

# A Classic Inside Job



## All new frames for CIRRUS—with minimal disruption

Text and photographs by Maynard Bray

When the inevitable time came to install new frames and floor timbers in the 1930 Herreshoff Fishers Island 31-footer CIRRUS, it made perfect sense to approach the project in the customary way—from the inside. CIRRUS faced none of the problems encountered on KIRAWAN, whose rigidly installed interior was preserved by the unusual reframing from the outside, as described in the article beginning on page 78. Thanks to her construction method, CIRRUS could be completely reframed with minimal loss of original joinerwork and planking. Except for five lower planks that are single-thickness, she is double-planked with an inner layer of cypress and a lovely outer layer of fine-grained, quarter-sawn Douglas-fir, beautifully fitted. For almost 75 years, those topsides have remained exceptionally smooth and fair, and to sacrifice them to reframing from the outside would have been ludicrous.

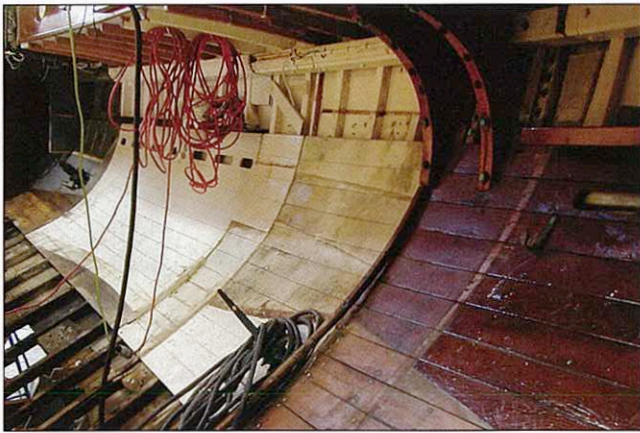
CIRRUS has been an important part of the yachting scene in Brooklin, Maine, ever since 1935, when Alan Bemis brought her here from New York. (See WB No. 34

for more about her and the rest of the Fishers Island 31-footers.) Alan sailed her most afternoons, but he often cruised her as well, always joining up with any Maine-based Cruising Club of America event and occasionally going off on his own or with only his wife, Chapie, as crew. CIRRUS still carried her original low-aspect sloop rig when Alan bought her, but it wasn't long before he increased the height of her foretriangle for better balance and windward performance. Then, in the 1950s, he had Joel White (as Joel's first paying job as a graduate naval architect) draw up a yawl rig. Always alert to ways to save money, Alan asked that the original mast be reused, so Joel added a second set of spreaders, shortened the boom, and designed a new mizzen. As a yawl, CIRRUS became far more user-friendly yet continued to prove herself a consistent winner. Even today, that original hollow, eight-stave mainmast with its spliced-eye standing rigging serves her well.

Near the end of his life, Alan bought a Rozinante named SPRITE and sold CIRRUS to another Brooklin

---

Because her bulkheads—and the rest of the interior joinerwork—landed on and attached to the boat's ceiling, they were easily removed for reuse, as Rick Clifton is doing here.



**Left, top**—You can see here how the various interior items have left their footprints on the ceiling. CIRRUS's fo'c's'le was varnished, while her main cabin was painted white. No attempt was made to reuse the ceiling.

**Left, lower**—Every other frame pair was split out to make way for new ones and to expose the threaded ends of the screw fastenings—which then could be driven out from the inside. Significantly, this enabled reuse of the same holes through the planking. With the access shown here, new back fastenings (the small flathead screws located in the frame bays that go through the inner layer of double-planking and into the outer layer) could be easily driven.



CIRRUS has always been an easy yacht to care for, and Joel White, whose Brooklin Boat Yard stored and maintained the yacht for many years during his lifetime and continues to do so, had this to say about her in a sidebar to the *WoodenBoat* article in 1980, when she reached the half-century mark:

Although she has reached middle age, CIRRUS is perhaps the easiest boat in the yard to keep up.... The fact that CIRRUS hangs together so well after 50 years of service speaks well of Nat Herreshoff's construction techniques.... She is not heavily built, quite the contrary, but in poking around below, one gets an impression of exquisite proportion and a feel for stress under sail, and how that stress is contained by wood and bronze. She would be considered lightly built by most standards, but experience says it must be just right.

