San Diego Ship Modelers' Guild
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The Ancient, Patient Art of Lofting

How Jack Klein Designed and Built the 89 Frames of His New Model of the *Challenger*

"If you want an exercise in time consumption," said Bob Crawford, Curator of Models for the *Berkeley* museum, at the November Guild meeting, "loft your own frames."

A loft, says the dictionary, is "an unpartitioned upper floor of a warehouse," and the verb "to loft" means to use this large space "to lay out a full-sized working drawing of the lines and contours of a ship's hull." What you want to determine is, in essence, the exact curves of all of a ship's frames.

That, together with building the resulting hull, is what Guild Member Jack Klein has spent the best part of 1998 doing in miniature to create his model of the 1856 naval steam corvette *Challenger*, rebuilt as an exploration ship in 1872. Already a case for the model is awaiting it in the museum's Charting the Seas exhibit.

Jack got his plans for the *Challenger* from The National Maritime Museum in Greenwich, England, and at Harbor Blueprint in San Diego had them reduced to the scale of 3/16th-inch per foot on the real ship. He thus acquired a model-size sheer plan, body plan, and half-breadth or waterline plan – see Diagram A on page 2.

He then turned himself into a skilled draftsman, using a large drawing board set up on the top deck of the *Berkeley* for his miniature loft. For specialized drawing tools, he acquired a Micro-Mart Incra rule (on which the inches and fractions are demarcated by tiny holes only 1/32" apart) and a mechanical pencil with pin-thin lead in black and colors, which when inserted through the ruler holes can mark off, with extreme exactitude, dimensions such as the centerline where the two laminations of a frame are glued together.

Jack's half-breadth plan showed just one side of the ship (the starboard), which exactly suited his needs, for this is a half-hull model. The plan included waterline contours only up to the fifth above the keel. Using the sheer and body plans, plus a set of "ship's curves" (like stretched-out French curves}, Jack drew in the remaining seven waterlines to above the sheerline at the poop and forecastle levels.

Now the hard, intensive work began. The *Challenger* had 89 frames – 65 numbered frames amidships, plus A to L in the bow and M to X in the stern. After calculating the spacing of the frames along the keel, Jack had to draw lines, using a T-square and triangles, from the keel to the maximum breadth. These lines, resembling the section lines on the half-breadth plan shown in Diagram A, marked off the fore and aft faces of the frames and their centerline.

That took more than a month, but it provided at last the information needed to determine the shape of each frame. Jack Xeroxed 89 sheets of copy paper with a

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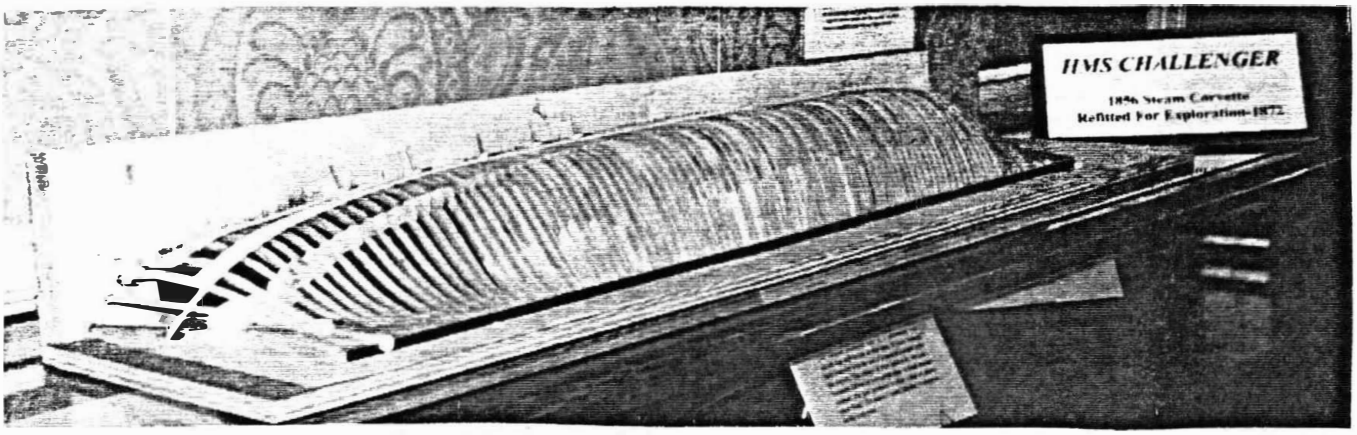


At 240 ft. long and 2,300 tons, the *Challenger* was among the largest wooden ships ever built.

Continued from Page 1

plotting chart like the one shown in Diagram B. The vertical line represents the ship's centerline as seen from fore or aft; the horizontal lines represent the waterlines from the keel up to the sheer.

On each frame on the waterlines plan, Jack measured out from the centerline (the keel) to the lowest – that is, nearest – contour. He transferred that distance to the lowest bar on one of the plotting charts, and marked a "tick." Then he marked the distance to the second contour on the second-lowest bar, and so on up to the twelfth.. Using various ship's curves, he drew a line connecting the ticks, and thus produced the precise shape of the frame.

Jack repeated this procedure 89 times, but these magic lines can't be used, without further work. The inside edge of the frame – showing its width – must be drawn, narrow at the timberhead, wide at the bilge – see Diagram C. An allowance for the thickness of the planking must be subtracted, since the curve represents the outside of the ship. And for construction reasons the timberheads at the top (which support the bulwarks above the deck) should be left long and trimmed later.

The actual frame is a two-layer lamination of wide, thin blanks glued up so that the grain runs generally with the curve and the joints overlap generously – see Diagram D. Jack insists on cherry for this job – hard, strong, cuts cleanly. The plotted design for each frame is then traced onto a jig that reveals how each part of the frame structure should be cut. The parts are then glued end-to-end and the two layers thus produced are laminated to each other to form the rough frame. After the plotting chart is pasted to the blank, it is sawed just outside the lines, leaving a little wood to be sanded off in the fairing process later.

