and over-sure of himself [as the designer of the winning boat], he went right off to England to study the model testing at Southampton, and he even called on David Boyd, who designed the *Sceptre,* to find out what they were all doing, rather than the other way around. I think it was a great example of Olin's practical modesty, and one of the reasons for his great success. He was always thinking, looking ahead, and finding out what was going on.
>
> I've raced a lot with Rod Stephens on his *Mustang,* had a terrific cruise to Nova Scotia in 1959, the year after the Cup race, when I sailed with him. And I have the very highest admiration for Rod Stephens. He probably, except for my father, taught me more about sailing and navigation and seamanship than anybody else I've ever known. I guess my heroes in sailing are my own father [Nathanael Herreshoff's son Sidney], Irving Johnson, and Rod Stephens, in no particular order. And certainly my heroes in designing are Captain Nat, my own father, and Olin Stephens, who I have a tremendous respect for.

Irving Johnson rounded notorious Cape Horn in a square-rigged ship in 1929, and subsequently sailed around the world seven times in his brigantines named *Yankee,* on each occasion accompanied by his wife Exy and a crew of enthusiastic young boys and girls. He first became acquainted with Rod and Olin in the 1930s, and Sparkman & Stephens designed his last *Yankee* in 1959.

> They're known the world over as brothers who have made the jobs come out right for people all over the world. And it's been a marvelous thing to see.

Fred Calabretta is an associate curator and America and the Sea Research Fellow in the Curatorial Department at Mystic Seaport. He has conducted several hundred oral history interviews.

VIREO

A Boat for Franklin D. Roosevelt

ANDREW W. GERMAN



With his passion for sailing, Franklin D. Roosevelt enjoyed making and racing boat models with his children. To teach them to sail, he bought the sloop Vireo *in 1920. Posing on the foredeck of their new sloop, he and his sons James* (rear) *and Elliott* (right) *show off their sailing models on 27 July 1920. (NPx 47-96:834, courtesy Franklin D. Roosevelt Library, Hyde Park, New York)*

Assistant Secretary of the Navy Franklin D. Roosevelt wanted a boat for his five children to use at the family summer home on Campobello Island, New Brunswick, just across the bay from Eastport, Maine. Roosevelt had enjoyed sailing as a child, but the 61-foot family schooner *Half Moon* had been turned over to the government during World War I. Now, with life returning to normal in 1920 and his children becoming teenagers, Roosevelt wanted to teach them the skill he enjoyed so much. Thinking of the Herreshoff 12 1/2-footer as a suitable boat, he contacted naval architect and yacht broker John Alden of Boston on 10 June 1920 to see what might be available. Roosevelt specified an "absolutely safe" boat of about 15 feet on the waterline. Alden replied that small boats were scarce, but he did have a listing for a small keel sloop named *Vireo,* or a more expensive Herreshoff Buzzards

Bay 15. Roosevelt asked him to pursue *Vireo*.

Franklin Roosevelt was buying a boat, not history, but his choice represented the history of the emergence of modern yachting. *Vireo* was owned by a member of the Corinthian Yacht Club of Marblehead, Massachusetts, who had ordered the boat for his daughter. Marblehead's narrow harbor and exposed location had been abandoned by the fishing industry but adopted by serious sailors who founded the Eastern and Corinthian Yacht Clubs there in 1870 and 1885. While grand yachting continued, with big vessels and professional crews, "Corinthian"—amateur—yachting had taken a strong hold among the newly affluent and athletic middle class since the end of the Civil War. They wanted small boats to use on weekends and small clubs at which to race and socialize. With its motto, "give the small fry a chance," Marblehead's Corinthian Yacht Club was a center for highly competitive small-boat racing. Since 1903 the club had sponsored a summer regatta that attracted hundreds of boats from Massachusetts yacht clubs.

