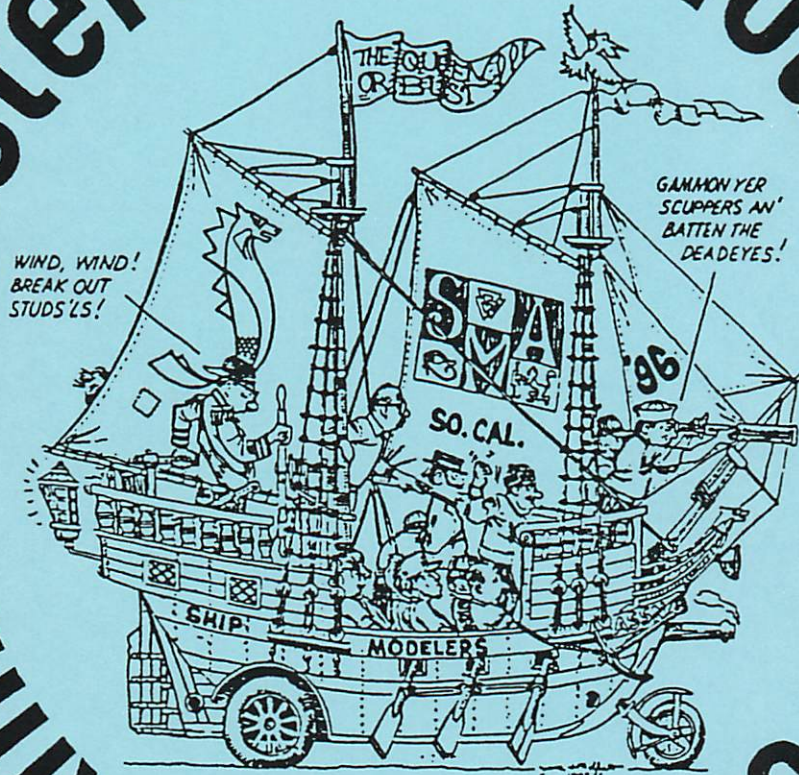


Proceedings

Exhibit Western Ship Model Conference and



March 22, 23, and 24, 1996

SHIP MODELERS
Association



Western Ship Model Conference and Exhibit Overview

Decision to Hold the Conference

At the beginning of 1995, a few members of the Ship Modelers Association met to discuss the pros and cons of sponsoring a second Western Ship Model Conference and Exhibit. The consensus was that we should proceed. This recommendation was adopted by the Board of Directors of the Ship Modelers Association, and the Conference Committee was formed in March.

Reasons for proceeding with the Conference and Exhibit were to improve the professional skills and awareness of modelers in the Western region of North America, to make interested members of the general public aware of ship modeling, to permit Western ship modelers to attend a major conference with reduced travel time, to allow modelers to participate in large exhibit and meet and interact with other modelers, and provide modelers with an opportunity to study a range of high quality ship models.

Based on the successful conference held on-board the RMS Queen Mary in 1994, it was felt that a conference in 1996 would be financially feasible, and that modelers from all over the country would attend.

The decision to hold the conference on-board the Queen Mary for a second time was based on the fact that no other nautical site in the Los Angeles area would offer the close proximity of a hotel and a large exhibit hall with 20,000 to 30,000 square feet of space. Furthermore, the Queen Mary, itself, is a large attraction for ship modelers. It was felt that the opportunity of staying in original first class state rooms was more important than the added comfort that might have been available in a high class commercial hotel.

The March date was chosen because it would be an attraction for modelers who live in colder parts of the country, would coincide with spring vacations in many schools, and would not conflict with the Nautical Research Guild Conference.

The Conference Committee

It is useful to outline the assignments in the Conference Committee because it will give some insights into the work that was done. Bill Russell was selected to chair the Committee with the responsibility of seeing that everything that needed to be done was actually done when it needed to be done. Lloyd Warner was to be the Registrar and Treasurer since it was not deemed practical to separate the two functions. Lloyd was also the primary interface with the Queen Mary Personnel. Dave Yotter was assigned to recruit quality speakers because he knows ship modelers all across the nation.

Don Dressel created the data base incorporating information on all the models in the exhibit. Since he is an experienced author, with a popular modeling book to his credit, he was asked to edit these proceedings.

Management and planning of activities in the Exhibit Hall was assigned to Eric Dodson, who is Vice President of the Ship Modelers Association. Roy Tomooka was given the responsibility of contacting modelers to obtain commitments to bring models to the exhibit. This was a critical task since the committee had decided that the exhibit would have over 200 models, an increase of more than 40 models over the number exhibited in 1994. A few months before the conference, Bob Morgan, President of the Maritime Modelers, the RC model club in the Los Angeles area, joined the committee. Through his efforts, 42

models were brought to the exhibit by members of that club.

Correspondence and news releases were primarily the responsibility of Bill Russell, Lloyd Warner. Kathy St. Amant created the overall circular design of the flyer that was widely distributed, and is used on the cover of these proceedings. The cartoon in the center of the flyer design was a product of Jack Moffett.

Preparation of a large number of signs was the responsibility of Clyde Emerson. They were mostly produced on a computer, and pasted on foam board. Other assignments were Yas Komorita for still photography, Bob Graham for video taping.

As the leader of the Mayflower Group, a Ship Modelers Association "hands-on" seminar on ship modeling, Bill Wicks was assigned responsibility for their part of the exhibit. It

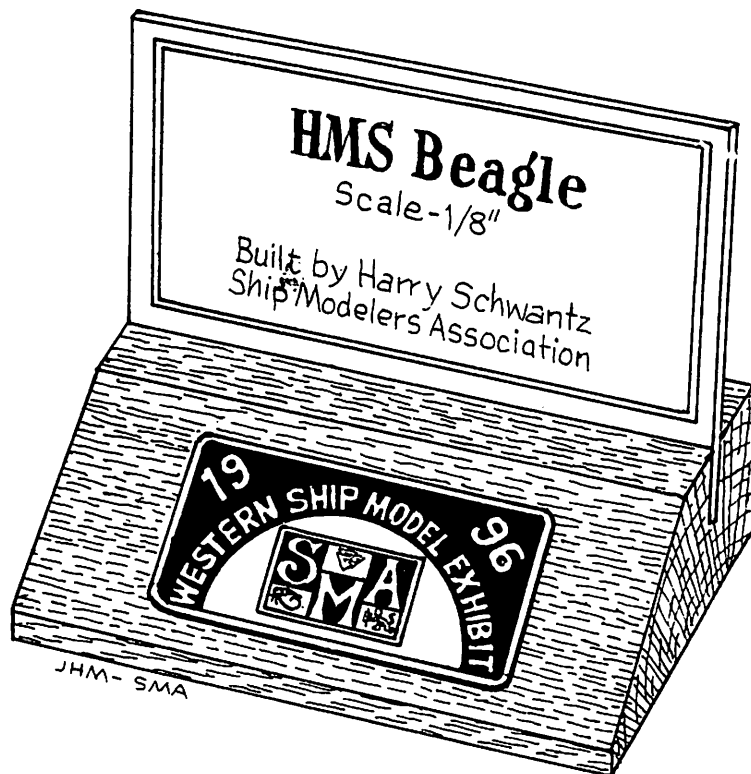
was felt to be important to show modelers one approach to organizing a group of modelers to learn the practical side of modeling by actually building models of the same ship in a mutually helpful environment.

George Dunton was assigned to contact and "sign up" vendors for the conference. Eventually, nine vendors came.