In making the keel, the half-breadth drawing of the frames provided Jack with an exact pattern for its frame notches. He clamped the keel to a construction base, and on the base's back edge fastened a vertical panel with holes for the timberheads cut into it along an arching curve representing the edge of the deck – see the picture on page 1. On this jig it was simple to glue the frame floors to the keel while the back wall supported the timberheads.

When put on display, the *Challenger* will look like a whole-hull model, with planking, gun ports, channels, deadeyes, bowsprit, smokestack, stubs for masts, pilot house, boats and davits.

And what's the story of the *Challenger?* According to information already on display in the museum, she was "a three-masted, square-rigged wooden ship of 2,300 tons. Essentially a sailing vessel, *Challenger* carried a 1,200-horsepower engine for close maneuvers when conducting scientific observations and deploying heavy gear . . ."

"The word 'oceanography' was coined in the late 1860's during efforts to convince the British government to sponsor a scientific voyage to study the sea. The result of these efforts was the *H.M.S. Challenger* mission.

"In this pioneering voyage, researchers dredged the ocean floor, tested the water for variations of temperature and salinity, and began to chart the topography of the world beneath the sea. The *Challenger* expedition was at sea from 1872 to 1876, during which time it circumnavigated the world. When the scientists returned, they published fifty volumes of findings."

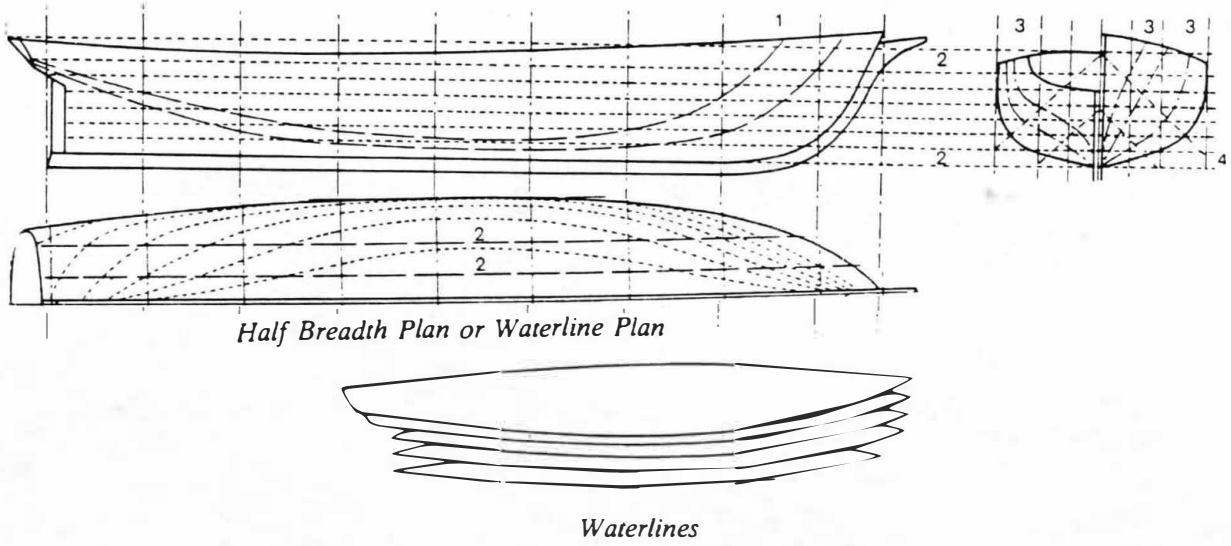


DIAGRAM A Typical ship plans (not *Challenger)* from "Historic Ship Models" by Woldfram zu Mondfeld (Sterling)

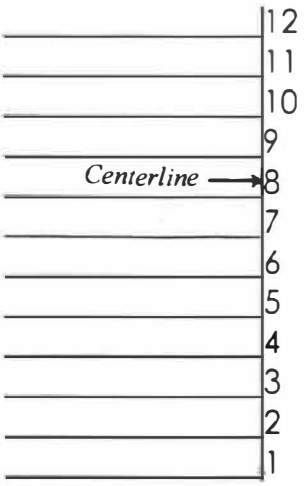


DIAGRAM B
Blank plotting cha

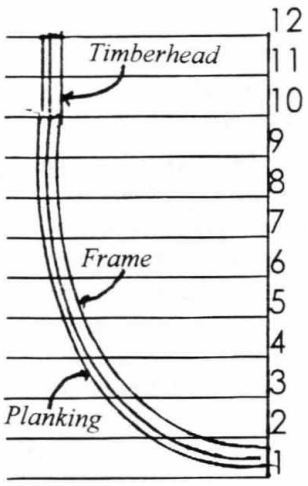


DIAGRAM C
Chart with a typical frame drawn on it

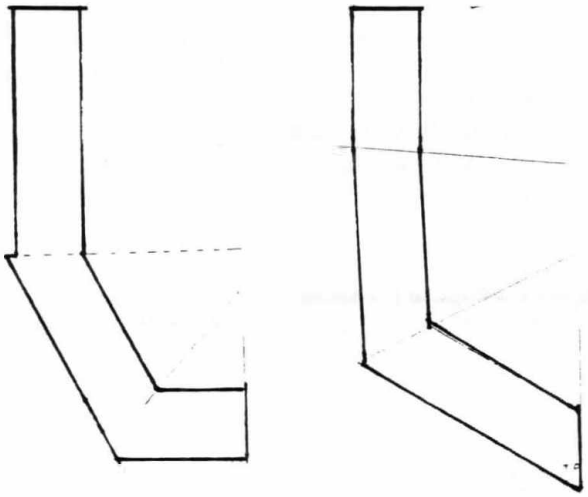
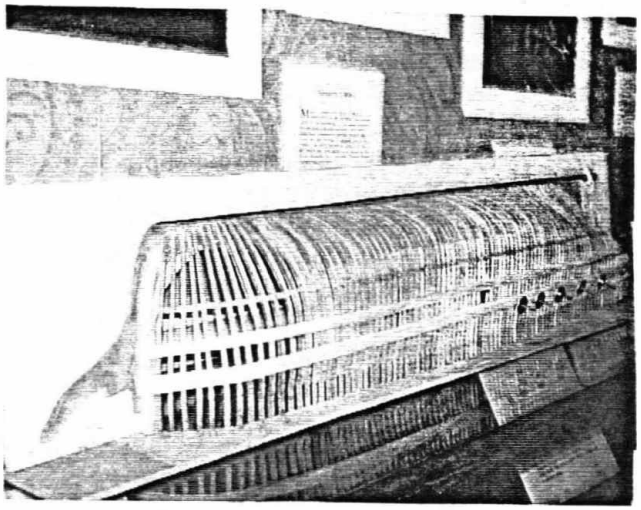