Small catboats, and keel yachts with bowsprits, abounded among Massachusetts Bay clubs, but in 1892 Henry Taggard of the Eastern and Corinthian clubs had wanted something new in which to "knock about" the bay. Inspired by the Marblehead workboat *Nanepashemet,* which had no bowsprit, he had George Stewart design the little sloop *Nancy,* which had an extended foredeck in place of an awkward bowsprit to anchor her forestay. *Nancy* performed so well that others copied her, and the knockabout was born.

By the end of the 1890s, yacht clubs had begun to realize that by sponsoring "one-design" classes they could obtain both economy of production and the unity of boat design that really tested racing skill.



George W. Shiverick (1870-1943) learned boatbuilding in the Hanley yard at Monument Beach, Cape Cod. After three years at a shop in E. Dennis, he moved to Kingston, Massachusetts, about 1895. Known for the quality of his design and construction, Shiverick built small sailboats for members of many yacht clubs around Massachusetts Bay. (Mystic Seaport, 1975.584.15)

Among the first one-design classes was the Beverly Yacht Club's Buzzards Bay 15 design, a handsome, high-performance knockabout sloop with centerboard designed by Nathanael G. Herreshoff in 1898. Soon, one-design racing spread to yacht clubs throughout New England and beyond, to be enjoyed both by adults and by their children.

With the growth of yacht clubs, boys were encouraged to sail. By the turn of the century, the "Gibson girl" ideal of a confident, athletic woman was catching on also. Women had been in the workplace since the 1820s, and even more so with the expansion of office work after the Civil War. They were attending college in greater numbers, and they were no longer expected only to be retiring homemakers. Young women took up bicycling, tennis, and canoeing, and they began to sail in the new one-design boats, which required more skill than strength. Caroline Dabney won the Buzzards Bay 15 class championship in 1904 in *Fiddler* (now in Mystic Seaport's collection), and soon boats of that size were being advertised as "ideal for a boy or girl to learn to sail in." Marblehead sailors agreed, believing that "children are never too young to learn to love the water and to handle boats," as *The Rudder* noted in 1920.

Among those believers was 36-year-old Herbert E. Yerxa of Boston. Yerxa had given up his ambition to be a boatbuilder at age 21, when he joined his father's wholesale grocery firm, Cobb, Bates & Yerxa, as clerk (later president). A member of the Corinthian Yacht Club since the age of 20, Yerxa had also joined the Eastern Yacht Club. His wife Ethel shared his enthusiasm for boating, often acting as crew when they raced. Yerxa reportedly wanted a boat for their 12-year-old daughter.

In 1912 the Eastern and Corinthian Yacht Clubs introduced their new one-design knockabout classes. Designed by Edwin Boardman, the Eastern class was 17 feet on the waterline; after it was sold a few years later, the fleet would become the now-famous Northeast Harbor A Class. Designed by the newly independent young naval architect John Alden as his first one-design commission, the four original boats of the Corinthian class were 15 feet on the waterline. "It is gratifying to see the growth of one-design classes for racing and afternoon sailing," noted *Yachting* when describing the new 15-footers. "Nothing keeps alive interest in a club as competition in boats of this size. Practically all leading clubs are building new one-design classes this year."

Yerxa might have taken one of the Corinthian 15s, but instead he purchased a slightly different design. The boat was built that same year of 1912 by the highly regarded boatbuilder George W. Shiverick of Kingston, Massachusetts, who had been building knock-



In this shop along the Jones River in Kingston, Massachusetts, George Shiverick built many one-design and one-off sailboats, including Vireo, *between about 1895 and 1941. (Mystic Seaport, 1975.384.17)*

abouts, small one-designs, and other pleasure boats there since the mid-1890s. With Yerxa's passion for boatbuilding and Shiverick's skill at design and construction, the boat's design likely represented a collaboration between the two men. Yerxa's boat matched the Corinthian 15s in 15-foot waterline length and 4-foot draft. But, at 25 feet five inches overall, she had five inches more of overall length. With more flare to her topsides, her seven-foot beam was 11 inches wider than the 15s. While her bow overhang was a bit flatter in section, for buoyancy, her shape below the waterline was finer, with shapelier keel and a graceful hollow to her garboards. Like the 15s, she continued the gaff-rigged knockabout tradition that had become so popular among one-design classes. Her handsome long bow and overhanging stern



