22/ The Swan 43

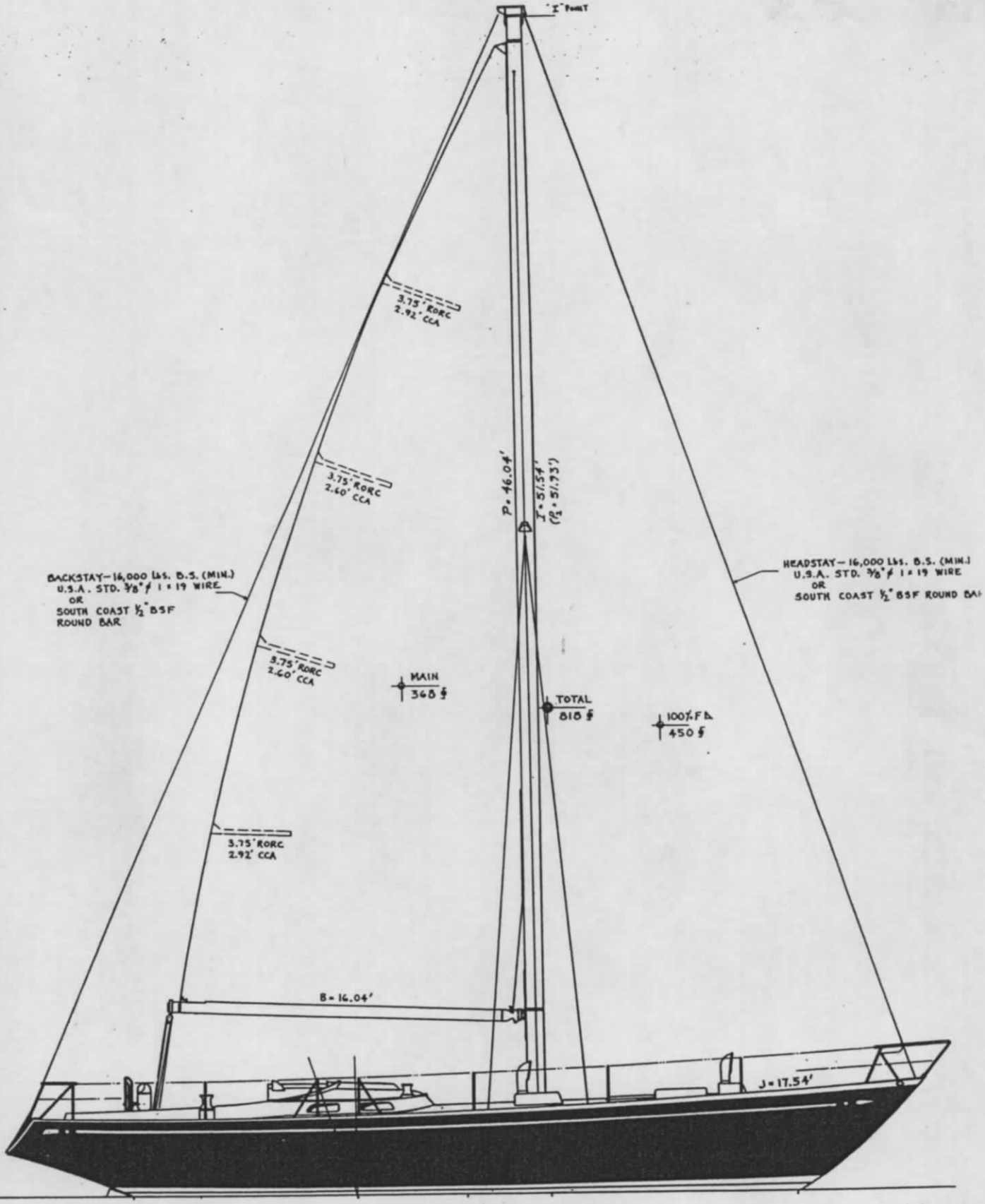
An Adaptable Sloop

Length overall: 43 feet
Length on waterline: 31 feet
Beam: 11 feet 8 inches
Draft: 6 feet 8 inches
Sail area: 807 square feet
Displacement: 19,850 pounds
Designer: Sparkman & Stephens
Year designed: 1968