DIAGRAM D Marking cuts on frame stock so that grain runs with curve and joints overlap when the two layers are laminated



The model with keel up

MINUTES OF THE MEETING

Sharp Variety Again a Theme At November's Show-&-Tell

At the November Guild meeting, as at the one in October, the discussion (lacking any other important theme) was dominated by the Show & Tell – and turned out to be engrossing. Again the variety of the models brought in by members was extreme, and they were for the most part strikingly different from the month before.

Take **Bob Crawford's** *Roger Revelle*, which he is building for the Scripps Institution of Oceanography at the University of California at San Diego (where the scientist Roger Revelle was the founding president). The requirements of this ocean-science ship were such that she had to be able to rearrange her deck like a stage set, shifting cranes, bitts, bulwarks, winches, containers and scientific equipment.

To that end, the deck plates are bolted to the beams in a grid pattern two feet apart in each direction. The only thing on the deck that doesn't move around is the crane that moves the other stuff.

The *Revelle* often needs to keep its position despite winds and currents. To make that possible she has no rudder but rather two propellers that operate on "Z" drives and can swivel 360 degrees. Rolling chocks run along the bilges on each side.

Bob's hull, built bread-and-butter on the 1/8"=1' scale, with ¾" poplar lifts, is nearly finished. Scripps provided detailed plans.

Two models of the ever-popular *America*, of America's Cup renown, surfaced at the meeting in vastly different sizes..

One demonstrated **Robert Hewitt's** amazing skill with tiny scales, in this case 1:240, meaning that a ship measuring 134 feet from the tip of the bowsprit to the end of the main boom turned into a model less than six inches long.

You need a magnifying glass to appreciate some of Hewitt's choice details, particularly a carving of *America's* owner John Cox Stevens, a poor sailor, puking over the taffrail as the yacht crossed the Atlantic toward France and England for the historic 1851 race (see Robert's informative article in the November issue of this newsletter). He rigged the model with a flying jib, used (until the jibboom snapped) in the race but not on the transatlantic voyage.

By contrast, your editor, **Bill Forbis,** brought in his big Schooner Yacht *America*, built on the ¼"=1' scale and 33½" from bowsprit tip to boom end.. He used Bluejacket plans, and installed that supplier's beautiful sterneagle carving, but scratchbuilt the rest in order to get experience making built-up frames, with futtocks and floors, thus stretching out the construction time by about

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Sharp Models – and Sharply Different in Their Looks

Continued from Page 3

six months.

He spoke about the magic of the *America's* rigging. The bottom end of the forestay goes through a real sheave mortised into the bowsprit and by way of a tackle to the stem. Pulling on that tackle made *all* of the rigging taut: the forestay itself, the foremast shrouds, the springstay to the mainmast, the forestay to the topmast on the mainmast, the main shrouds, the peak halyards on both gaffs, the vangs, the topping lift of the main boom, and its sheet. (It was akin to raising the masts of a ship in a bottle.)

Jack Klein brought his *Challenger,* like Bob Crawford's a model still under construction. This ship started life in 1852 as a steam corvette (though also rigged with three masts and square sails), and was converted for exploration in 1872. The rebuilders left only two guns and used the space for research and experimentation. The construction of the model was so complex that it requires another story *(see page 1).*

Fred Fraas showed-&-told his *Texaco New Jersey,* one of the T-2 class of 525 turbo-electric ships that were the tanker equivalents of Liberty cargo ships in World War II. She was launched as the *Lake Erie* in June 1944, and took the name of *New Jersey* in 1947.

She was "jumbo-ized" in August 1959 by adding a new midships section that increased her length from 523½ to 573 feet. In 1961 the name was further changed to what it is now. Fred decided that his particular T-2 would be this one because he built it about the time the battleship *New Jersey* was being recommissioned He added the *Texaco* because he found a Texaco logo in a model-railroad store. Bob Crawford interjected that such stores have lots of things that ship modelers can use.

Fred built, on the 1/16th scale, from a Bluejacket kit, which means that the hull is solid. The kit provided guns and paint for a wartime version, but he wanted the peacetime rig that the model has.

One of **Jerry Deschenes'** specialties is models not of ships that do exist but rather of ships that could exist – such as his party boat pictured in the November newsletter. This time he produced the self-designed motor sailor that he fancies he might like to build life-size, 28 feet long, and christened *Moon Glow.*

He could have used bread-and-butter construction but conscientiously built the model plank-on-frame. It's crisply finished with deck houses of basswood and mahogany. The planking is strips of 1/64th-inch plywood. The detailing is sharply brought out by the comfortable scale: 7/8" to the foot.

The general lines came from a double-ender that Jerry saw in *Wooden-Boat,* but the motor sailer is "more whimsical than anything," he says. "I just put things in that I wanted to put in."

In other action at the meeting, which was attended by 17 members, Purser **Ed White** reported $330 in the Guild bank account. Bob Crawford promised to print members' names on the already purchased name tags if someone (this means you, Ed) would print out the roster on a computer disk.

The subject of a Christmas party came up: attendance has been dismal in recent years. Bob produced a brilliant solution: not a party at all, but a regular meeting, plus a bar. **Doug McFarland** promised to supply the bar, as he usually does with great flair.

A suggestion was made that meetings should include videos of nautical topics, and Doug reported that he had lately seen an interesting TV documentary on the discovery of the sunken remains of the *Armageddon,* a lesser-known ship under Lord Nelson's command. For his part, Crawford said he'd prefer to downplay history and stress model-building. He'd like to see, at Show & Tell, more partly built models and parts of models.