Lessons From the 1994 Conference and Exhibit

The Committee made a concerted effort to correct the perceived problems encountered in the 1994 Conference. Primary among these was the need for a quiet, hospitable location for the seminars. The Queen Mary management was happy to provide the Britannia Salon, which proved to be a vast improvement over the room used in 1994.

The tape used to identify models in 1994 was extremely difficult to remove. Instead, individual plaques with uniform information would be provided for each model exhibited. The plaques would be something for the modelers to take home. The design of the plaque was original, with Lloyd Warner responsible for the wood portion. Kathy St. Amant agreed to design and make 200 lost wax bronze castings in her jewelry shop for incorporation in the plaque. Making and finishing the castings proved to be a daunting task, so Kathy produced the rough castings, and Bill Russell, Lloyd Warner, and Lloyd's wife Etta finished them. Work was completed on the plaques the day the conference began.



It was believed that visits by the general public to the exhibit would have been larger if it could be open until 5 PM instead of 12 noon as was the case in 1994. Queen Mary Management agreed to the additional hours without increasing charges.

Greater care was taken to determine the quantity and location of signs on-board the Queen Mary. This was accomplished by visiting the ship and specifically determining the location and content of each sign about a month before the conference.

New Features

The Committee decided that there should be some new features in the 1996 Conference and Exhibit. There would be more models, and there would be at least four modeling demonstrations on Sunday. The demonstrations were intended to provide up-to-date information concerning specific methods that would be useful in building models.

It was believed that the conference would be a useful modeling experience and that it would be worthwhile to document things that happened at the meeting. Thus, these proceedings were planned from the earliest days of the committee.

The Seminars

Six seminars were presented at the Conference. Speakers Saturday morning were **Randy Biddle** whose topic was *On the Wind's Highway: Sailing Ship Fittings and Deck Arrangements*, **Sara Conklin**, who spoke on *Marine Art and Ship Model Appraisal*, and **Dana Wegner** who discussed *Government Resources For Ship Modelers in Washington D. C.*

In the afternoon, **Rob Napier** spoke on *Taking the Act on the Road or You Bust 'em, We Dust 'Em*, **Edward Von der Porten** discussed *The Swedish Warship Vasa in 1628*, and **Charles Sweet's** subject was *The Monterey Fishing Boat and its Impact on Yacht Design*.

The after dinner speaker was **Johnnie Ridgway** whose talk was about *Life of the Cherokee (An American Brig) 1831 - 1850*.

Summaries of all these talks are in the section on Seminars.

The Demonstrations

Four demonstrations were given on Sunday Morning. Details concerning the demonstrations including drawings of the 3-D Pantograph and Rope Walk are given in the chapter on demonstrations.

Bill Amour went through a "high tech" demonstration that used a computer controlled milling machine to make wood scroll work, belaying pins of various scales, and brass cannon barrels. Software and hardware requirements were discussed.

Kathy St. Amant's demonstration was concerned with mold making for ship model parts. These molds are suitable parts from plastic or low temperature metal alloys such as pewter.

Richard Denney, President of the Ship Modelers Association, demonstrated the use of a 3-D Carving Pantograph which allows parts to be copied in wood at reductions of 1:2, 1:3, or 1:4. A piece of wood scroll work was machined for the demonstration.

Russell Long demonstrated the use of a rope walk of his own design to make scale rope.

Drawings were provided to those requesting them.

Support from Other Modeling Organizations

The Nautical Research Guild provided important support to the Conference. Information about the conference was publicized in the NRG Journal, and many NRG members attended the Conference. Four NRG officials attended: Eugene Larson, Chairman, Rob Napier, NRG Journal Editor, William Fleming, Circulation Manager, and Lloyd Warner, Secretary.

Other modeling clubs gave essential support. These include the Maritime Modelers of Los Angeles, The Ventura County Maritime Museum Ship Modelers Guild, the South Bay Model Ship Wrights from San Francisco, the Red Rock Riggers from Arizona, and the Southern Nevada Scale Modelers of Las Vegas.

Vendors and Commercial Support

Nine vendors of interest to ship modelers were at the conference. They were Preac Tools who make small wood working machines, Sherline, Inc. which makes small machine tools, Scroll America (Hegner) which sells precision scroll saws, Pier Books which specializes in Nautical Books, the Dromedary which sells a great variety of kits,

tools, materials, drawings and books of interest to ship modelers, and Frank's Mosquito Boats, a vendor of kits for PT boats, K. H. Lee who sells jewelers tools, LA Maritime Museum which sells a line of ship model kits of modern vessels, and Royal Products which supplies special tools for making treenails.

Items for the raffle at the banquet were given by Treasure Beach, Bill Wicks, the Nautical Research Guild, Warner Woods West, the Dromedary, and Ships in Scale.

Many commercial publications incorporated information about the Western Ship Model Conference and Exhibit, often more than once, and were instrumental in getting the word out. These include Seaways, Ships in Scale, Model Ship Builder, Wooden Boat, Fine Scale Modeler, and many others.

The Statistics

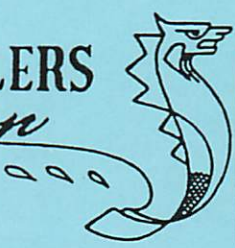
The numbers for the 1996 Conference were significantly improved for the 1996 conference compared to those for the 1994 Conference. Two Hundred and fifty people registered and 186 attended the seminars. The attendees came from 22 states from Hawaii to Massachusetts. There were 212 ship models in the exhibit, and 723 members of the general public visited the exhibit.



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2305 Via Acalones
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6856 Clara Lee Ave.
San Diego, CA 92129
6119-583-0847

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West Garden Grove, CA
92645 -
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Fred Winchester
1016 Benito Ave.
Pacific Grove, CA 93950
408-372-8877

Mason Wood
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Long Beach, CA 90803
310-433-3814



Seminars

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On The Wind's Highway Sweat, Serendipity and Success in Nautical Research

A Talk by Randle McLean Biddle, MS
Edited by Don Dressel

Randle Biddle was kind enough to become one of our speakers at the last minute, when another speaker became unavailable. Since he had little time to prepare a paper for his talk, I will try to cover the highlights of his speech. He did furnish some highlights, which are included wherever possible.

Randle prefaced his talk by indicating to his audience a few of his ideas concerning the art of ship model construction and the research involved in this effort. He indicated that the beginning of his modeling was in 1958 when a young man. He will demonstrate throughout his talk the millstones of a modeler using himself as an example. He also stated that the art of ship model building results in something beautiful and lasting to give to our society. It has been his unique privilege to have worked with many master builders and other people who love ships and the sea and he is more the happy to share what knowledge he has with anyone who is interested.

Randle went on to stress that what we, as model builders, are doing is definitely worthwhile. Many young people of today do not have the hero's and other stimulus that he had as a youngster.

today in building things, such as ship models. Shipmodels have something to teach each of

us, no matter the level of craftsmanship. This is exemplified by the models exhibited below decks today (on board the *Queen Mary*.) The research involved in the model making effort is itself very rewarding. It is surprising how information flows in when you start to look for it.

Randle next showed a picture of Commodore James Biddle which hangs in the Museum of Natural History. James Biddle was active in the Navy from 1812 to 1847. He commanded many famous ships of the U.S. Navy including the Wasp, Hornet, Constellation, Etc. One other Biddle mentioned, Nicolus, went with Nelson on an Arctic cruise. Unfortunately, he was killed in action in 1774. He went on to say that he was not related to either of these gentleman, but his grandfather did obtain a nautical name. He comes from a long line of Illinois farmers. His grandfather, Emmitt Biddle, since he kept on going across the Illinois river, was nicknamed 'Frog.'

