

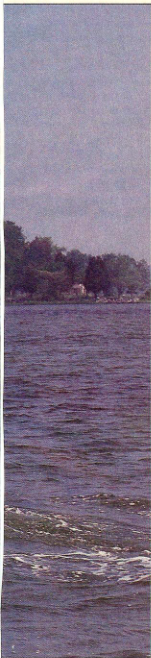
A Lineage of

Ed Cutts strives

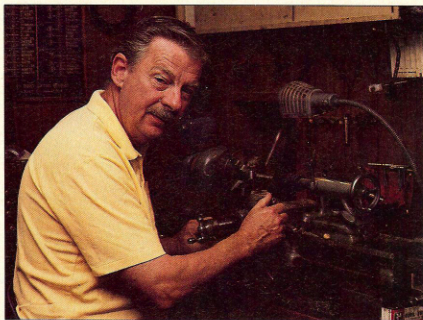


Craftsmanship

for innovations that will help wooden boats endure



With mentors such as L. Francis Herreshoff and the master builders of the Nevins Yacht Yard, Ed Cutts (above) has sought to carry on the best of traditional ideas in his boats, while seeking to develop new approaches that will lead the way for the future of wooden boat building. The 23' sloop CYGNET (left) shows all of these capabilities.



by Winston Groom

Photographs by Benjamin Mendlowitz

Clean lines, durability, ease of handling, and impeccable craftsmanship are the unwavering principles of Edmund A. Cutts, a 60-year-old former Long Islander who operates the Cutts & Case boatyard in Oxford, Maryland. During the past 45 years, he has built a marvelous assortment of watercraft—including some 40 boats of his own design, each a masterpiece of uniqueness in traditional wood construction. Ed Cutts has also developed an array of new building methods that he is convinced will, when combined with sound craftsmanship, permit wooden boats to “outlast anything in fiberglass that’s on the water today.”

For example, Cutts has introduced a new technique of hull construction that he believes can revolutionize the craft of wooden boat building. He calls it the Cutts Patent Method. Basically, it is this: A simple set of ordinate molds is made to the inside of the planking. An inner keel structure and transom are placed on the molds, as in any other boat with keelson construction, but here the similarities end. The planking is done in two layers, both running longitudinally, and the inner layer being thicker than the outer. After the first, or inner layer is on, a small

groove is vein-routed athwartships around the planking from sheer to sheer a few inches apart. Into this system of grooves specially woven, epoxy-saturated Kevlar cord is installed. The second layer of planking is then glued over the first, sealing the Kevlar in between; then the molds are removed, leaving a monocoque shell.

Cutts says the method is by far stronger, faster, cheaper, and cleaner than any of the traditional ways of building, yielding boats that are

lighter, more beautiful, and easier to maintain. He has patented it, and used it on everything from a 13' rowing dinghy to a 65' motoryacht now under construction in his yard.

"In my opinion," Cutts says, "wooden boats built in this fashion will outlast and outperform any fiberglass- or metal-hulled boat. There's more room inside, because there are no frames to take up space, no bungs to work loose and sap wood strength, no electrolysis problems, and a single

cord of this Kevlar is strong enough to hoist the biggest Cadillac automobile.

"What's more, it saves a bundle on all that \$60-a-gallon epoxy—most of which winds up, if not inhaled, as dust on the floor after grinding. Repairs are easily made by cutting to the cords on both sides of a fracture and graving in feathered pieces—with no strength loss."

As he describes all this, Cutts becomes visibly excited—as any inventor might who has just seen his idea made workable. But more than this, perhaps, Cutts's enthusiasm is heightened by an absolute passion for boats, and a genealogical association with the sea that reaches back more than three centuries.

"The Cutts family owned the first boatyard in America—in what is now Kittery, Maine, near Cutts Island, in 1646," he says. "My great-uncle was a skipper for the White Star Line, and my father was Commodore of the Yonkers Yacht Club in 1909." (In 1985, Cutts himself was Commodore of the Classic Yacht Club of America.)

"I believe that I was born into this world to build boats," he says, "wooden boats."

Cutts first entered the boatbuilding trade when, at the age of 11, he and a friend attempted the design and construction of a tiny yacht in the cellar of his home in a small Long Island town. It was probably Ed's least successful undertaking.