Jack Klein again urged members to take advantage of the newly available Microlux miniature table saw, but repeated that they should phone ahead for an appointment on weekdays – on the *Berkeley* "we're below the bilge in priorities."

Jerry Deschenes inquired whether the model shop had a sewing machine. "Not so far," said Crawford, but he knows someone who does. Jerry broadly approves of sails on models, but someone else interjected that "they hide too much."

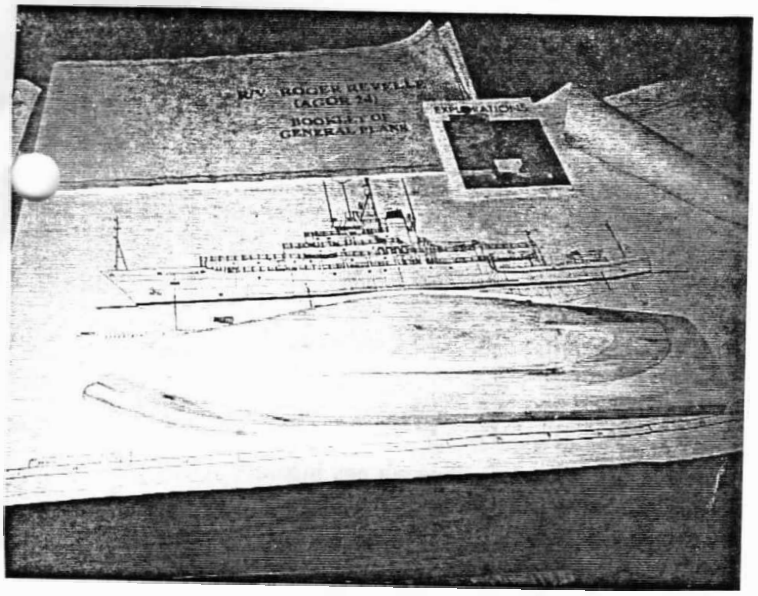
Picking up on last month's discussion of jig tackles on big schooners, Gordon Jones reminisced on his service aboard the three-masted schooner *C.A. Thayer* when First Mate "Smilin' Jack" Dickerhoff (he never smiled) had the deck.

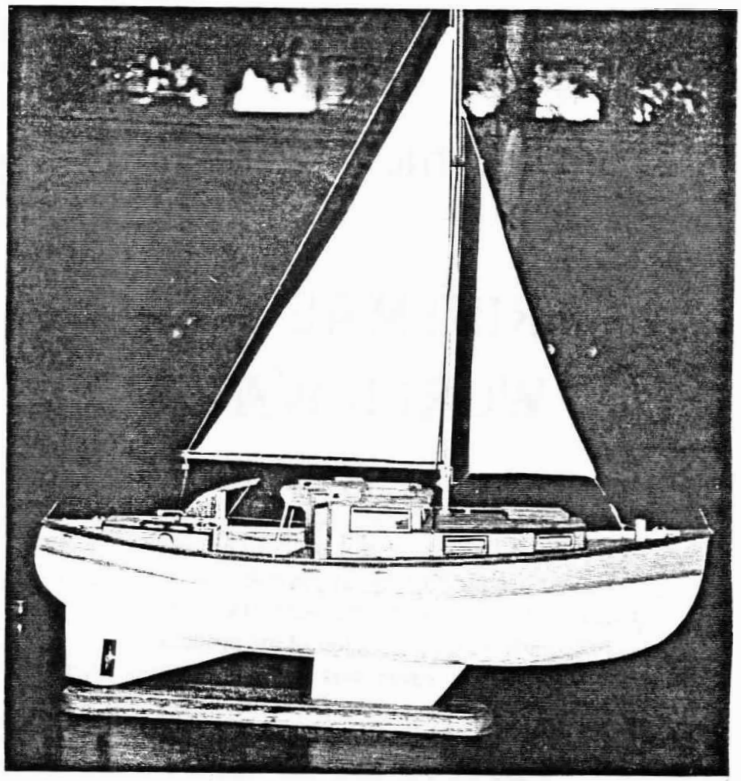
"Fifteen men [said Gordon], mostly greenhorns, tried to 'run up' the large fore-and-afters. City dwellers, mostly, we 'pooped out' when they were one-third of the way up

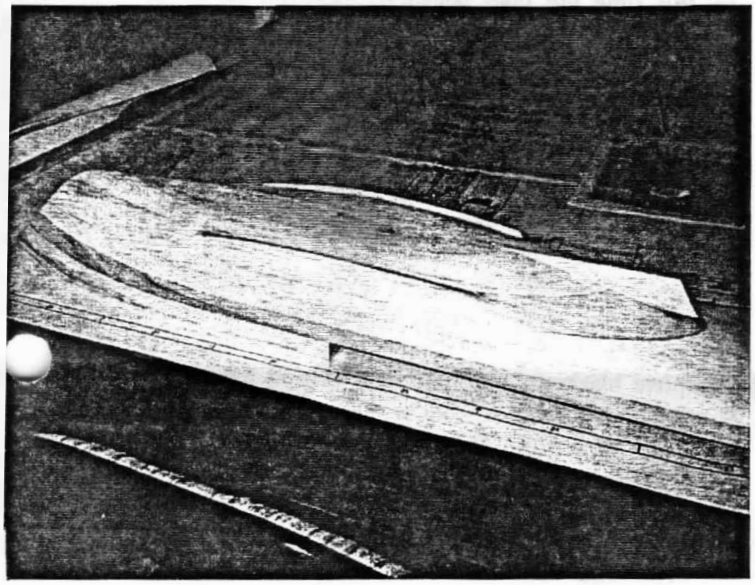
"After the command 'avast heavin',' Dickerhoff proceeded to tell us how three-masted schooners would have only three or four hands before the mast (to keep down expenses). But these men were *seamen,* who knew how to heave together, who raised the sail a bit at a time. On the rare occasions when steam was available, they'd let the donkey boiler do the work.