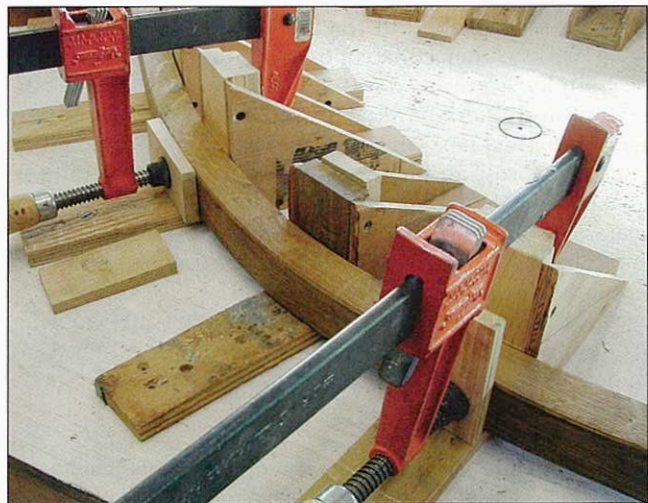
summer resident—Sue Drew—who from childhood had admired this big red yawl. Heeding survey recommendations by Giffy Full of G.W. Full & Associates, Marine Surveyors of Marblehead, Massachusetts, Sue had Brooklin Boat Yard sheathe the well-worn teak deck with plywood and Dynel and do some discreet hull refastening. Sue doesn't sail as often as Alan did—few people do—but whatever CIRRUS has needed, she has consistently received. So when it came to dealing with the frames and floors, there was no hesitation despite the big scope of work and the resultant yard bill. Would that every good wooden boat had as loyal an owner as Sue Drew!

Not many wooden boats get to see the three-quarter-century mark without major work; it's a function of age that cannot often be avoided. But in CIRRUS's defense, the work described here proved to be a good deal less than with most boats of her age. Partly this is because of consistently good care—like inside storage off-season and being in the hands of a knowledgeable boatyard. An equally important element is the way she was originally designed and built. Twenty-year life spans were the norm back in 1930, and a 50-year-old boat was rare. Either a yacht would go out of style or she'd go to pieces from use and abuse. CIRRUS and certain of her 14 sister Fishers Island 31s were exceptions, as at least half of them survive to this day.

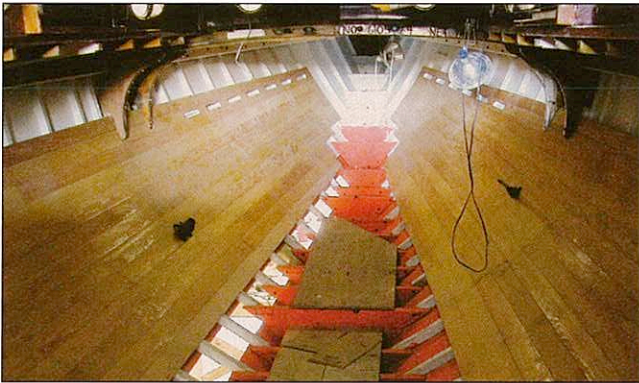
It's rarely broken frames that cause a Herreshoff-built boat to require new ones; instead, it's usually the need to drive in a third set of screw plank fastenings. By then, the frames simply don't have enough meat left, and another series of counterbored holes would leave the planking perforated—presuming that the existing screws were too far gone (as they usually are) to be backed out.

Beyond these considerations, CIRRUS was built with floor-to-frame bolts of galvanized steel that had rusted away and in the process had ruined the surrounding wood. This is a common problem with Herreshoff Manufacturing Co. boats of the 1930s Great Depression era; Herreshoff's earlier craft were given longer-lasting copper or bronze in these critical locations.