Randle then showed slides of some of his early books. "My Book House", "Romances of Clipper Ships", and "How to Make Clipper Ship Models" were some of the books discussed. He related how, at the age of 14, he saw a picture of the 40-gun ship-of-the-line in the book "Ship Model Builder" by Johnson. He wrote to the author and was

pleased when he got a reply. As a teenager, he build model airplanes. He indicated that Johnson also wrote a book on airplane building -- if anyone has knowledge of this book or can tell him were he can get a copy, he would be grateful.

The went on to do the things teenagers do. Then on to college, were he graduated and got a job in Cape Code. Since he was now in the Cape Code area, he started to visit a lot of the maritime museums in the area. He also became familiar with Model Shipways, and purchased their kit *Flying Fish*. He also visited the fishing fleet at Cape Code.

He also had the opportunity to visit on of his boyhood idols - Mr. Johnson, the author of "Ship Model Builder". He had the privilege of having dinner with him and his wife, which he enjoyed very much. He was also able to see the model of the 40-gun Ship-of-the-Line which he had dreamed about as a boy. Mr. Johnson died in 1982. He showed a picture of his daughter Olivia, whom he named after Mr. Johnson's wife.

He next showed slides of some ship models displayed at the Smithsonian Museum. He does not know who built them, but would like to know.

He talked about Robert Emmett (I hope I got the name right), who was a tug boat captain and model builder. He was a real inspiration because he had only one arm! About this time he built the Model Shipways kit *Katy* and while doing so became acquainted with the Nautical Research Guild since he researched the model.

He next related his real ship experience in 1970 - that of the *Star of India* which was in San Diego. He went aboard and did a lot of seaman type things, like going aloft. He

meant Captain Reynard (Again, I hope I got the name correct), who was a driving force behind the Maritime museum in San Diego and the ships berthed there. The *Star of India*, one of these ships, is the oldest iron sailing ship afloat today.

He had a picture of himself, Bob Weinstein and Ron Cleveland (Hope I got the names right) aboard the *Star of India*. He indicated that a lot of the old master model builders that he knew when he was young are no longer with us. One of Ron Cleveland's models is in the National Maritime Museum in San Francisco. He showed a picture of this Themes River Barge, which was in 1:96 scale. The English Museum people indicated that this is the finest Model of this type they had ever seen. He also showed a picture of the crew of the *Star of India*.

In 1974 he was back on board the *Star of India* and he had more pictures of her. There were more pictures of Henry Rush and Ken Reynard. He also had a picture of a sailor. He did not remember his name, but one of the people in the audience identified him as Gordon Fountain.

Randle then showed a picture of his 3/16" model of *Hanna* built in 1970. This model was in a museum for a long time, then returned to him in 1990. Unfortunately, it was damaged in the 1994 Northridge earthquake. It has been repaired, but it will never be like it was originally. Next a slide of a Colonial Bark ca 1640, after William Baker, was shown. This was a waterline model.

The next slide was of the submarine model *Grampus*, which is also in the National Maritime Museum in San Francisco. He worked with John Cabot in the research for this model and showed two more slides of

the submarine in other museums built by other builders. He found this very interesting. The *grampus* was the first modern submarine launched in the Pacific, built by the Union Iron Works of San Francisco. Merritt Edson, long time editor of the Nautical Research Journal, helped Randle write an article in the December 1981 issue of the Journal entitled "Pacific Debutante: A Brief History of United States Submarine Torpedo Boat *Grampus*, A-3, SS-4." His model of the *Grampus* was made with balsa wood - many people are surprised because it looks so much like metal.

Randle then related various (as yet) unpublished research efforts he has been working on over the years. He first talked about the book "Under Sail in the Frozen North", which gave details of the *Carcass* of 1764, the same vessel that Nicholas Biddle of Revolutionary War fame served on with Nelson. In England in 1977 he did research on the Farmouth brigantine *Island*, ex *Lady of Avenel*, 1874. He then showed a slide of the *Morgan*, the famous whaler. Along with this model he indicate that information on this ship can be found in the book "American Ship Models & How to Build Them". He next talked about the Provincetown whaling schooner *Agate* and how information on this ship was obtained from Chappelle's book "American Fishing Schooner".

He then showed pictures of some racing boats he had seen when he went to Puerto Rico. These boats were about 30 feet long. Two weeks after he came back home he discovered an article in one of the boating magazines concerning these same boats.

He next showed a picture of the San Francisco Bay scow schooner *adellia*, which has inspired his model of *Gaslight*, 1874, which was also a San Francisco Bay scow

schooner. Randy's 1:48 plank on frame model is almost complete. He plans to publish a book on the unique aspects of West Coast scow construction and rig, including the possible inclusion of the substantial collection of scow photos from the Robert A. Weinstein estate. These were recently gifted to the Los Angeles Maritime Museum and are now in the process of being cataloged and properly archived.

Randy feels he is fortunate to have participated in the art form and loves to discuss and pass on what little information he has to fellow modelers. The pursuit of this hobby will and does have wonderful doors open for you. Most individuals, including Randy, enjoy sharing their love for all things nautical. He advocates that we all keep building, keep writing and keep researching. The main thing you should ask yourself, when you are building a model and run into a problem, "How was this used." Randy hopes that as much knowledge as possible will be passed on to others, so that they too may enjoy the wonderful world of ship models and all things nautical.

“Dear Sara”

By
Sara Conklin, ISA, CAPP

The following is an excerpt of one of Sara's columns from *Nautical Collector*, in which as the magazine's appraiser she discussed ship model valuation.

A reader wrote, “Dear Sara” How much should I insure my ship model of the CUTTY SARK for? I made it myself and it took me 8 months, about 640 hours, to build it. This is my second model and I used a kit but made a lot of changes. I figure that at \$15 per hour for my time my model should be worth \$9,600. Is this right? Larry Sparks, Fresno, California.

Dear Larry, Certainly \$15 per hour is not excessive for somebody constructing a complicated ship model, but in your case, an insurance value is based on the actual sale of similar ship models. If you were a famous model builder and had documented recent sales records, the value of your model might be closely tied to a per hour figure. Noted builders who sell models to galleries probably charge the gallery a per hour figure from which the retailer bases his/her asking price. Since your work doesn't enjoy similar status, the value of your model will have to be based on sales of comparable models. Generally well-crafted, contemporary kit models of vessels like the CUTTY SARK can sell from about \$1,000 up to about \$3,000. Beyond this point, the absence of plank-on-frame and planked deck construction techniques preclude models from commanding higher figures.

A second issue is your insurance policy. Unfortunately, unless you have a very pricey insurance policy that allows you to name the “replacement value,” you must have an appraiser assign an estimated replacement value based on market activity on your work. For your information, the following are some appraisal basics should you choose to have your model professionally appraised; first of all, don't pay an appraiser a percentage of the value he/she assigns to your model. Hourly fees, daily rates, or job-specific remuneration, however, is considered ethical and proper.

The appraisal process includes documentation of your model with both photographs and a physical description, and research in the correct market for actual sales of models “comparable” to yours. “Comparable” means the same type of model; built by a hobbyist (not a famous builder); based on the same kit; made recently (not antique); and in the same condition as yours. Finding the recent sale of a ship model with all these elements comparable to your model takes some time and is the dream of all appraisers. In the real world, we usually can only find a few of these elements of comparability.

Market research must also be in the appropriate marketplace. Does your model sell most commonly between knowledgeable people at auction, through dealers, or at estate or garage sales? The market may actually be a combination of several markets. The value placed on an object must be based

on equal market activity, not just a personal opinion.