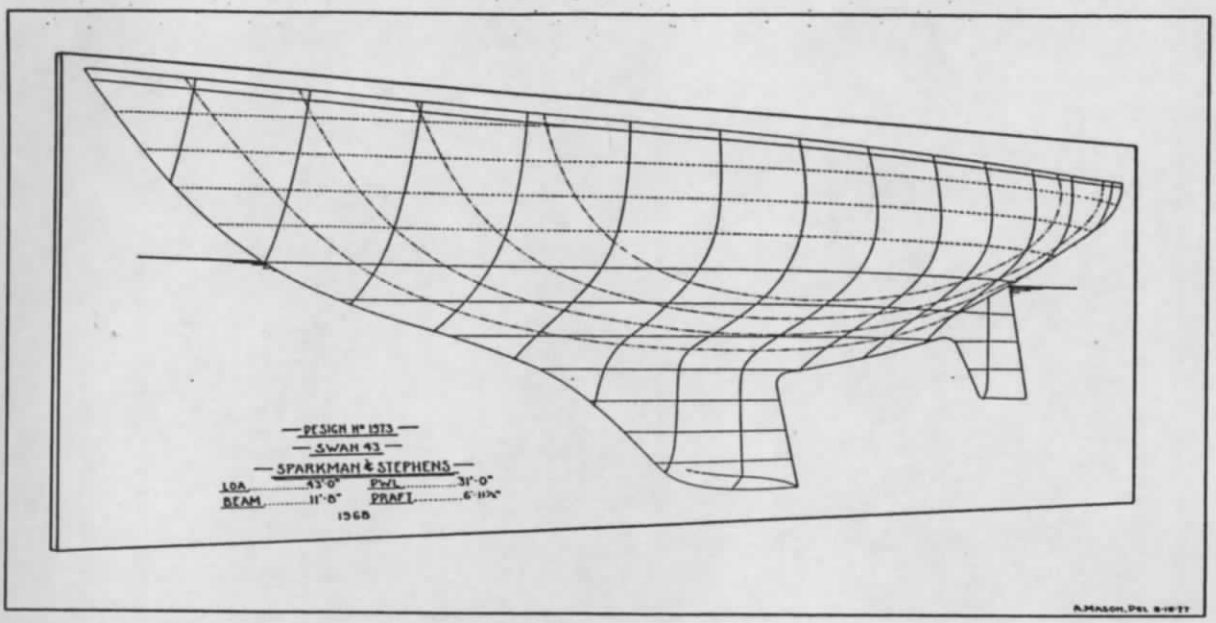
About the last thing I'd want to do would be to sail a stock boat having an IOR configuration to within less than 10 degrees of the North Pole. But if I were determined to attempt this feat in such a boat, the one I most probably would choose would be a Swan 43. This is the boat that carried E. Newbold Smith to the far north in 1976 and earned for him the Blue Water Medal awarded by the Cruising Club of America.

Smith's boat, appropriately named *Reindeer,* sailed from Newport, Rhode Island, to Newfoundland; then to Iceland and Norway via the Faeroes; and finally to Moffen Island off the northern coast of Spitsbergen, a point closer to the pole than any other American yacht had yet ventured. The return route passed through the notoriously stormy Denmark Straits to the ice-filled waters of southern Greenland. Although *Reindeer* was fortunate not to experience exceedingly bad weather in the Denmark Straits, she withstood some contact with ice, and underwent a grounding and inadvertent careening to a heeling angle of 65 degrees in Prins Christians Sund, Greenland. Early in the voyage, she was given a dusting by four full gales but was only obliged to heave to for seven hours. At any rate, *Reindeer* was well tested, and she came through her rugged experiences with flying colors.

Actually, the Swan 43 should not be considered a true International Offshore Rule boat. I only said she had an IOR configuration, and at one time she did extremely well racing under that rule. She made her debut just before the advent of the IOR, but her designer is Olin Stephens, the rule's principal architect, who had some inkling of the kind of boat that would be well treated by the rule when the 43's lines were drawn. IOR type or not, though, the Swan 43 is a moderate boat with many wholesome features as compared with many of the latest IOR boats. For example, she has a relatively full bow, a bit of sheer with some freeboard forward, slackish bilges, moderate beam, some overhang aft for reserve buoyancy, and a rig that is not exceedingly tall. Although the keel is short, it has a raked leading edge to lessen damage from con-