John Alden sent Roosevelt this photograph of Vireo *under sail in a good breeze at Marblehead. Sailing off the wind with reefed mainsail and small storm jib, she approaches her hull speed. It appears that Herbert Yerxa is at the tiller, with his wife forward and perhaps one of their children to leeward. (NPx 59-214, courtesy Franklin D. Roosevelt Library, Hyde Park, New York)*



The picture of contentment, Franklin Roosevelt steers Vireo. *His crew includes* (from left) *daughter Anna, son James, two boys identified as family friends, possibly the children's governess, and Eleanor Roosevelt's cousin Henry Parish. (Courtesy Franklin D. Roosevelt Library, Hyde Park, New York)*



With the cockpit full of family and friends, Franklin Roosevelt sails Vireo *in Cobscook Bay, 27 July 1920. The four bands of reef points on the mainsail make her suitable to sail even in strong winds. (NPx 77-94(44), courtesy Franklin D. Roosevelt Library, Hyde Park, New York)*

gave her increased waterline length, and speed, when heeled over. Her lead keel made her safe from capsize, and two watertight bulkheads made her virtually unsinkable. Based on the price of the Corinthian 15s, she would have cost about $600. Yerxa named her *Vireo.*

Although Corinthian Yacht Club yearbooks contain no record of her racing, *Vireo* had the reputation of being the "fastest knockabout of her overall length around Marblehead. . . . Very stiff and able," an "ideal single hander," according to John Alden. Maybe she showed up the Corinthian 15s, for the entire class was offered for sale, unsuccessfully, in 1913. Yerxa kept *Vireo* through the 'teens, but by 1920 his daughter and son were outgrowing her. He listed the boat with John Alden, who supplemented his income as a naval architect by selling yachts.

Vireo had a new set of sails, and Yerxa was asking $850, but Alden thought he might accept $600. Roosevelt hoped to pay less than $700 for a boat, and that is exactly what he paid for *Vireo,* in commission and ready to sail. From initial inquiry to sale, the deal took just eight days. However, between his navy and political travels, Roosevelt did not send payment for the boat until 23 July, leaving Alden as the guarantor of the $700 even after the boat was taken to Campobello.

Roosevelt planned to travel to Campobello on the destroyer USS *Hatfield,* which was making a training cruise on the New England coast. At the Boston Navy Yard, the *Hatfield* picked up *Vireo,* and on 25 July 1920 Roosevelt steered the destroyer into Passamaquoddy Bay to disembark for Campobello with his new sailboat. Two days after his arrival, photographers recorded him sailing *Vireo* with his children.

Roosevelt hoped to spend several weeks teaching his children to sail and enjoying his time with them, but within ten days he was back in Washington, D.C., to resign as assistant secretary of the navy, having been nominated as vice president on the Democratic Party's Cox-Roosevelt ticket. As the election campaign got underway, he did not return to Campobello again that summer.