The appraiser must attest in writing that he/she has no current or contemplated interest in your model; the IRS also requires that not only the appraiser, but his/her spouse and extended family members, etc., have no interest in the appraised material.

Since professionally prepared appraisals are expensive, be certain you need one. If your interest is personal, with no legal requirements, you can do much of the research yourself. Go to dealers who carry nautical material or to auctions and find a few models "comparable" to yours in the ways mentioned above. In this way, you will get a feel for its general value.

After my column was printed a reader responded with the comment that the unique feature of a model that mostly determines its value is how closely it was built to the actual scale. My response to his letter brings up a few more issues to be considered for valuation. The reader began his letter discussing valuation terminology. The point you made about the valuation of any property for insurance is partially correct ---- the value definition is called the **replacement value**. Generally speaking, it is either **replacement new** for recently manufactured items, or **replacement with a comparable** for antique items. Everyone should read the **replacement clause** in his/her insurance policy to learn exactly how the insurance company will compensate a loss. In 95 out of 100 policies the language reads (as does my State Farm policy); "We (insurance co.) will not pay an amount exceeding that necessary to repair or replace the property." If an appraiser always bases the value of a ship model on an hourly figure for someone to build a replica, the client could be

overpaying premiums enormously, because after the loss, in 95/100 cases the company will simply go out and buy another model of similar size and type. This process is called **adjusting the loss**, and unless the insured has an extremely expensive policy that includes a clause -- some times called a **fine arts rider** or **scheduled amount** -- that says the company will pay a *certain named dollar* amount, a lot of money has been wasted on premiums. Figuring insurance valuations is not a simple nor fixed process; it is specific to each type of policy, specific to each type of model.

The professional and experienced appraiser locates the recent sale of comparable models and uses the model range of values taken from several sales of **comparable** models. The costs of replication would be used only for extremely rare model types not available in the market, or those models built with rare details not represented commonly in the market. In these instances, I hire a model builder to make the replication estimate, and it is based on an hourly rate combined with price of materials. It is not scale that **most** importantly determines the value of a model, but fineness of the modeler's skill, construction techniques, and sometimes provenance. If John F. Kennedy owned a model horribly out of scale -- who cares? The key value issue here is that he owned it, and what it will cost to buy another model owned by him. Solid hulls vs. pinned plank-on-frame hulls, a solid piece of veneer vs. planked and pinned decks, are among the most important valuation criteria in most cases.

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Government Resources for Ship Models in Washington, DC

By Dana Wegner
Edited by Don Dressel

Since Dana's speech was after Sara Conklin's talk on ship model appraisal's, he commenced with a discussion on the relative value of models from his perspective. His area of expertise is specifically 19th and 20th century ships, primarily U. S. Naval warships. He related the story about a ship modeling company called Gibbs & Kotch Model Company (again, I hope I got the name and spelling correct.) They employed 167 modelers in 1944 during WW II. They had a commission from the U. S. Navy to build a model of LSM 201 - Dana had access to the original papers and contract with respect to this model. He indicated that the final cost for the model was \$1,300,000.00. The modelers that worked for Gibbs & Kotch were paid \$2.00 per hour plus \$2.00 overhead, the Navy paying \$4.00 an hour to Gibbs & Kotch. The cost to build the model today by Navy standards is \$67.00 per hour. How much would it cost to replace this model with a new one if the original was destroyed?

Dana has 25 years experience as both a modeler and museum curator. His greatest source for information is in Washington D.C. He indicated that the easy part is to make a request for information on ships. What happens after that is the difficult/fun part of the project, depending on your point of view. One item stressed is that you, as a

homework as possible before trying to delve into the government archives. Get the

specific name of the ship, the exact dates you are interested in, the builder of the ship (if known), where the ship was built, etc. Sending away for information is sometimes helpful - then again, you can wait weeks or months for a reply. Occasionally, you get no reply at all.

One great source in your research is the eight volume government publication "American Naval Fighting Ships." This source can be invaluable as a starting point. Another great source is the Navy Department Library, which has open stacks - very unusual for so large a library. Another source is the U. S. National Archives, which were created in 1934, but you have to know how to access the information. The filing systems are not all the same. Dana indicated that letters are filled in different ways. Letters from the Navy Secretary to officers are in one filing system. Replies from officers to the Navy Secretary are in another filing system. Sometimes the letters are filled by place of origin instead. Obviously, letters written before 1880 are handwritten, since the typewriter was not available prior to that date.

Ships plans and maps are filled separately from other types of information. Photo's of ships have yet another filing system. If you are looking for a particular ship, you can look for plans of that ship under the ship's name, sister ship's to your particular ship, or even ships of the same period as your

particular ship. Try to find the hull lines and general arraignments first, but the plan of a ship may actually be many sheets of plans. A battleship of WW II fame can have 70,000 sheets of plans! These plans include calculations a draught, changes in the original plans and anything else you can think of.

There are also files of ship's logs - from 1801 to 1927. These are not as useful as you may think, however. Mostly deal with the routine happenings aboard ship - the raising of the flag in the morning, the departure and arrival of the captain, etc. Very seldom is any mention made of an actual battle the ship is involved in.

One thing Dana suggested is that you go to Washington D.C. yourself in the research for information concerning your ship model. Go to the archivist and explain what your interest is and ask him/her to explain the filling system, etc. to you. Take a block of several days at least to do your research. One of the joys of this type of endeavor is that hopefully you will see and open a document that no one has seen for a long, long time. This is when you can discover 'gold.' Dana said that many things can be discovered in the plans and documents which you might not expect. There can be newspaper clippings from that era, cartoon drawings, erotica, or even someone's crumbs from lunch many years ago.

Dana told of an incident when he was researching and opened one volume that was still covered with the proverbial 'red tape' - in this case literally. The volume had to do with the trial of a commander during the Civil War. While going through the volume, he discovered hair particles which he determined were from someone's beard. He thought, Oh Yuk! Reaching the end of the

volume, he discovered that the document had been reviewed and signed by Abraham Lincoln! He may have seen the beard hairs from the 16th president of the United States!

Dana also indicated that there are no plans of U. S. Naval ships available after 1949, as these plans are all classified. Even earlier plans, if they are stamped 'Classified' are not available to you. Classification of plans can be a problem for you, depending on what you are trying to find. Modern ship's plans are unavailable.

There are other sources. He did mention Howard Chapelle's plans of ship models which are available from the Smithsonian, I believe. Also, another excellent source is the U. S. Naval Academy Library and Museum. All the sources are listed at the end of this short paper, which Dana gave out at the Conference.

Dana also indicated that you may have problems with fees, staff assistance at government institutions, etc. While the general quality is still high, there are now long waits for a lot of things. It is also much more costly then it was several years ago. The plans for a ship could cost you several hundred dollars! Much of this is due to the shrinking federal government budget and the reduction is staff at many of the institutions. As an example, there is only one part time person at the Smithsonian now - it may take a long time for him/her to get to your request and answer it.

Dana said that this was the end of his prepared speech. Again, attached to this short synopsis of Dana's talk is his list of resources:

"Naval History Resources in Washington DC."