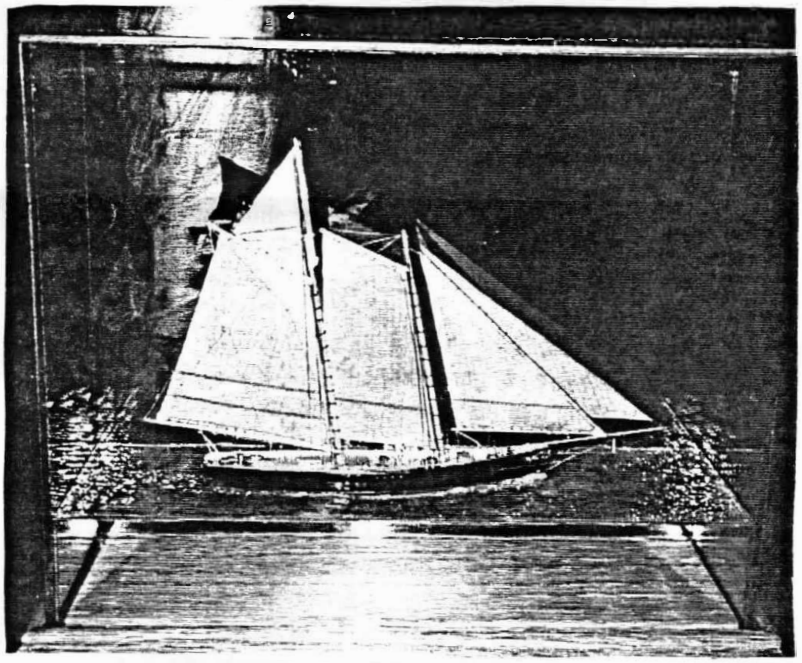
"After resting, we tried again – this time trying to pull together."

That settled, Crawford recommended the self-guided tour of the *Roger Revelle* that's available to the public, and promised that the Nautical Research Guild's national conference next year in San Diego will include the Scripps Institution's operation in La Jolla.

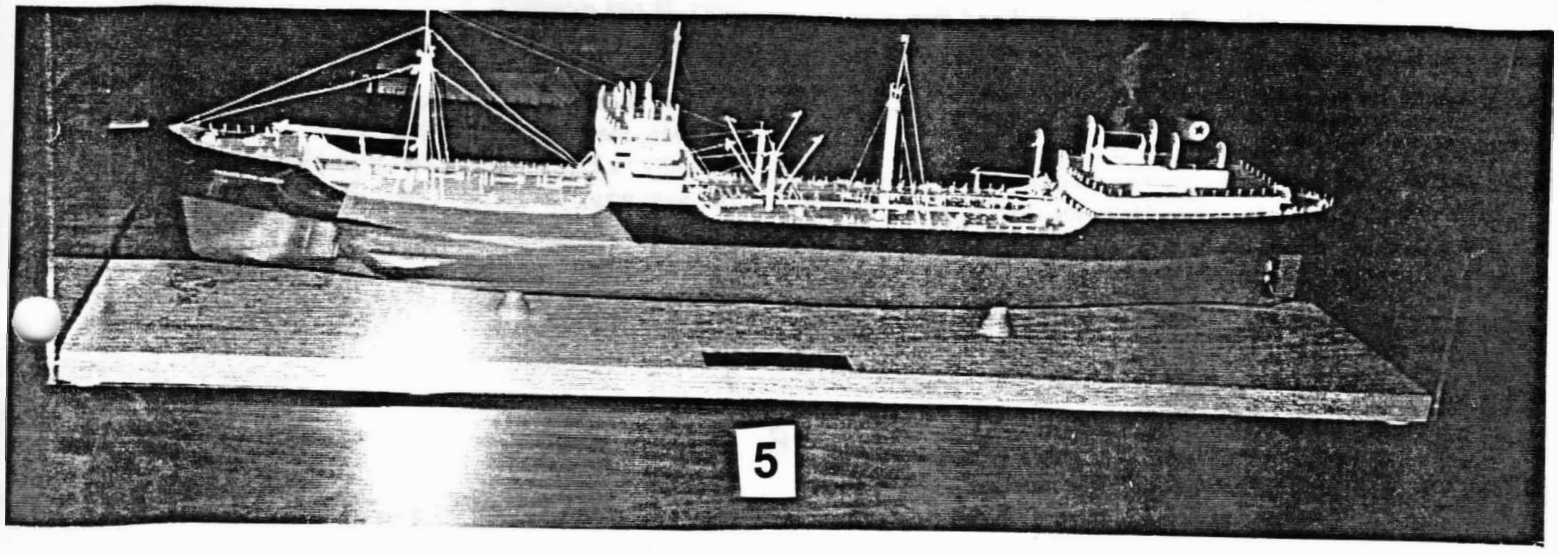








MODELS AT THE NOVEMBER MEETING
Above: Two bottom-up views of Bob Crawford's exploration ship *Roger Revelle;* Top Right: Jerry Deschenes' motor sailor *Moon Glow;* Middle Right: Robert Hewitt's six-inch-long *America;* Bottom: Fred Fraas's T-2 tanker *Texaco New Jersey*



THROUGH THE LUBBER'S HOLE
By Robert Hewitt

CHRISTMAS AT SEA IN WORLD WAR II

In February 1943, my first cousin, Steven Pesany, joined the United States Air Force. Prior to that he worked as a final assembler on P-40 aircraft at the Curtis Wright Aircraft factory in Buffalo, N.Y.. One of his many tasks was to synchronize the firing of the 50-caliber guns with the rotation of the propeller.

Steve's boot camp was in Miami. From there he went to Denver, then on to Corvallis, Ore. to learn photo reconnaissance. This time he was assigned to the 116th fighter squadron. This outfit had been in operation under Capt. Eddie Rickenbacker during World War. I.

From there Steve went to Savannah, Ga.. and then to Hampton Roads, Va. That was where he was introduced to the *Joseph Gale,* a Liberty ship. The *Gale* was built at the Oregon Ship Building Co. in Portland, Ore. She was 422.8 ft. long with a breadth of 57 ft. She weighed 7,176 tons and had a crew of 44 men.