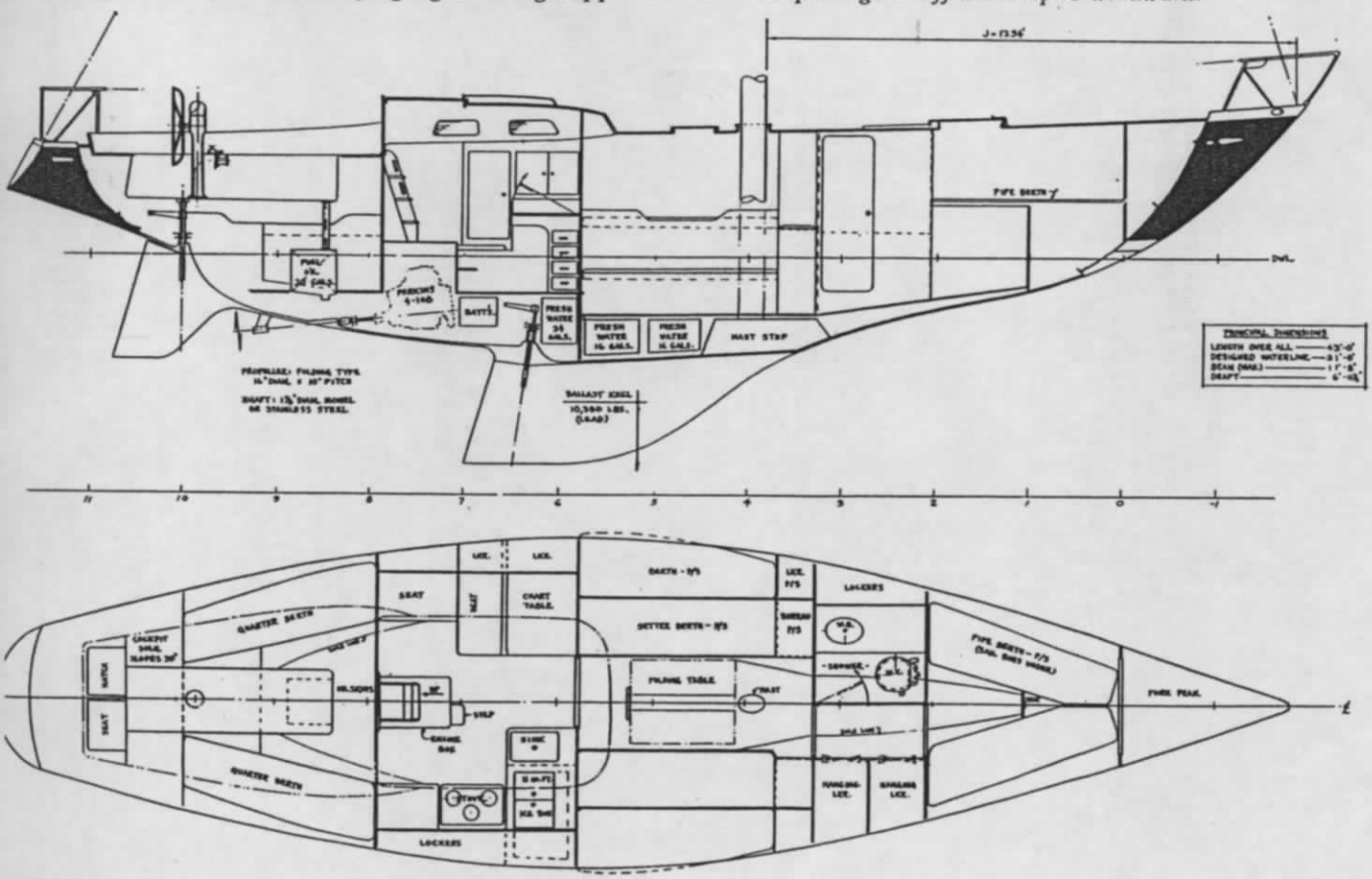


The aspect ratio of slightly less than 3 to 1 for the mainsail seems just about right for a boat like the Swan 43, which has good stability and is used for racing as well as cruising.



This perspective drawing of the Swan 43 shows her V'd sections abaft the keel, wide beam just above the LWL, and tumblehome amidships.

The accommodations of the Swan 43 offer plenty of bunks on the low side and also, of course, on the high side when it is necessary to satisfy the whims of a gung-ho racing skipper who insists on putting the off watch up to windward.



tact with flotsam, and the boat has rather deep V'd sections abaft the keel and a skeg to help provide directional stability.