"We got through framing it up," he says, "but had nothing to plank it with. It was during the Depression, and nobody had any money; but back then there was a weekly 'Junk Day,' when people brought all of their junk to a collection pile. All we could find in the pile for planking material was a roll of linoleum—with huge, red dahlias on it. Flowers on our boat, not bad at all. We put the finished boat onto the handlebars of a bicycle and walked it eight miles to Jamaica Bay.

"We'd made a paddle from old Ping-Pong paddles, and my pal, Rudy Klingbile, took the boat out for a cruise while I watched from shore. I was amazed at the boat's speed as Rudy came toward me against the tide; he looked like he was really flying. Then I realized he wasn't in the boat at all—he had stepped right through the linoleum and was wearing the boat like a skirt, walking along the



In the yard's 60 years of existence, no one has ever been laid off. Although some of the crew are quite young, most have been with the yard for more than a decade, and two have worked there for 46 years—unusual facts for these days.

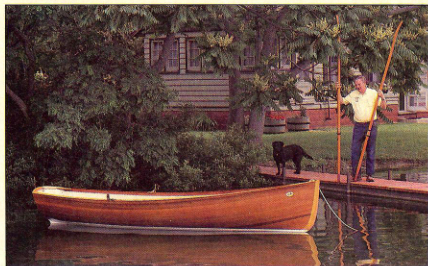
bottom back toward shore!"

While this experience might have been enough to dampen the enthusiasm of some would-be boatbuilders, it only strengthened Cutts's resolve, and at the age of 15 he entered New York's Maritime Vocational School, to learn the boatbuilding trade. He had only been there a year when World War II broke out, so he signed on as an apprentice at the Brooklyn Navy Yard, where he was put to work with the crew building the battleship IOWA. (More than 40 years later, the opening ceremonies for the Statue of Liberty's 100th anniversary would be performed aboard IOWA.)

As soon as he came of age, Cutts joined the Navy, and because of his machinist training was sent to aircraft ordnance school to be an aerial gunsmith, and then, off to the South Pacific. When the war was over, "you couldn't buy a job in a shipyard"—so, in need of work, he signed on with a typesetting shop. "You learn from everything. Typesetting taught me layout and balance—but always I longed to get back into the shipyards again."

By this time, Cutts was keeping company with Maggie, his wife-to-be, and was beginning to design his own boats on paper and in wood half models. One weekend, he and Maggie went to the Grand Central Palace Motor-Boat Show in New York, and he noticed that L. Francis Herreshoff's "Common Sense" magazine articles had just been published in two volumes, *The Common Sense of Yacht Design*. A week later Maggie gave those books to Ed, and they were to have a lasting impact on their lives. "Maggie knew I really wanted those books, and she spent her week's pay to get them for me. She's still the same today, always my helper, always encouraging."

"One day, I knocked at the old castle door in Marblehead and met Mr. Herreshoff for the first time in what would become a long and friendly acquaintanceship that would last some 28 years. You can imagine that we had some long conversations over that span of time. He examined the work I was doing, instructing in a gentle, subtle way—always giving encouragement, always taking time to show me interesting things and ways that he found best in doing his own work. He was a very generous man whose stories still stay on my mind. Eventually, he told me that the work and the mod-



The Cutts Patent Method

"I've constructed and repaired yachts in every accepted and conceivable way except with concrete," says Ed Cutts, "and God knows I hope I never have to do that."

But for Cutts the most pleasant method to work with was double planking. "The lumber is stout enough to stand under the plane when edged," he says, "and lies fair over the frames as well. Still, at half the thickness of carvel planking, it is supple enough to take twists nicely. But as to the rest of the hull construction process, the backbone, framing, fastenings, and bungs: not only are they the eventual weaknesses of the boat, but they also bring up its cost and weight—not to mention eating up room on the inside of the boat."

So Cutts set to the task of creating a better way to build a boat. The patented method that he developed, utilizing longitudinal double planking, Kevlar cord, and epoxy, results in a hull

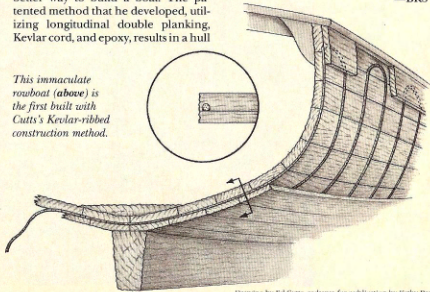
that is light and strong—one, however, in the case of larger boats, that also relies on proper bulkhead installation in key places. Cutts uses the analogy of a wooden barrel to explain: "It has to have the ends in it in order for it to be the perfect monocoque structure that it is."