Steve had never seen a bigger ship. After a briefing that included an equipment and clothes check, he boarded ship. He was surprised to find himself on a cargo ship.

The deck was filled with trucks all lashed down with wire cable. He never found out what was in the holds, but the rumor was that they were carrying medical supplies and ammunition.

There were about 500 men in Steve's outfit, along with a few others from different divisions. They departed on Dec. 23, 1943, not knowing where they were headed. The *Joseph Gale* was in a convoy of about 50 ships. A number of destroyer escorts circled the convoy.

Green Powdered Eggs

The soldiers in Steve's outfit quickly settled down to a routine of gambling. There were card and dice games in every corner of their hold. The bunks that filled the hold were eight to ten high, with no more than two feet of space between them. The deck of the hold was covered with knapsacks and gear.

At the time most men were smokers. The smoke was so thick that it was impossible to see from one end of the hold to the other. The only relief was to go on deck.

The head for the soldiers was nothing more than a long pipe 16 inches in diameter. There were holes cut in the top, to which toilet seats were welded. Steve thinks there were about 20 seats in a single row. The trick was to gently lift oneself off the seat as the ship rolled. This prevented one's bottom from being splashed.

Christmas day started with a cold shower in sea water, using a special sea soap. Water was at a premium, and they were issued only one canteen per day. Breakfast was served in a small cabin next to their hold.

Steve can still recall seeing the green powdered eggs in the mess. They weren't entirely green, but had green streaks running through them. The soldiers did not have seats, and had to stand to eat.

This was enough to wipe out any memory of a turkey dinner; it may well have been a chicken dinner. One of the officers did conduct a type of Christian service, as there was no chaplain on board. However, most of the soldiers continued to shoot craps, play cards, and smoke. By this time the hold began to look like a gambling casino. The only thing missing were the blinking lights.

No tree, no family, no presents and having to spend 24 hours in a smoky, diesel-smelling hold was not a very good way to spend Christmas.

The men who slept in the hold were not allowed to remove any of their clothijng except shoes. They were each issued a life jacket, which was to be carried with them at all times and to be worn on deck.

Gleeful Sailors

Soon the weather warmed, and the men who could not stand the smoky hold slept on deck. Since there was a complete blackout, the men slept behind heavy canvas drapes, which led to another problem: some men insisted on smoking behind the drapes, crumpling butts and scattering torn cigarette paper and tobacco everywhere. Deck sleepers would awaken to find tobacco and paper in every fold of their blankets and in their hair.

The deck was hosed down every morning, and the sailors would gleefully hose down any sleeping soldier.

Steve's most memorable time was spent on the bow at night, watching the porpoises and other marine life that glowed with an iridescent light. One night he stayed up all night just to see the Rock of Gibraltar. The soldiers were allowed the run of the ship as long as they stayed out of the sailors' way.

Another favorite spot of Steve's was the engine room. H was especially impressed with the neatness and cleanliness of the steam engine, and all of the polished brass.

The *Joseph Gale* arrived in Oran, Algeria, on Jan. 11, 1944. Steve's outfit left Oran on Jan 31 on board the *Chantilly,* a French liner with a British and Indian crew. The food was even worse on this ship, with kippers and porridge for breakfast. Steve lost about 20 pounds on this leg of the trip.

Off through the Suez Canal, the Red Sea and the Arabian Sea to Bombay. From there he went by train and river boat to Dhaka, India.

Steve spent the remainder of his service in India and China. He ran a crew that replaced aircraft engines and readied them for combat.

When the war ended, Steve spent another Christmas at sea, on his way home. This time he was in the Mediterranean off Algeria. The ship was the *U.S.S. General Brooke*, a troop carrier. Steve saved the Dec. 24, 1944 ship's newsletter titled "The Babbling Brooke."

Christmas festivities commenced at 1930 with a community sing of Christmas carols on top of hatch No. 5. A midnight mass was held in the enlisted men's hall by Father Brosnan of Boston.

A turkey dinner was served with all the trimmings. A special treat was given after dinner. What that treat was has long since been forgotten. At 2030 that evening there was a radio broadcast on ship of Dickens' "Christmas Carol" with Ronald Coleman playing Scrooge.

Some of the news briefs of the day were:

1. The burial of General Patton in the U.S. Army cemetery at Luxembourg.
2. Assassination threats made to General McArthur in Japan.
3. Air service would soon open between the U.S. and most European cities.
4. High hopes that the United Nations would succeed.

The best part of the trip was seeing the Statue of Liberty. The *General Brooke* was greeted in New York harbor with horns blowing, fire boats shooting streams of water into the air, and people cheering from the docks.

The *Joseph Gale* was scrapped in 1961 at Bordentown, N.J. Steve is still sailing, but only on land.

Life aboard the* General Brooke: *a cartoon from the ship's newsletter for Dec. 24, 1945.

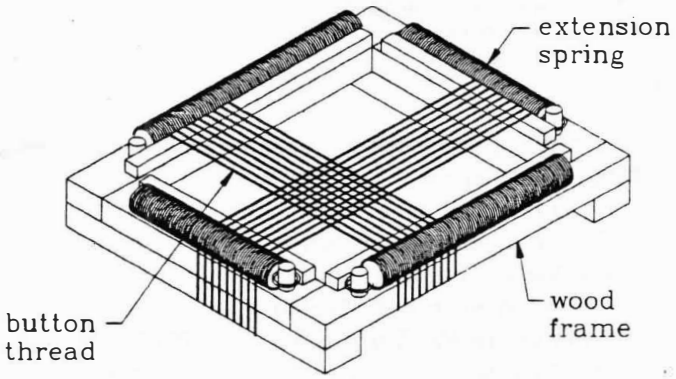
On Another Subject, Robert Hewitt Writes:

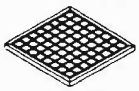
At our last meeting, Gordon Jones asked how I made my small deck gratings. The model of AMERICA has a scale of one inch to twenty feet. After being given the explanation he did remark "fake and deception!"