Naval History Resources In Washington DC

By
Dana M. Wegner

I. SHIPS PLANS

Most existing USN ships plans 1776-1949, gun plans, maps, and patent drawings:

U.S. National Archives
Cartographic Archives (NNSC)
Washington, DC 20408*
(301) 713-7040

The only source within the Navy for ships plans for ships built after 1949:

Director of Congressional and Public Affairs
Naval Sea Systems Command
Washington, DC 20362
(703) 602-1575
Fax (703) 602-4982

Plans of some USN ships 1776 to about 1917, full sized copies of Howard I. Chapelle plans (catalog available):

Division of Armed Forces History
Museum of American History
Smithsonian Institution
Washington, DC 20560
(202) 357-2250

Plans for early USN small boats:

The book, *Standard Boat Designs for the U.S. Navy, 1900*
Reprint by Elliot Press, 1995/96

Plans of regional watercraft and commercial ships including Liberty, Victory, and MarAd vessels (catalogs available):

Division of Water Transportation
Museum of American History
Smithsonian Institution
Washington, DC 20560
(202) 357-2025

Fax (202) 357-4256

II. RECORDS

For pension records, steamship inspection reports, census records, historic motion pictures, etc:

U.S. National Archives
Washington, DC 20408**
(202) 501-5400

Military service records before 1917, agency correspondence, official reports, etc:

U.S. National Archives
Military Records Branch (NNR1)
Washington, DC 20408
(202) 501-5385

Military service records after 1917. You must be related to the person. Write only:

National Personnel Records Center
9700 Page Avenue
St. Louis, MO 63132

III. PHOTOS AND PRINTS

Ships, people, and places, 1776 to about 1949:

Naval Historical Center
Photographic Branch
901 M Street SE
Washington, DC 20374-5060
(202) 433-2765
Fax (202) 433-3593

U.S. Naval Academy Museum
118 Maryland Avenue
Annapolis, MD 21402
(410) 293-2108
Fax (410) 293-5220

Photo Service
U.S. Naval Institute

118 Maryland Avenue
Annapolis, MD 21402-5035
(410) 293-6110
Fax (410) 269-7940
(Not a Federal agency)

Ships, yards, etc.

U.S. National Archives
Still Picture Branch (NNSP)
Washington, DC 20408*
(301) 713-6800

Ships:

The Library of Congress
Washington, DC 20540

IV. HISTORICAL DATA

Histories of every U.S. Naval ship until publication date:

Dictionary of American Naval Fighting Ships, 9 vols, 1959-91, published by the Government Printing Office.

Ships histories after *Dictionary* (above):

Naval Historical Center
Ships History Branch
901 M Street SE
Washington, DC 20374-5060
(202) 433-3643
Fax (202) 433-3593

U.S. Navy deck logs:

Naval Historical Center
Deck Log Section
901 M Street SE
Washington, DC 20374-5060
(202) 433-0824

All unclassified USN log books (index available):

National Archives
Military Records Branch (NNR1)
Washington, DC 20408
(202) 523-5385

Navy classified operational records post WWII:

Naval Historical Center
Operational Archives Branch
901 M Street SE
Washington, DC 20374-5060
(202) 433-3224

Navy cruise books:

Naval Historical Center
Navy Department Library
901 M Street SE
Washington, DC 20374-5060
(202) 433-4133

*Mailing address. Documents are located at the National Archives II, 8601 Adelphi Road, College Park, MD 20740-6001

**General mailing address. Some documents may be located at Archives II (see above) or regional archives nationwide.

March 23, 1996

Taking the Act on the Road or You Bust 'Em, We Dust 'Em

by Rob Napier

About twenty years ago I began accepting commissions for ship model work away from my home workbench. Individuals, businesses, and institutions requested repair, restoration, and conservation work on single models and collections. Itinerant ship model work has its drawbacks it's true, but, for me they are outweighed by advantages. The work has taken me to distant corners of the United States and to remote sanctums of museums. Seeing an extensive collection in its home setting provides a sharper sense of its creator's goals than seeing the constituent models one by one in my studio. And, not surprisingly, it is simpler to transport one or two people and some tools than, perhaps, several dozen ship models. Over the years I have grown to enjoy the challenge of solving ship model problems without an entire studio's resources just a few feet away. This reflection reviews some thoughts about work in the field and the tools for the job. Assuming someone engaged in ship model repair has gained proficiency at home, there is little discussion here of actual repair techniques; comments are directed toward trips of at least a week's duration.

Planning a trip to work on a collection of ship models depends on answers to several questions. It's not always possible to know the answers before departure, so many are guessed from a basis of experience. No question need ask what type of vessels are portrayed in the collection - work

requirements will be similar regardless of subject.

Will I be able to make an initial visit for assessment purposes before involvement in a lengthy project? Such opportunities should be taken because they will greatly reduce uncertainty generated in determining what will be needed. All that's vital to assess a collection thoroughly are a notebook, a tape measure, a tweezers, a small magnet, a flashlight, and a camera.

Will I be able to make more than one trip to this collection? If so, the first trip combines assessment and actual work. There is far more latitude for planning particular tasks if more than one trip is possible.

Will the trip be by air or car? Air travel demands more refinement to tool and material selection, just about anything can be tossed in a car.

Will the stay be long enough to permit shipment of parts from home or to mail-order new parts? This simplifies second-guessing the precise work that will be required.

How many models are there? This key determines the length of stay or the number of visits.

Are the models cased or uncased? If they are cased, it is likely that more effort will be

used in opening, cleaning, and re-assembling the cases than in working on the models themselves. This is fairly easy work and requires few specialized tools. Uncased models will require specialized cleaning and far more complex repair.

Are the models in generally good or bad condition? Clients' interpretations of condition (and quality, for that matter) vary widely in ratio with their maritime artifactual experience. Their verbal descriptions of the models and damage can reveal a lot about their familiarity with things maritime.

Is the client as institution, a business, or a private collector? The first may have professional-level workshops or laboratories which are suitably equipped with tools, materials, and workspace for ship model work. However, their staff, space, and time resources are usually spread too thin on in-house projects. They can provide minimal labor to move pieces, but expect their consultants and sub-contractors to be self-sufficient. Business clients are much the same: a ship model professional is hired so they won't have to solve ship model problems. Collectors, though, frequently have time and enthusiasm to contribute; they enjoy marginal involvement with their objects: it is their pleasure and they are eager to learn, to advise, and to lend their hands and tools.

What sort of space will be provided for work? The client will determine the specific workplace. It's seldom as ideal as the home bench and may be in the very room or gallery where models are displayed or stored or it may be at considerable distance. Sometimes ingenuity is required to convert a decorously furnished and carpeted living room or public space into a workshop. The space only really needs a table and chair, power, heat,

and light. The last is a chronic problem. Only once have I met a collector who understands these concerns and provides a fully lighted, air-conditioned, plumbed, masonite-countered, tile-floored, ramp-entried work-space built into his questhouse for those who maintain his collections.

Are the models or cases of a size that I can Move alone? If not, will assistance be provided? museums may insist on moving all artifacts themselves, regardless of size. Most business and private clients can usually find someone to help when necessary, but prefer the model professional to handle things.

Procedures

Budgeting time is the first task upon arrival and I generally get to it right away by viewing, with the owner or a curator, the models scheduled for attention, the work area, and other available on-site resources. The quick tour defines the project's scope - all models are included, none is thoroughly examined. Concerns about whether the right equipment is in the travel kit will be alleviated as the subsequent time is spent unpacking and getting oriented in the new workplace.

Only then is each model studied closely and a list compiled of additional tools and materials that may be required. As soon as possible, arrangements are made to obtain these, either directly from the client or a local shop, or by telephone from home or mail-order suppliers via second-day delivery. If this is an assessment trip, careful estimates of time for all tasks are made and become the foundation of a detailed written proposal for future work. For a big collection, this might take two or three days. If this is a work trip, I begin mentally allotting the time span of the visit to particular models and deciding the

order in which they will be addressed. If I'm worried about working on a large number of models in a short visit, I establish a sense of being ahead by planning to complete work on a group of easier models first. At this time as well, initial recording steps are taken.