As for his planking formula: Inner planking is half the total plank thickness, plus half the cord groove depth. For a boat planked a total thickness of $1/2$ ", the inner layer will be $1/8$ " thick; the cord is $1/8$ " in diameter, as is its routed groove, and the outer planking is $1/8$ " thick.

Cutts is writing an instruction manual for his method. More information can be obtained by contacting Cutts & Case, Inc., P.O. Box 9, Oxford, MD 21654.

—BRS

This immaculate rowboat (above) is the first built with Cutts's Kevlar-ribbed construction method.



Drawing by Ed Cutts, redrawn for publication by Kathy Hoy

ing a series of 40' yawls at the time, 14 in all, in two groups. The Owens-Corning people mixed up some of their glass, and we put it on the deck of one of the yawls. Next morning, the whole mess had turned to a dark brown molasses. But they kept coming back and doing tests to improve their product. I began to hate the stuff from the first minute I saw it."

Cutts left Nevins in the late 1950s to go to a small boatyard near Port Washington on Long Island's North Shore. There he was a builder/designer for Thorsten Peterson, and also by this time, his designs had begun to proliferate in magazines such as *The Rudder* and *Motor Boating*. Apprenticed in the legacy of Herreshoff, Cutts remained true to the clean lines and simplicity of his master—as he does to this day. It was also at this time that his work was noticed by retired business executive John Case, with whom he shares a partnership in the present yard. "I had built a 29' sloop," Cutts remembers, "for a man who

owned a car museum out on Long Island. John Case saw it and liked the boat, but had a preference for double-enders that were transom-sterned. I drew a study plan to this configuration, and John immediately placed an order." It was the beginning of a long and pleasant association.

But in the meantime, Cutts was sidetracked from the Long Island yards that were building his boats. After a dispute with one of the yards, he found himself embarking on an entirely new career—one which, had it not been for his fortuitous encounter with John Case, might have deprived the yachting world of future Cutts-designed boats. It was the dead of winter, and with a wife and family to support, Cutts needed a job. He got one at, of all places, the giant Grumman Aircraft plant not far from where he lived.

"I spent two years there in prototyping and tooling for the F-111 Fighter design," Cutts says. "I came up with several methods that allowed for the

transposition of drawn prints onto the contoured surfaces of stretched skins. I also made the checking patterns for the Olympic boats. It was an intriguing two years, but I had orders for more boats and more designs. It was time to go back again and devote a total effort to my own trade."

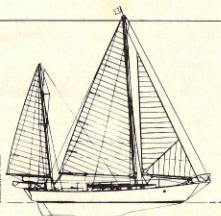
Cutts stayed on at Grumman for another year, but his association with John Case started up again and began to lead to other possibilities.

"In the cellar of my house I would work on my boat designs. John Case would drop over sometimes, and we would talk boatbuilding. Then, one day, he invited me to his place for supper. He lived in this incredible house on Centre Island near Oyster Bay. I was looking at all the wood models and pictures he kept of the boats he had owned, and I said, sort of casually, 'John, you ought to own a boatyard.' He looked at me and said, really seriously, 'You know, Ed, I'd love to own a boatyard, but I don't know how to run one.' So I said, 'Well, John, I sure as hell know how to run one, but I don't have the money to buy one,' and John said, 'Well, I've got the money, so why don't we go into business?'"

And that was how Cutts & Case got started 25 years ago in Oxford.