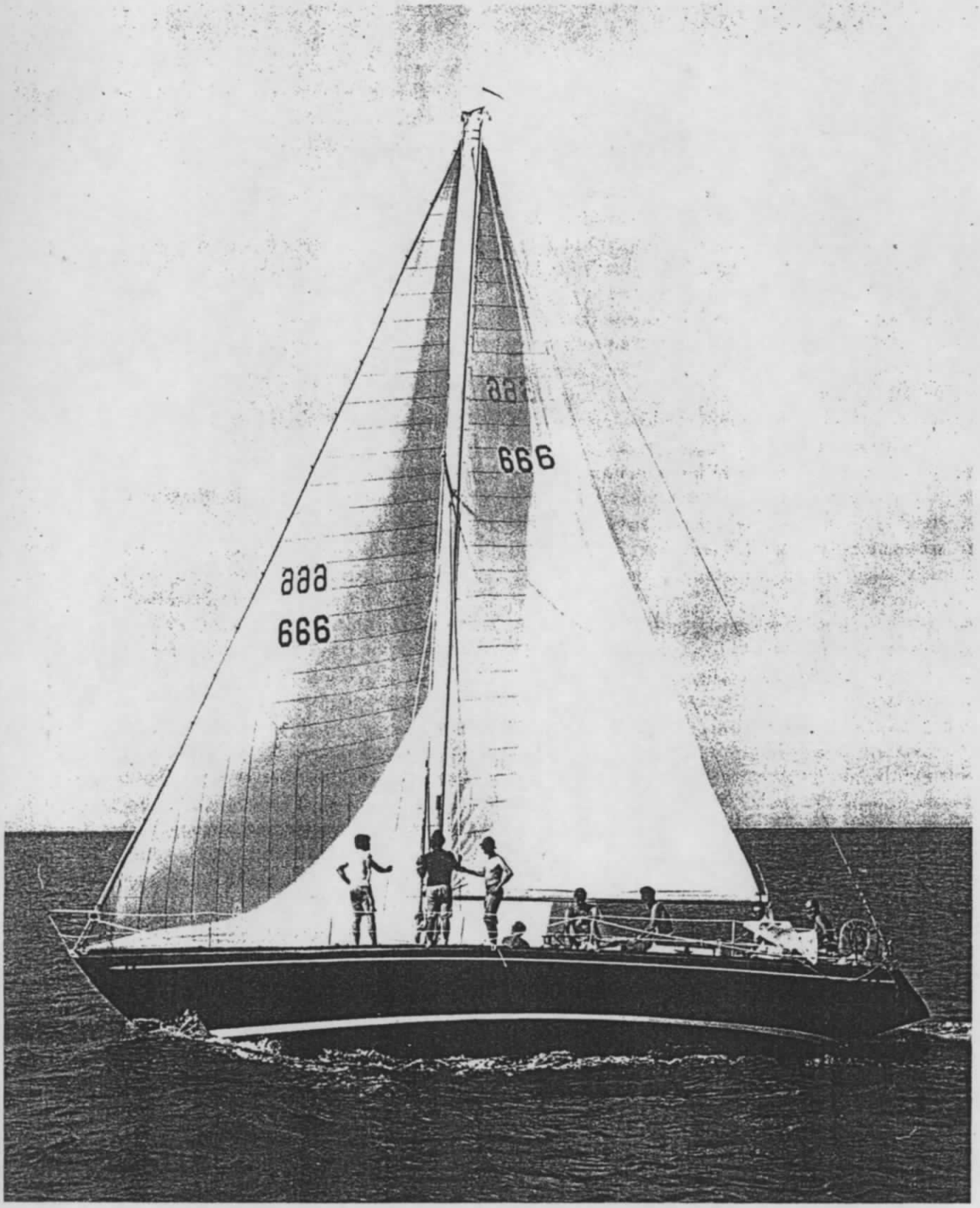
Furthermore, the Swan 43, sold as the Palmer Johnson 43 in America, is exceptionally well built by Nautor Ky of Finland. Nautor has a reputation for tremendous pride in craftsmanship, and the company is extremely anxious to please. In a *Yachting* magazine article about Nautor (November 1974) it was written that Rod Stephens was inspecting the plug for the deck mold of an early Swan design, and he was not convinced that the winch pads were in the best possible location. Within several hours, the pads were cut off and relocated, whereas another builder had refused to perform a comparable relocation job because "it would cost thousands." The Swan hulls are built of fiberglass to meet or exceed Lloyd's standards, and for the most part they are fitted with extensive stiffeners that are quite often foam-filled to provide great strength and rigidity without excessive weight. As one might expect, the wood finish and joinerwork are superb. The 43's cabin sole is made of teak and holly, the cabinets are of teak and exotic koto wood, while the deck is teak notched into a king plank and laid over fiberglass.

An unusual feature shown on the plans of the Swan 43 is the trim tab at the trailing edge of the keel. This device is similar to a flap on an airplane wing, and its main function is to enhance the lift characteristics of the keel and thus improve windward ability. Lift is improved because the tab can increase the angle of attack at the keel's after edge, and it will add some camber so that the water flow will speed up and lower the pressure on the keel's windward side. The trim tab also can correct helm balance, especially on a reach when the sails' center of thrust is far outboard of the hull's center of resistance, creating a long moment arm that tends to turn the boat into the wind. Some designers feel that using the tab to correct for balance is inadvisable, because it costs too much in drag, yet it can relieve the helm when cruising. Rod Stephens told me that he thinks the trim tab is an unnecessary complication, but on the other hand, he concedes that it might be handy for emergency steering, since the tab is controlled by a wheel next to the main steering wheel. Most of the tabs are now fixed in place so they can never be used, primarily because racing skippers don't think the tabs are worth their cost in rating and complication, and when this is the case, a rudder deeper than the original is recommended.