Museums and businesses usually have models inventoried in some fashion and, if so, their order, numbering, and artifact naming systems are ascertained and preserved. Most private clients do not have formal catalogs. In either case, consecutive numbers are assigned to the right-hand pages in a fatter-than-necessary new notebook and each model is assigned to a page. Client-inventoried models are entered in their established order; others are entered as I approach them while working around a room.

To avoid muddles in written and oral correspondence, clients' naming and numbering systems, even if ponderous or inaccurate, are used. Further, models with compound names are always sited by their full names; it's easy to see how confusion would arise between models of the liner *SS President Roosevelt* and the aircraft carrier *USS Franklin D. Roosevelt* if both are called Roosevelt.

At home, I maintain a consecutive log of every model I've ever built or worked on. If a client's collection is inventoried, its cataloging system is cross-referenced with my log; if it's not, the models' notebook page numbers are used for cross-reference.

When the collection notebook is formatted, just a model's name, number, and vessel type are logged at first. Later, as each model is readied for individual work, initial data are substantially amplified. The model's length, breadth, depth, and height are recorded. It's

important to specify exactly what dimensions are taken so others will understand, for example, whether a length is from the forward end of the figurehead to the taffrail, or from the bowsprit end to the main boom end. There are many excellent models of unidentified subjects and there are models with names common to many vessels. In both cases, accurate measurements may be the vital link to successful correlation of a model with its particular prototype - positive identification can substantially increase a good model's value.

If such an attempt at identification is anticipated, it's smart to take measurements in a system compatible to the vessel type. As examples, lengths of small boats are usually given overall, from the front face of the stem to the top of the transom. Banks dories, though, are measured on their bottoms. Lengths for some types of sailing vessels were taken on their keels, some were taken on particular decks. Beam is often tricky to measure, especially on large models with severe tumblehome. Drop a plumbline on each side and adjust them until they are tangent to the hull's widest points. This frequently requires two people. Draft is easily measured by calculating the difference in heights from a model's base to its deepest point and to its waterline. Because it's an internal measurement, depth of hold is far trickier to measure and usually can only be estimated.

Additional notes record hull construction, color scheme, rig, propulsion, and armament. Comments are made regarding the model's quality, condition, and need for cleaning and repair. Everything on identification and model builders' plaques is copied verbatim either longhand or photographically. If not mentioned on a plaque, scale is estimated from draft marks, liferail or door heights, or

other features. It can be calculated by comparing vessel and model lengths. If the model is clearly built to a scale, but it can't be determined, it is listed as unknown. Models clearly following no consistent scale are listed as not to scale.

It's a bad idea to rely solely upon one's own recall to catalog similar models in a collection. So, at least one straightforward identification photograph - a mugshot - is made of each model. Later, a 2R, or wallet-size, print is glued to the model's manuscript notebook page. When notes are typed to disk, the mugshot is digitized with a scanner and becomes a part of the model's computer file. Other photographs record special details, damage, or changes in condition attributable to, for instance, adverse climatic conditions in the display area.

The model's notebook page becomes its worksheet. Entries record everything done and time spent on each piece. Time accounting is kept separately for all models so clients can learn their relative maintenance needs. This is especially useful when repeat trips are made to a collection.

Extra notebook pages are useful. With the book's front dedicated to individual model pages, the back is open for other stuff. Separate accounting is kept there for the collection's non-model-specific labor which might include set-up, clean-up, moving models in groups, and obtaining materials locally. I make lists of tools and out-of-pocket expenses there. General commentary is entered journal-fashion. Sketches are drawn there of complex displays when items must be moved to work on a model; their return to exact locations will be expected.

A great advantage to knowing that repeat visits will be made to a collection is that

work on some model components can be done at home. A roster is kept in the back of the notebook of all these individual projects which might entail, for instance, making a group of new liferail stanchions to replace those missing from a model; building a new deck gun or anchors; ripping wooden stock for new liferail caps; shaping replacement deadeyes; or even shaping a new mast or rudder. Details for each project are written on a card and enclosed with sample pieces from the model in a ziplock bag for transportation home. This solution effectively extends a trip. Installation can be made during the next trip. If the client is willing, the component work can be done at home and then be returned so he or she can install it. Clients are normally reluctant to do any except the simplest installations.

Space

It's possible the temporary model shop will be in an institution's exhibition gallery or a collector's carpeted living room, but even if it is a rougher situation, it's important to keep tools and projects on the assigned table, bench, and floor areas as consolidated and tidy as possible, even if extra time is required to do so. Work surfaces, especially if they are private furniture, should be protected with heavy paper or cloths. To prevent grinding dust and scraps into carpets, care should be taken to sweep and vacuum as messy tasks are completed. Keep traffic paths open; models positioned for work in thoroughfares should be moved at day's end. Except when in use, coil power cords and stow them; it would be unprofessional, not to mention pretty silly, to be carrying a priceless ship model, trip over a power cord, fall on, and crush the model. If furniture needs re-arrangement to facilitate model work or movement, make a sketch of the original plan and put things back just as they

were. Clients appreciate efforts to keep their spaces orderly, and are delighted if rooms are left cleaner than they were found.

At some sites, some models, because of their large size or installation complexities, may be very difficult to move to a bench. While awkward and more time consuming, one should be prepared to work in situ. This will probably require carrying tools all over the place, working on step ladders with awful lighting, or even jury-rigging staging. On models mounted near walls, it's frequently possible to attend only to display sides. When I make repeat visits to collections with models so-mounted, I arrange a service schedule so all will be brought to the bench regularly, even if infrequently.

Tools

Without an initial assessment trip, planning which tools and materials to take is tough and the first trip is the hardest. Needs will vary among jobs and will depend on circumstances touched in questions at the top of this article. If repeat visits are made to a collection, it's a good idea to arrange a special, preferably lockable, cupboard or shelf to keep model paraphernalia at the site. Materials, supplies, and some basic tools can be stored there and it's a good place for clients to place parts which become separated from models.

If traveling by car, it makes no difference that steel modeling tools are heavy. However, if traveling by air, as I usually do, they make a weighty bag. They can go into a briefcase, but airport security agents may get agitated at so much metal in a carry-on. The solution is to group tools in heavy-gauge ziplock plastic bags and distribute them among clothing in two checked bags. I have never had a problem using this method.

The bags are proportionally lighter, the tools don't have to be lugged through airports and onto airplanes, and they are protected by soft clothing.

I have developed a two-part corollary to Murphy's law: No matter how many or which tools one takes to a work site, the first tool actually needed was either left behind or was already there. The moral is to keep tool selection straightforward and minimal. While home workshops may be crammed with years' worth of tools and materials, it's comforting to be surrounded by the accumulation, and it's terrific to have everything available for a job, the reality is that relatively little is required when the act goes on the road.

As a rule, the actual tasks encountered while working on collections are relatively few, but there are always challenging surprises. Nearly all models, cased or uncased, require cleaning which may be done at different intensities. Simple brush or vacuum dusting is occasionally sufficient, but more thorough work is needed periodically depending on Model's display circumstances.

Bowsprits, yards, topgallant masts, rudders, davits, gunport lids, and other projecting portions of uncased models get broken frequently. Liferails get crushed. Casual viewers seem compelled to discover, with a snap, that rudders, steering wheels, and propellers don't really work. Impact with projections breaks fragile rigging or yanks out its fittings. Bulwarks get fractured. These are the sorts of damage traveling model professionals can anticipate finding and should be prepared to rectify.