Today, the yard is outwardly much as it was when the original founder, Ralph Wiley, owned it—red, wooden outbuildings nestled on the banks of Town Creek, just off the Tred Avon River. In late spring the sycamores, maples, and oaks are a pageant of new green, and there is the din of Canada geese and swans feeding in the shallows and marshy sloughs that lead to Chesapeake Bay. In the village of Oxford, tourists wander along the brick sidewalks past stately colonial houses—many built by sea captains—and the widows' walks that overlook the green expanse of the Choptank River to the Bay beyond. At the town dock, beside the restored Robert Morris Inn, the St. Michaels ferry disgorges another load of passengers and cars—the gawkers from Washington and Baltimore on a weekend outing. But out on the Choptank, the true character of this area shows in a panorama of water, sky, and sails. On a sunny spring day, there are dozens of boats—dinghies, class boats, big sloops, yawls, and ketches heeling in the

The interior of SPELL-BOUND features "Wiley" ports that open and close, depending on which way the boat is heeled, and touches of elegance such as the locker doors framing leaded stained-glass panels.



warm Bay breeze. The Choptank, the Tred Avon, the Miles, the Wye, the Chester—this is sailboat heaven.

The Cutts & Case yard has the same air of tradition about it, the smell of sawdust and varnish mingling with the aroma from the brackish water that will soon team with blue crabs and other delicacies of the sea: "Byberry," the home of Ed and Maggie Cutts and the oldest house in Oxford (built in the 17th century), perches neatly on a rise overlooking the boat

slips. It was in this yard that the first Comet—designed by C.L. Johnson and built by Ralph Wiley—was launched in 1933, and it is here, now, on this spring afternoon more than 50 years later that sailors with similar salt eagerly look forward to that first good puff that fills their sails for the new season.

Down on the docks, they are sprucing up boats. Winter covers are off, tack rags wipe down newly sanded varnish, a few engines are purring,

sails are being bent on. In an outside slip, gleaming and ready, sits JEANNE, a classic example of Ed Cutts's handiwork. It took 20,000 man-hours to build this 44' sloop, eight years ago.

The first thing one notices about JEANNE is the vertical-shaft steering wheel, which, while not entirely novel, is something of a Cutts trademark. The idea, he says, is to provide extra room for more people in the cockpit, and at the same time better ease in steering, because the leverage is greater with a flat wheel when the helmsman is seated. Also, a top fits over the wheel, making it into a table while at anchor.

Other innovations are less apparent. For instance, this boat is equipped with "Wiley Ports," gravity-induced-opening and -closing cabin windows that snap open on the weather side of the boat, while those on the lee side snap shut, keeping spray out of the cabin and still allowing fresh airflow below. There is no structural wooden keel to swell or push the garboards. Instead, the planks were laid directly into the lead. But unlike the Herreshoff method, in which the planking was side-fastened into the lead between the floors, the Cutts method is to use white oak strips for the garboard planks, which are edge-fastened into the ballast. On JEANNE and other Cutts boats, the trouble spots have been eliminated and the seam across the garboard remains as perfect as the bottle-smooth planks on her sides. The keelbolts run up the inside of the boat like chainplates that have been inverted and forged from the strap shape into the round of a threaded rod, which passes diagonally through the ballast keel. This prevents swelling changes, crushed floors, and pierced timber, and results in a stable and trouble-free structure in an otherwise difficult area.

As in all of Cutts's yachts, the joinerwork and cabinetry of JEANNE are impeccable, the seams smooth as satin. In this particular yacht, there is a red-leather chair below—an exact replica, Cutts explains, of the chair once owned by Governor Thomas Dewey of New York.

The storage shed at Cutts and Case is to boats as the back lot of Warner Bros. is to movies: Here, in various stages of decay or repair, lies a fascinating collection of traditional yachts and boats built by Herreshoff,



Of REBELLION, the 33-footer the yard built in 1966, Cutts says, "She was so very fast and lovely to sail that we kept her." She was first for four years in a row in the Fred Avon Series of races.

The 44' sloop JEANNE is distinguished by clean, uncluttered decks and a generous cockpit. Typical of the care lavished in the construction of the boat is the horizontal steering wheel. Built by Cutts as a gift to the boat, it was made from a piece of South American alerce (Fitzroya cupressoides), a waxy, dense, soft wood from ancient, slow-growing trees.



Nevins, and other greats. There's a terrific old war canoe, and a 45' classic motor launch owned by the New York Yacht Club, which Cutts is extending by 12'. But the craft that catches Ed's immediate attention is a torn-down 33' cabin launch. On first impression, it seems somewhat nondescript; then Cutts moves to the stern and points at a faded name—FOTO.