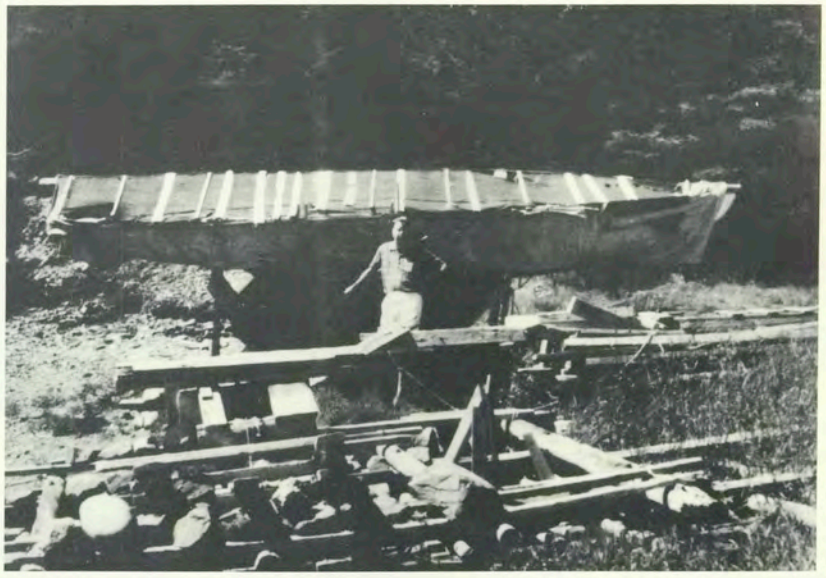
Having lost the election, Roosevelt was relatively free in 1921 and again planned to spend several weeks with his family at Campobello. He sent orders to Captain Franklin Calder, the islander who cared for the family boats, to have *Vireo* varnished and ready to sail by the time the family came to the island early in July. Roosevelt himself arrived on 10 July and had a few days to sail before he rushed back to Washington on 17 July to defend some of his earlier actions in the Navy Department before a Congressional committee.

In his absence, Captain Calder might take the children or the family's house guests for a sail in

Vireo. One afternoon, the children's Swiss governess, Mme. Seline Thiel, fell overboard. Until the children demonstrated that they could use the tidal eddies to return to the mooring even if the wind died, Roosevelt would not permit his children to sail alone. His son James recalled that he expected the children to learn the finer points of sailing by watching their father, and would sometimes explain what he was doing, but he did not coach the children as they sailed. While Elliott preferred horses, like his mother, the other children did learn the basics of sailing from their father.



At her mooring in the bay off Campobello Island in 1920, Vireo *shows off the long bow and stern overhangs that increased her stability and speed. (NPx 77-94(72), courtesy Franklin D. Roosevelt Library, Hyde Park, New York)*



The Roosevelts' youngest son, John, poses with Vireo *in storage on the beach at Campobello in 1958. (Mystic Seaport, 1959.455.1)*