The following tool review includes everything I usually carry by air for a two- to two-and-half week session with a large

collection of uncased steam and sailing ship models which will require intensive cleaning and repair. It is assumed the client will have big items like vacuum cleaners, stepladders, power cords, and the like. It is tempting to reserve a special tool kit packed and ready to travel, but needs are different enough each time that I'd repack anyway. Furthermore, I always prefer using the same favorite tools at home and away.

* * * * *

While a spiral-bound notebook smaller than 8-1/2 by 11 inches might be more convenient to pack and carry, this size, college-ruled, provides the best format for taking notes and sketching. A bound notebook works better than individual clipboarded sheets because the pages, thus the models, are always in the same order and easily found. For later data entry to a computer, the standard letter size makes format adaptation easier. Soon, however, the spiral-bound notebook and pencils will be replaced by direct entry into a notebook computer and the entire lengthy step of transcription will be eliminated. Although private clients may not object to the use of pens and markers, their use is discouraged in many institutions. The pencil habit is good to maintain - number 2s are still the best. Artist's supply houses carry small aluminum pencil sharpeners with hard steel blades.

I use a Nikon N8008s, 35-millimeter single lens reflex camera equipped with a 60-millimeter macro lens, a 28-85-millimeter zoom lens, and a daylight-balanced SB-24 speedlight flash. Both lenses are equipped with automatic focus, a feature I eschewed when my eyes were a decade younger. Now bifocal-equipped, I find the camera can focus itself more accurately than I can. Use of autofocus doesn't obviate the need to know

exactly where the focus is - well - focused, it just minimizes problems of viewing through the wrong portion or the transition line of bi- or trifocals. Autofocus features also do not reduce or eliminate the need to understand and apply the principle of balance between aperture and depth-of-field.

Kodachrome 64 and 200 are my films of choice for recording models. Slides are the better medium for illustrating talks and they are easier to file and store than the awkward combination of negatives and prints. As many images as necessary are produced of each model to record its features and any specific damage. Some damage, for instance that produced by adverse climatic conditions, occurs slowly and can only be recorded over a period of years. Repeat visits to collections are important for tracking this sort of problem, and photographs are the medium for the task.

I bring along several items to assist vision and get a better look at models. An Optivisor with a 2x lens is awkward to pack unless it's stuffed with socks; a 3/4-inch-diameter, AAA-battery-powered Mini Maglite is small enough to get inside a lot of models; a universally-articulated electronic technician's mirror with 6-inch handle is indispensable for use with the flashlight; and a small bar magnet is essential to test for ferrous metals without removing paint.

If fabrication of parts is likely, a sizeable selection of tools will be needed. For measuring and layout, I carry a 6-inch Rabone Chesterman steel rule calibrated in the English system on four edges; a 1/4-inch-wide, 10-foot Stanley steel tape calibrated in the English and metric systems; a 0.0- to 1.0-inch outside micrometer for measuring small drills, wires, and cordage; a 6-inch, thumb-lock vernier caliper; a 2-1/2-inch engineer's

square; a pair of dividers or a compass; and a small steel scribe.

Simply the most useful tool at home and on the road is the knife. Everyone has his or her favorite and I use an old L.S. Starrett Co. pin vise with a comfortable 9/16-inch eight-square anti-roll, bakelite handle to hold standard number 11 blades which I'm prepared to consume at the rate of one per day. I also carry a Swiss Army knife; the Huntsman model will solve a toolbox of problems and won't pull one's britches down.

For more specialized cutting, a 2-1/2-inch jeweler's frame saw with one dozen number 2 Herkules "white label" piercing blades and a light-weight razor saw are packed. My traveling bench pin is a 6-inch plywood with a V-notch in one side. It is C-clamped to the edge of a table with padding to protect the table's surface.

Files are occasionally necessary for shaping and cleaning. I carry three 6-inch Swiss; numbers 00 and 1 pillar, and a number 0 barrette; two needles: a number 0 three-square and a number 4 round; and a Japanese double-sided, 90-millimeter, feather-edge saw file. The last has an exceedingly fine 16-1/2-degree knife-like edge which is superb for reaching inside angles.

While chisels should never be used for prying, one with a 3/8-inch-wide blade is indispensable for many tasks besides shaping wood. I use mine for carefully removing paint and other hardened gunks from polished and painted surfaces, for lifting fittings, for cleaning glass, and for other tasks when a fine, sturdy edge is required. A seldom-used 1/2-inch-wide, shallow gouge is also in the kit. Both are perfectly honed before leaving home and the rest of my

baggage is protected from their edges with simple, folded index card sheaths taped to the shanks.

An assortment of tweezers is essential. The most useful for me are a 5-inch, bevel-edge, tapered shank, non-magnetic stainless steel MM; a 4-1/4-inch, indented shank, honed, needle point number 5; a 4-1/2-inch curved-shank number 7; a 4-3/4-inch pointed cross-locking type; a stainless 10-inch long-reach; and a 6-inch, angle-shank, serrated-jaw dental type. When working on very large models, it's convenient to have a pair of the first two on each side. The long-reach and dental tweezers hold swabs when cleaning and the former will reach hard-to-get items like the hatch cover that fell in the hold. For traveling, tweezers' tips are taped together or inserted in short lengths of plastic tube.

Although it's nice to have more pliers for holding, shaping, and cutting things, I get by with small and very small 1-inch-jaw flat pliers; a round-nose plier that tapers to 1/32 inch; an oblique 9/16-inch flush nipper; a 5/8-inch semi-flush nipper; and a fly tier's scissor-grip combination flat plier and cutter.

Some sort of portable power tool is essential. I prefer a variable speed Dremel model 395 with a three-jaw chuck which can hold drill bits, cutting burrs, and even workpieces for light-duty lathe-like turning. For those impossible spots the Dremel can't reach, and because it seems foolish to be without one, I carry a 0.0- to 1/16-inch pin vise. Burrs are seldom needed, but occupy little space, so one each 1.4-inch round, cylinder-square, and cone burrs; and cylinder-square and cone-square dental types will do.

A small assortment of drill bits will satisfy most needs. Bits 1/16 inch in diameter and

above are readily available at local hardware stores, if they are necessary. Notice that bits are carried to accommodate each of several standard wire gauges and those gauges twisted on themselves. See Table 1. Most drilling will be for reaming ragged and glue-filled holes, for remounting fittings, and for internal pins in spar repair. Hand-twisted number 45, 55, and 65 jeweler's reamers are useful as cutting broaches for clearing old line from blocks and deadeyes.

Metal model components require repair as well as wooden and fiber ones. Many broken chains can be simply repaired with new links and many parted liferails can be spot-soldered in place. But creative soldering is frequently a challenge on the road. Fortunately, few tools are needed. Although large and heavy, I take a powerful Weller 8200N gun from which I can get a lot of localized heat in a hurry. I try to remember flux and solder.

To hold things together several small clamp types are in the tool kit. These include a pair of 1-1/2-inch C-clamps; two 4-inch carpenter's squeeze clamps; four each Radio Shack mini and micro test clips which are terrific for holding rigging before seizing or tying off - different colors ease the job of line identification; six or eight standard spring clothes pins with the jaws ground to various shapes; and one hemostat.

Some tools are indispensable. These include my 3/8-inch by 3-inch rosewood-handled jeweler's riveting hammer; a 0.1-inch jeweler's screwdriver; surgical scissors; assorted stainless steel dental picks; and a three-prong adapter - because if I don't take one, I surely will need one. Another critical item is a miniature nail set - I use a 4-inch piece of 5/32-inch-diameter brass rod; about 1/2 inch of one end is tapered to about 3/64

inch with a slightly concave tip. This is valuable for setting small nails and pins in difficult-to-reach places.