Separating the ballast keel and deadwood from the



**Measurements for each new pair of frames were taken from the hull, but frames were prebent on the bending table shown here. They were given sufficient overbend to accommodate the springback that inevitably occurs as the clamps are removed.**



*Left, top*—The forward portion of CIRRUS's timber keel was judged okay, but not so with the aft portion, which required renewal. Like the original, this piece of oak had to be steamed and bent into a curve to fit against the floor timbers. In lieu of a steambox, the timber has been bagged with plastic (which shows here) and a steam hose inserted. As the wood became sufficiently limber, the piece was clamped into position. As with the frames, the keel timber has been somewhat overbent—accomplished in this instance by means of blocks sandwiched between keel and floors, and near the midpoint of the bend, as shown. *Left, lower*—New ceiling, in strakes matching the originals in cross section and glue-scarfed to match them in length, was sprung in and fastened after the framing was completed. The photo shows the terminus of the ceiling forward. Aft, Herreshoff had ceiled CIRRUS only as far as the cabin bulkhead, and that's where the new ceiling ended as well. The few frames aft of the ceiling's end were fitted with new lower portions. All the floor timbers from stem to stern, however, were renewed.


hull—the first step in the process—proved rather spectacular and when done made CIRRUS look like a shallow centerboarder. Having a Travelift at hand to hoist up the hull helped immeasurably, and that took only a half hour or so. The preparation, however, although not difficult, was more involved. The nuts had to be loosened and removed from the keelbolts, and the flush bronze straps that helped keep the lead ballast keel secured to the hull also had to be cast off. But because the ballast keelbolts were bronze, their nuts came free easily; likewise with the straps. Then, before calling in the Travelift, the hull was coaxed slightly away from the ballast with wooden wedges.

By gutting the boat and installing new frames from the inside, the existing screw holes in the planking could be reused; it would only be a matter of splitting out the old frames. This was done by sawing through the frames with a circular saw set shy of the frame's molded depth, followed by splitting the wood with a chisel to expose the screws, which could then be eased out to make way for laying in the new frame. All of this was done from inside the hull. Furthermore, the new steam-bent frames were brought inside through the gap left by the removal of the garboards and first and second broadstrakes; therefore the sheerstrakes, covering boards, deck, and sheer clamp remained undisturbed.

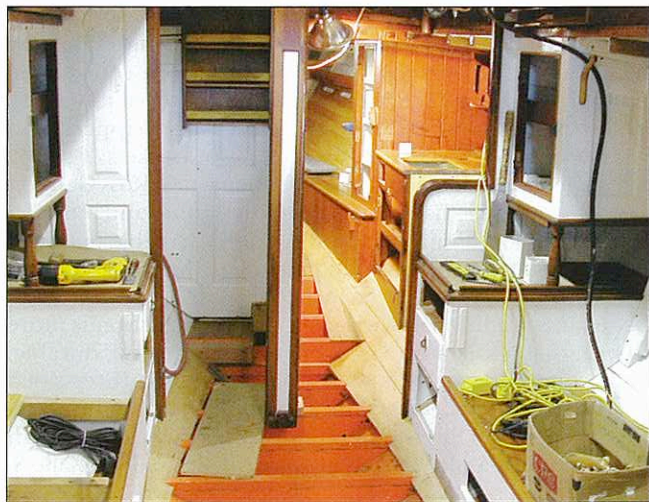
Gutting out the interior was really a piece of cake in CIRRUS. She had not been cluttered with elaborate system upgrades with the attendant tangle of new wiring and plumbing lines. The all-original bulkheads,

partitions, and cabinetry all landed on the ceiling, to which they were only lightly fastened. Herreshoff didn't use structural bulkheads like the boats of more recent vintage. The company built its hulls upside down, and one of the first operations after turning them upright was to install the ceiling—or inner planking. Only the ceiling had to be sacrificed to reframe CIRRUS, and it came out easily. Because it consisted of uniform-width strakes that ran the full length of the living spaces, milling out, fitting, and fastening a new bellyful of ceiling didn't take a great deal of time, either. After the new ceiling was in place, all of the original interior joinerwork was reinstalled.

The yard, with team leader Peter Chase working with Rick Clifton and Paul Laudeman, consumed a little more than 2,500 man-hours with the structural work and caulking. The annual painting and varnishing took longer than usual because of the new ceiling and because the topsides had to be stripped and refinished. But all this work took place over a single winter, so summertime use of CIRRUS didn't have to be the least bit curtailed.

With this work completed, I'd wager that CIRRUS is well ready for her next 75 years! 

*Maynard Bray is a contributing editor for WoodenBoat.*



**After some refinishing, the original joinery was reinstalled against the new ceiling.**