There is no doubt that Swan 43s and PJ 43s are fast. Their victories have included class wins in such prestigious events as the Bermuda Race, Chicago-Mackinac, Annapolis-Newport, and Marblehead-Halifax Races. Furthermore, these boats have been used in the Admiral's Cup series, the well-known international team races for offshore boats.

Sailing across the Atlantic from the Bahamas to England for the Admiral's Cup races, *Firebrand II,* a PJ 43, ran into extremely heavy weather in the notorious Bermuda Triangle. For more than two days she encountered gale force winds with gusts higher than 60 knots; yet her crew never felt obliged to heave to. Part of the time they ran off under reduced sail at speeds often exceeding 10 knots, and once they were pooped by a huge sea. It not only filled the cockpit, but torrents of water cascaded down the companionway, despite the fact that the boat has a high bridge deck. No real damage was inflicted during the lengthy gale.

Windward performance of the boat is unquestionably excellent, yet this type of hull with its moderately narrow V'd sections aft has been criticized by at least one leading designer as not having the best form for running off in fresh winds. Compromises, of course, are always necessary, and it is true that the Swan 43 may give up a little off-the-wind ability in exchange for excellence on a beat. Nevertheless, the experience of *Firebrand II* shows the boat is surprisingly manageable downwind even when scudding before a heavy gale. The moderate bustle helps tame the stern wave, and it adds



The go-anywhere Reindeer *after finishing a Bermuda Race. Her retroussee stern is much more handsome than many, because there is some overhang aft and the slope of the transom is not extreme. (Bermuda News Bureau)*

some buoyancy aft, which is helpful to the downwind performance of boats with fine sterns.

I like the height of the rig as shown in the accompanying sail plan. Unlike many of the most modern IOR boats, the original Swan and PJ 43s don't have extremely tall rigs, which can often cause tenderness and handling problems, yet there is sufficient height for power in light airs and efficiency to windward. The mainsail has an aspect ratio of approximately three to one, and it seems to me this is quite appropriate for a stiff racing-cruiser of this size. There is sufficient luff length to provide high lift, and the boom is sufficiently short to allow an ample roach without its fouling the backstay; yet the boom is long enough to allow a mainsail foot length that will balance the spinnaker on a run reasonably well and thus obviate any real need to set a blooper. Another argument against extremely high aspect ratio sails is that they are difficult to make, and they are not easy to control in terms of achieving optimal shape for all conditions. The largest headsails are not easy for a small crew to handle, but the boat is sufficiently smart that she can be sailed quite effectively with smaller jibs.

There are plenty of bunks in the Swan and PJ 43s. With two pipe berths forward, two pilot berths and two settee berths in the main cabin, a quarter berth on the port side aft, and an optional quarter berth to starboard, a good-size crew can sleep comfortably under almost any condition. Many boating writers, including myself, have criticized boat producers for trying to cram an inordinate number of bunks into a small hull. However, it makes sense for an offshore boat to have ample berths aft and on both sides, because it is safer and more comfortable to sleep on the leeward side and as close as possible to the boat's pitching axis when under sail at sea.

The cabin trunk is very short, which prohibits trunk windows in the main cabin, but plenty of light is provided by numerous deck prisms. As is customary on S&S yachts, there are a lot of hatches and Dorade vents to provide fresh air below, but surprisingly, the accompanying plans don't show a vent from the head. Comfort and convenience features include a hot and cold freshwater pressure system, a shower in the head, a heating stove in the main cabin, and a large chart table with navigator's seat. There is a splendid galley with deep stainless steel sink, an ice box of approximately 11 cubic feet, and a three-burner stove with oven. Lockers abound, and low ones that could be wet by bilge water are watertight.

Not long ago I saw *Reindeer* at a Cruising Club of America get-together on the Chesapeake. During a race prior to the rendezvous, she showed her heels to some fine ocean racers, and she turned out to be the overall winner. I could not help but admire this handsome vessel that had previously sailed to within 45 miles of the polar cap. She seemed remarkably adaptable to any environment—from the warm, calm waters of the Chesapeake to the hostile, ice-packed seas of the far north.