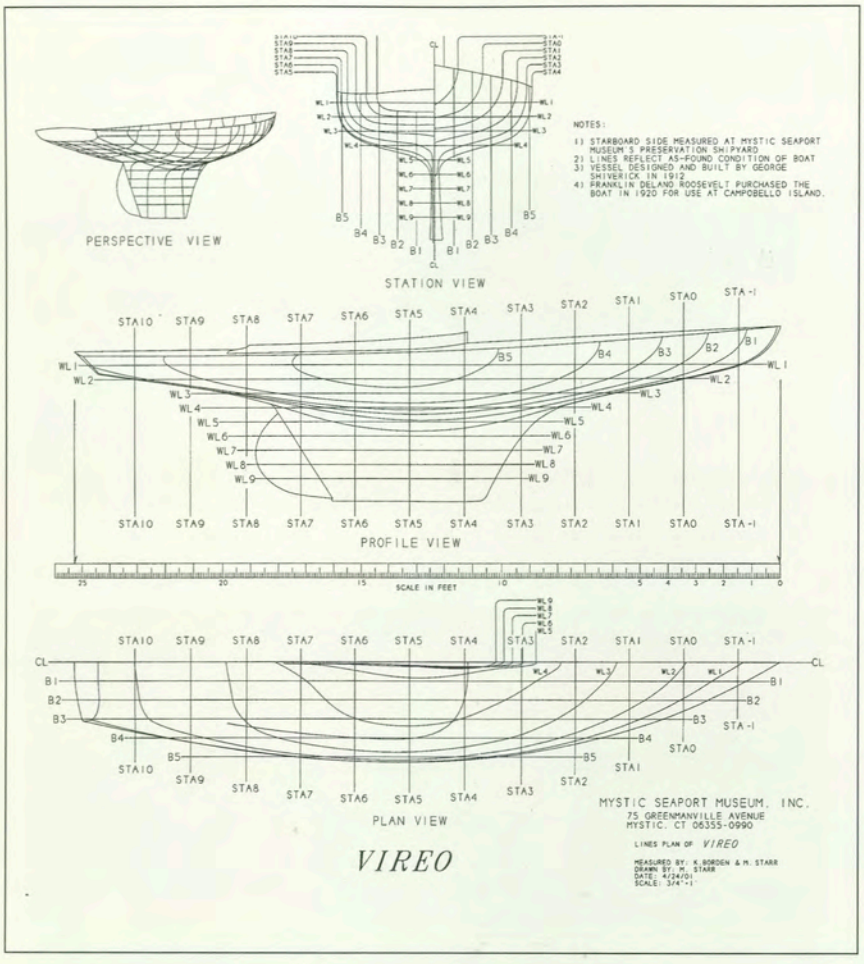
After stressful testimony in the stifling heat of Washington, and other duties, including a tour of Boy Scout facilities in New York, Roosevelt prepared to return to Campobello. He traveled on Van-Lear Black's steam yacht *Sabalo,* taking the helm for many hours to negotiate the fog on the Maine coast. They arrived on 7 August, and after dinner on board the yacht the party watched late into the night as the local herring fishermen emptied the offshore weir. Playing as hard as he worked, Roosevelt was up early the next day to take the Blacks fishing in *Sabalo's* tender. While moving back and forth past the tender's engine to bait his guests' fishhooks, he fell overboard. This dunking has long been associated with the onset of his polio. It may have further weakened his resistance, but it did not cause the disease. He already harbored the polio virus, which he had likely contracted in Washington or among the Boy Scouts.

The Blacks departed the next day, 9 August, and on the tenth Roosevelt took Eleanor, Anna, James, and Elliott for an afternoon sail in *Vireo.* As they sailed among the rocky islands of Cobscook Bay, Roosevelt displayed his local knowledge of ledges and currents by cutting close to the outcroppings. Just off the Cobscook River they noticed a small forest fire on one of the islands. Roosevelt steered *Vireo* in close to the beach, where they anchored and ran ashore to fight the fire. An hour later the sooty group weighed anchor and crossed the bay to the mooring at Campobello. Then Roosevelt led them on a run across the island for a swim, followed by a run home.

Exhausted, achy, and coming down with a fever, Roosevelt took to his bed that evening. He was able to rise briefly the next morning, but it was the last time he would walk unaided, as the polio virus brought him near death and left him paralyzed. Except for brief visits in 1933, 1936, and 1939, he would not come back to Campobello.

Yet, despite his absence, the growing children probably sailed *Vireo* when they traveled to Campobello with their mother in 1925 and 1927. And even she took the helm on occasion, once remarking to a friend, "I never get a chance to sail the boat myself. There are always men around. . . . One has always to let the men do the sailing."

When the Roosevelt family sold the Campobello house to the Hammer



family in 1952, *Vireo* was included in the transaction. She remained unused, and in 1958 the proprietor of the Deerfield House in Wilton, Connecticut, told Mrs. Clifford D. Mallory about the boat. During discussions, Armand Hammer's brother Victor J. Hammer of New York's Hammer Galleries agreed to donate the boat if Mystic Seaport provided transportation. *Vireo* arrived at Mystic Seaport in 1959, and Eleanor Roosevelt visited the boat there in 1961, a year before her death after her last trip to Campobello. *Vireo* remained on exhibit at Mystic Seaport through the 1960s, but she was put into storage when she began to deteriorate from continued exposure to the weather. In June of 2001, spruced up as Captain Calder would have done 80 years earlier, she was put back on display in Mystic Seaport's "Your Grandfather's Boats" exhibit.