FOTO was owned by the famed nautical photographer Morris Rosenfeld, who, until his death 20 years ago, documented a half-century of the heyday of American yachting

from her decks, over 2 million pictures that include the total J-boat pictorial history. When Rosenfeld died, his son wanted to scuttle FOTO at sea in homage to his father, but other family members persuaded him to sell it. FOTO changed hands several times over the years; when Cutts finally located it in Georgia, it was in almost-ruined condition. He rescued it and is in the process of restoring it.

"We do just about anything here," he says, "but our clientele is basically special. I mean, if you own a Rolls Royce, you take it to the Rolls Royce people to be worked on, right? Not to

the neighborhood mechanic's shop."

A stern but respected taskmaster in a yard that sometimes produces only a single boat every year or so, Cutts presides over a crew of 14, most of them cross-skilled in several of the boatbuilding trades. In the yard's 60 years of existence, Cutts proudly points out, "no one has ever been laid off." Most of the crew have been there for nearly a decade, and two men have worked there for 46 years. And no matter how small or large the undertaking, Cutts is quick to point out, everything that goes into the boat except the engine and winches



Launch an Heirloom

The Original Gloucester Rocker is the heirloom alternative to the rocking horse. This patented rocker is numbered and signed on a brass plaque. The Original Gloucester Rocker is handcrafted using the finest wood by New England woodworkers. For ages 1-4. Call or write us at:

Gloucester Rockers Ltd.
811 Boylston Street
Boston, MA 02116
(617)424-0027



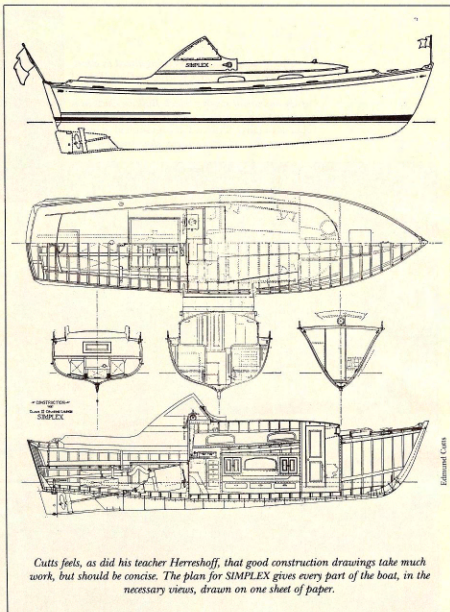
GREAT ENCOURAGEMENT FOR SHIPWRIGHTS!

All gentlemen shipwrights and able-bodied modelists who have a mind to provide for themselves amusement and satisfaction through the traditional craft of ship modeling, an opportunity now offers to acquire, through the minimal cost of two Colonial Dollars (\$2.00), a catalogue of fine and unique ship model kits, plans, books and fittings from the renowned company of Model Shipways located in Bogota in the state of New Jersey.

MAIL THIS COUPON TODAY!

Send \$2.00 for a catalog to:
Model Shipways, Inc. — Dept. W8975
39 West Fort Lee Road, P.O. Box 85
Bogota, N.J. 07603

Name _____
Address _____
City _____
State _____ Zip _____



Cutts feels, as did his teacher Herreshoff, that good construction drawings take much work, but should be concise. The plan for SIMPLEX gives every part of the boat, in the necessary views, drawn on one sheet of paper.

is hand-built right on the premises. "That way, we know it's been done right."

Today, Cutts is followed in the boatbuilding trade by his two sons, Edmund, Jr. and Ron, both of whom still use their great-grandfather's tools; Cutts hopes they'll keep the boatyard going as long as his boats are around—"and that's going to be 100 years or more," he laughs.

What's the strangest boat he's ever been asked to build?

"That's an easy one," says Cutts. "The Navy wanted us to build a nuclear submarine. I got a letter from Annapolis and just glanced at it. There were some diagrams, and they wanted me to build a nuclear sub—I

nearly fell out of my chair! When I read it more carefully, I saw that what they actually wanted was a scaled replica—a 40' model for the midshipmen at the Naval Academy to use in classroom training."

Did he build it?

"No, I didn't. We were working on some other projects then, and we couldn't get to it by the time the Navy wanted it.

"Good work can't be rushed," he says.

Winston Groom is a writer who lives in Point Cedar, Alabama. His recent novel, *Forrest Gump* (Doubleday & Co.: Garden City, NY, 1986), begins, "Let me say this: been a idiot is no box of chocolates."