To make the grating, I constructed a wooden frame jig with an open area of approximately 1"x 1 3/4". Four dowels hold extension springs of .141 in diameter. The wire diameter of the springs is .015"

I used heavy button thread and wrapped it around the frame, spacing it at every three coils of the spring. After finishing one side, I then wrapped the thread in the opposite direction, 90° to the first side.

The thread was then stained with FLO-QUIL new manilla stain. After drying, I brushed the thread with watered-down WELD BOND white glue. This was allowed to dry overnight. I then cut out the grating from the jig, and glued it to a frame of pear wood.





completed grating

And Bill Forbis Responds

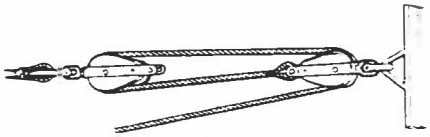
Faced with making gratings for the *America* that I brought to the same meeting, a model five times larger than Robert's, I devised a method that I haven't heard about elsewhere. My tool was my Unimat lathe in drill-press position. The basic stock was a small sheet of 1/32" walnut tacked with double-sided tape to a wooden block held in a vise on the cross-slide.

The control screws of the Unimat move the workpiece sidewise and lengthwise under the drill at one millimeter per turn. Using a 1-mm. drill, it was easy to bore a row of holes 1mm. apart, and more rows beside the first, making a grid. Then I replaced the drill bit with a 4-penny finish nail, which has a four-sided point. With the motor off, I used the drill press as a punch to square the drilled holes. The result is a nice illusion of a grating made with lap joints.

The Exotic Mystery of the Spanish Burton

What follows is a disquisition on the brain-busting mystery of the increase in power created by the exotic ship's tackle known to the cognoscenti as the Spanish Burton. The question arose when Irwin N. Schuster, esteemed Editor of the Newsletter of the U.S.S. *Constitution* Model Shipwright Guild, reported that member Mat Leupold had seen one of the contraptions on the windjammer *Mary Day*.

The most elementary fact about tackles is conveyed in "The Oxford Companion" with these diagrams:



Tackle rove to disadvantage

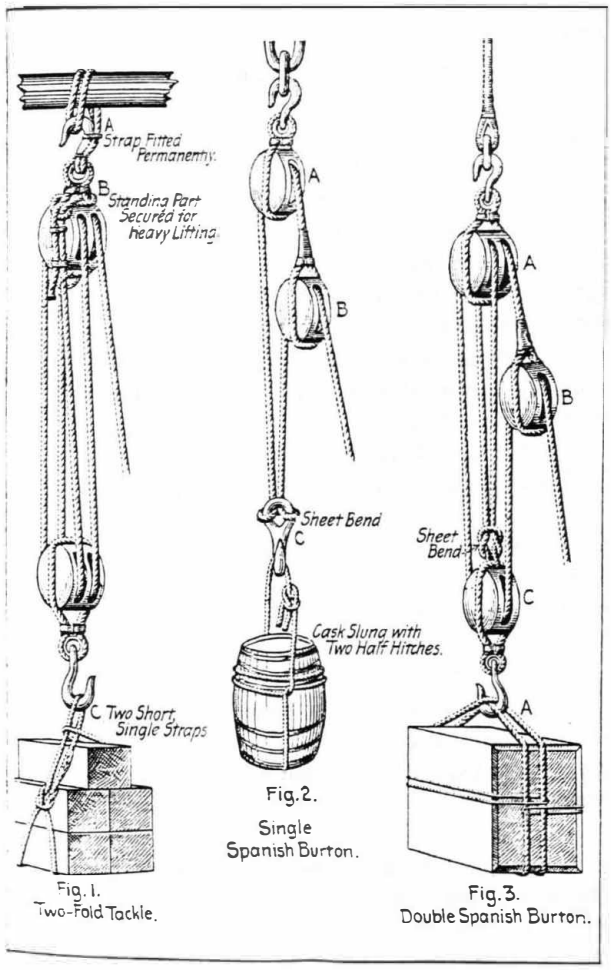
Tackle rove to advantage

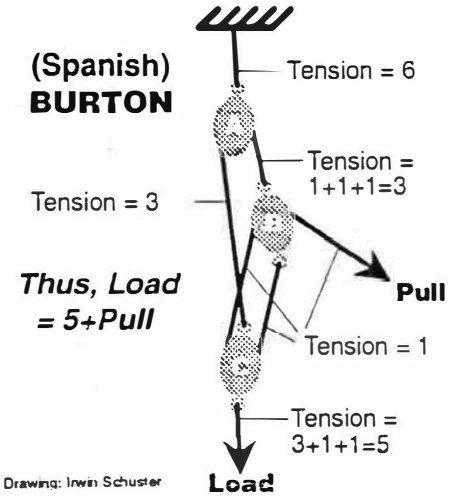
and this explanation: "The power increase [advantage] in a tackle is equal . . . to the number of parts of the fall at the moving block. Where a tackle is rigged so that the hauling part leads from the standing part, the power gained is less." The advantage in the top example is two, in the bottom example three.

In Fig. 1 of the plate supplied by Gordon Jones from "Modern Seamanship" by Knight (1903), the advantage, by the Oxford rule, is four. But how much is the advantage in Fig. 2, Single Spanish Burton, and how much in Fig. 3, Double Spanish Burton?

Schuster worked out the advantage of a Single Spanish Burton as five, and drew the diagram at the right to show why. But this Spanish Burton uses a block at the load end where Fig. 2 has a sheet bend and a hook. There has to be a difference between a block and a knot.

Of course, the Spanish Burton doesn't seem to have been of much actual use to anyone. "The Oxford Companion" says that "In sailing ship days it was used to set up the shrouds of the masts so as to get them as taut as possible."





Gordon's "Standard Seamanship for the Merchant Service" by Felix Riesenberg calls the single Burton "a relic of the past, power three." Of the Double Spanish Burton, Riesenberg writes: "So ancient that authorities begin to differ. Combination of a double and two single blocks. I have never seen a Double Spanish Burton rigged and cannot say why it should be rigged in the present day."