Franklin Roosevelt bought *Vireo* with great hope of spending time with his children and teaching them a self-reliant skill. But in the two summers he attempted this, his time on the island was limited to a total of no more than 20 days. While he had precious few hours in the boat, they were a memorable, carefree time spent "to breed real sailors and provide real sport."

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Mystic Seaport Salutes!

Frank Murphy, Volunteer

Nearly everyone knows the adage "Time and Tide Wait for No Man." At Mystic Seaport, however, time waits for Frank Murphy. Every day, seven days a week (one might say "like clockwork"), Frank visits Mystic Seaport to wind the Museum's many clocks, a labor of love he has been diligently carrying out for the past 23 years.

Frank came to Mystic Seaport in 1978 at the request of Senior Curator William N. Peterson, who was looking for someone to take over the task of repairing the many fine eighteenth- and nineteenth-century clocks in the Museum's Nautical Instruments exhibit. Living and working in West Hartford, Frank began making the trip to Mystic and liked the area so much he and his family moved here permanently 18 years ago.

Frank says he became an Interpreter by accident. While he was repairing repairing one of the Museum's oldest clocks, a visitor started asking him questions, and before he knew it he was reciting the history of timekeeping (the earliest timekeepers were the monks whose rhythmic chanting marked the hours), the origin of the word "clock" (from the Old French word *cloche*, meaning bell), and sharing his enthusiasm for, along with his immense store of knowledge about, each of the Museum's timepieces.

He is hard-pressed to say with any certainty how many clocks are in



his care, and he adamantly says he has no one favorite. He enjoys them all and amuses himself by gauging the accuracy of each. He says, for example, that the clock in the Sanger Visitor Reception Center gains 10 seconds each week, and he believes the Joseph Neighbour clock, made in the mid-1700s, is the Museum's oldest currently on exhibit. An older one may be in storage. He can tell where a clock was made from its style, and can repair just about anything. If a part cannot be found for a particular repair job, he will make it, and his skill extends beyond clock parts. He once borrowed one of the Museum's octants, figured out the measurements, and made one out of ebony and brass. He has made banjos, which he does not play, and Celtic harps, which he does. He has also made hammer dulcimers and seven-stringed lyres, and examples of his work have been sent all across the country, from South Carolina to Washington State. He also enjoys a well-deserved reputation as a baker of exceptional cookies, which he happily shares with Museum staff members.

Averaging over 450 hours per year, Frank Murphy is one of Mystic Seaport's most dedicated volunteers. He loves what he does, and has passed his enthusiasm and knowledge along to his grandson, Jim. Now a 24-year-old medical school student, Jim used to accompany Frank on his trips to the Museum, even standing in as an Interpreter at a very young age, helping out his grandfather by responding to visitors' questions.

At a time when Mystic Seaport is working hard to complete the installation of miles and miles of fiber-optic and new telephone cabling to serve as the backbone for the Museum-wide computer and communications network, it is reassuring to know that no amount of high voltage conduits can replace the gentle hands-on touch that Frank Murphy brings as he goes about his daily duties of caring for the Museum's historic timepieces. Distinguished and dapper, Frank has become a fixture at the Museum. Mystic Seaport is proud to salute the man who keeps us ticking.



Atlantic photograph ©Mystic Seaport, Rosenfeld collection, Mystic, CT. In 1905 the yacht *Atlantic* set a racing record of 12 days, 4 hours, 1 minute and 19 seconds.

In 1905, the 185-foot schooner *Atlantic* posted an ocean crossing racing record that has never been equaled. Sailors will have another crack at it when Rolex, the New York Yacht Club and the Royal Yacht Squadron conduct another race from New York to Lizard Point to The Needles, England. Rolex will serve as Official Timekeeper.



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