Gordon recommends that all we have to do concerning tackles is keep in mind Knight's basic explanation: "Power is doubled at the movable block because it is transmitted *around the sheave* and so acts along both parts upon the mass to be moved."

Salty Language

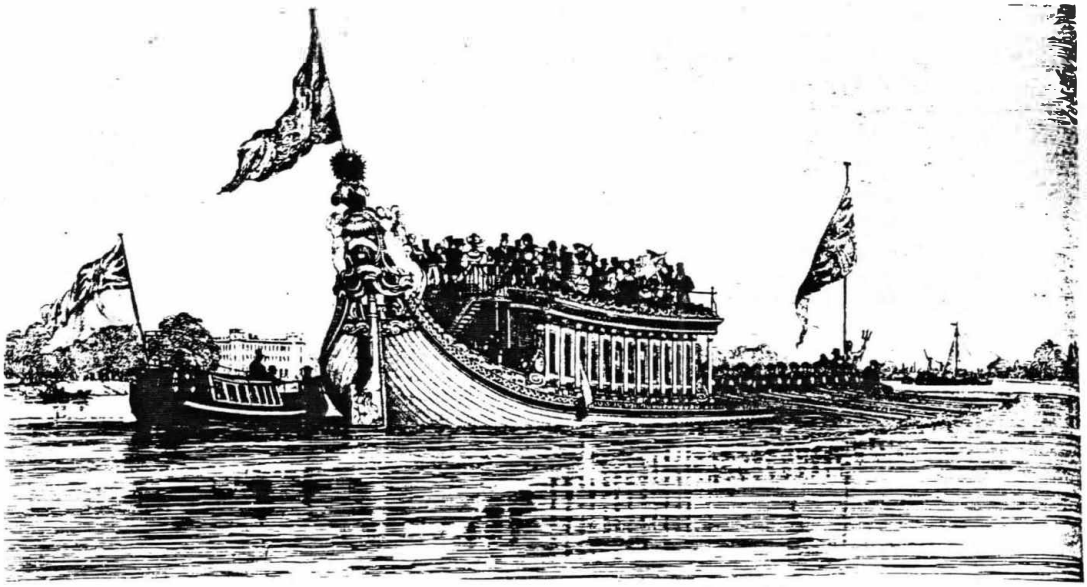
Definitions of picturesque nautical terms, taken from "The Oxford Companion to Ships and the Sea."

"SHOW A LEG," the traditional call of the boatswain's mate in a British warship when the hands are called to turn out in the morning. It arose from the old days when seamen, who were signed on for the duration of a ship's commission, were always refused shore leave when in harbor for fear that they would desert. Instead of shore leave, women, ostensibly wives, were allowed to remain on board while the ship remained in harbor, and of course joined the men in their hammocks at night. When the hands were called in the morning, the women were allowed to lie in, and the boatswain's mates, when they saw a hammock still occupied, would check the sex of the occupant by requiring him/her to show a leg over the edge of the hammock. If it was hairy, it was probably male; if hairless, probably female. The call remained in use for many years after the scandal of women living on board was finally abolished by the British Navy around 1840.

KECKLE, to, the operation of covering a hemp cable spirally with old rope to protect it from chafing in the hawsehole. a necessary precaution in the days before chain anchor cable. In the days of large sailing vessels, anchors and cable were normally worked on the main deck, the haweshole being cut in the ship's side close to the stem. As there was no hawsehole as such in the modern sense of a sloping pipe, the wear through the hawsehole on an unprotected hemp cable as a ship swung to her anchor was prodigious, hence the need for keckling it. Chain cable was not generally adopted for anchor cables until the third or fourth decade of the 19th century.

CQD, the original wireless distress call made by a ship requiring assistance. It was introduced in January 1904, and stood for CQ, the signal for all stations, and D for distress, but became widely known as "Come Quick, Danger." It still remained in operation for a number of years after SOS was agreed internationally as the recognized distress call in 1908. When the White Star liner *Titanic* sank in 1912 she sent out both CQD and SOS calls.

ALL-A-TAUNT-O, the condition of a square-rigged sailing vessel where all the running rigging is hauled taut and belayed and all her yards are crossed on the masts, i.e., have not been sent down. In general, it refers more to ships with very tall masts than to more rugged ships with shorter masts.



BARGE [Definition **2**] A ceremonial state vessel, richly decorated and propelled by rowers, used on state occasions and for river processions. Such was Cleopatra's barge described by Shakespeare in *Antony and Cleopatra* (Act II, sc. 2) which . . . *like a burnished throne/ Burned on the water: the poop was beaten gold;/ Purple the sails, and so perfumed, that/ The winds were love-sick with them: the oars were silver;/ Which to the tune of flutes kept stroke, and made/ The water, which they beat, to follow faster,/As amorous of their strokes* . . .

"If you want an exercise in time consumption, loft your own frames." P. 1

CHRISTMAS AT SEA
IN WORLD WAR II P. 6

Next Meeting

S	M	T	W	T	F	S
			1	2	3	4	5
6	7	8	(9)	10	11	12
13	14	15	16	17	18	19

December

San Diego Ship Modelers Guild
1306 N. Harbor Drive
San Diego CA 92101

SAN DIEGO SHIP MODELERS GUILD

Officers for 1998

Guild Master	K.C. Edwards	/redacted/
First Mate	Doug McFarland	/redacted/
Purser	Ed White	/redacted/
Log Keeper	Open	
Newsletter Editor	Bill Forbis	/redacted/

Founded in 1971 by Bob Wright and the late Russ Merrill

SCHEDULE OF ACTIVITIES

Meetings Second Wednesday of every month. 7 p.m. social, 7:30 p.m. meeting. Held on board the ferryboat *Berkeley*.

R/C Operations Saturday mornings at the Model Yacht Pond (Mission Bay).

Annual Regatta Third weekend in June.

MEMBERSHIP

Dues are $15 annually ($7.50 after July 1.

We strongly encourage all to join the San Diego Maritime Museum as an expression of appreciation for the facilities provided for our benefit.