Small, impact-caused dings in softer woods can sometimes be repaired with near-boiling water gradually injected into the wood's fibers. I use 0.3-cubic-centimeter syringe and attempt to insert the needle parallel with the wood's fibers and to gradually inject the water which should cause the crushed wood fibers to swell and restore the surface's original contour. This technique doesn't work well on hard woods or on older dings. Care must be taken because the needle punctures finishes and leaves visible marks in the wood and the water can lift finishes or stain woods.

Sewing needles are handy. I stow number 10 quilting, number 9 sharps, and number 5 darners. Three is the right quantity for each because they can be used for properly splicing lines of various sizes. Blunted points are far better for this than sharp ones because they will not snag individual fibers.

Brushes are used for two major jobs; cleaning and painting. For cleaning I use a 1-inch nylon-bristle wash brush with a 9-inch handle and a 1/2-inch natural-bristle stencil brush. For painting I pack an assortment of small to fine high-quality natural bristle artists brushes appropriate to the media to be applied.

For traveling, the needles, number 11 blades, drill bits, burs, and the small scribe will conveniently fill a 9/16-inch-diameter, 2-1/4-inch long plastic screw-top container. The steel rule, knife handle, Herkules blades, needle and Japanese saw files, all but the largest tweezers, test clips, jeweler's screwdriver, nail set, syringe, and shorter brushes all fit in a 9-1/4-inch by 2-inch by 1-

inch cardboard box which is secured with rubber bands.

The camera body, lenses, film, notebook, and spare eyeglasses travel in my briefcase: the camera for its fragility and value and the notebook for it records everything pertaining to the account. I absolutely can't afford to lose these items. All else, while dear, is replaceable. The heavy flash goes in a checked bag.

Prior to departure, I encase my Preac micro-precision table saw and its basic accessories in bubble-wrap, drown this in Styrofoam pellets, and tape everything into a sturdy cardboard box addressed to me in care of my client. If I find it's needed, a call home will have it mailed early the next morning.

If driving, the more substantial items I'd add would be a sturdy camera tripod, two photolights, two 25-foot extension cords, my favorite standard-sized tools including hammers, screwdrivers, 3/8-inch electric drill, and the Preac saw.

Materials

At most sites it is possible to obtain basic, non-specialized cleaning and repair materials; paper towels, glass and other cleaners, sandpaper, cotton swabs, paints, stains, dyes, thinners, all glues, and the like, so toting them is not necessary and clients' housekeeping systems can absorb leftovers. Museums may wish to supply all materials themselves so they know exactly what's been used on their artifacts.

It is difficult to predict what materials will be required for repairing models on a single-trip job. Hopefully, the client can give a good sense of requirements over the telephone before departure. At one site I visit annually,

I have stockpiled a healthy cache for future use. A good assortment of various items is recommended. For wood, I take a selection of bass, mahogany, pear, and box strips in sizes ranging from 1/32 inch by 1/16 inch to 1/8 inch by 1/4 inch. A few pieces of 1/32-inch and 1/16-inch bass and pear sheetwood are packed: they aren't large.

Spools of brass and copper wire and lengths of rod are carried in the gauges and standard sizes detailed in Table 1. Lengths of chain and coils of twisted steel wire rope, each in two or three sizes, may be needed for repairing rigging. A hank of barely-visible 0.004-inch copper wire is useful for all sorts of binding repairs. The 18-inch wood strips and metal rods are taped together for mutual protection against breakage or are carried in a tube. Lill and other small ferrous and non-ferrous pins in different sizes will probably be needed for replacing fittings.

A couple of hundred assorted blocks, deadeyes, thimbles, turnbuckles, shackles, and other rigging sundries have found their way into a little box which always goes along on the off chance one or two will fit somewhere perfectly. Cotton, cotton-polyester blends, linen, silk, and nylon lines of different sizes and textures are put in the kit for repairing rigging. Because it's easy to make light-colored line darker, white or ecru line is carried and stained or dyed the appropriate color at the job. Beeswax is a must.

A selection of six or seven basic Floquil colors in 1-ounce jars is useful. The jars are wrapped individually in ziplock bags, and are slid cartridge-style into a length of 1-1/2-inch polyvinyl chloride pipe. They fit snugly and are protected. A similar basic selection of Liquitex artist's acrylics in 2-ounce plastic tubes is also packed. Predictably, Floquil

products can't be found in remote places, but, surprisingly, artist's acrylics can be remarkably tough to find.

No glues are carried: new supplies of white glue, epoxy, and other adhesives are purchased, used, and left at work sites. I can't imagine any of these leaking in my baggage.

* * * * *

After working with a collection for a spell, it's inevitable to have notions about how its pieces could be displayed to topical and aesthetic advantage. Because the models are usually already on display, it is obvious that clients already have their own feelings about this. The modeler may contribute his or her opinion when asked, or perhaps it may surface unbidden. Regardless, the client will probably listen politely but will finally do what he or she wants. Advice is generally more appropriate when it concerns models' quality, condition, and longevity.

It's deliciously tempting to correct mistakes we find others made in building or repairing models and frequently business and private clients will request this sort of work. However, it is important to preserve the intention and execution of the original model builder. It's certain we'd all like to be assured that those who attend to our models in the future - and they will all need repair at some point - will honor what they perceive our intentions to have been. In other words: don't upgrade the models.

Repair work teaches me a great deal more about ship modeling than simply viewing models does. Fixing models takes me up on down to other modelers' level of effort and ability to confront ship modeling's diverse challenges. For me, a final advantage lies in

taking the act on the road. Time at a clients' site is relatively pure: the telephone never (or hardly ever) rings for me, there is little or no mail, there are no interruptive chores or diversions, and I can work long, clear, productive, and satisfying hours on nothing but ship models. Life seems a little simpler for a few weeks, so: Have Tweezers, Will Travel.

Special thanks for assistance in preparing this paper are extended to Andrew W. Edmonds, Robert Forbes, and Racket Shreve.

Editor's note (Donald C. Dressel): Table 1 mentioned in Rob's article was not included with his paper. However, Rob does plan to publish this paper in the June or September issue of the "Nautical Research Journal", were I am sure the table, along with several illustrations, will be included.

The Swedish Warship Vasa of 1628

By
Edward Von der Porten

A huge gap in our knowledge of the history of ships was filled by one nautical archaeology project: the VASA.

The VASA story began during the Thirty Years War, a religious and political struggle to determine whether the then-new Protestant churches, and the kings who supported them, would survive the counterattack militant Catholicism, and to decide who would control the German states which were coalescing in the aftermath of feudalism. A rising force on the Protestant side was Swedish King Gustav II Adolf of the House of Vasa, who had consolidated Swedish control of much of the Baltic coast, created a new-style army, and was preparing to confront the armies of the Holy Roman Empire. VASA was intended to be the flagship of his growing fleet.

VASA was ordered in 1625, built by a Dutch shipwright, probably launched in 1627, outfitted in 1628, and lost by capsizing in Stockholm Harbor on 10 August 1628. Salvage efforts using a primitive diving bell succeeded in bringing up most of her sixty-four bronze cannon, despite the cold and darkness of the one-hundred-foot depth of water. Then she was forgotten.

In 1954, Anders Franzen began the search for the VASA and located her two years later. She was found to be almost intact and was raised in 1961 in a salvage operation that became a national endeavor and a source of national pride. Since then she has been emptied, cleaned, coated with preservative, reconstructed, and placed in a

well-designed, permanent museum that is now the most popular attraction in Sweden.

The Vasa's place in the history of the ship is right between the galleon of the Spanish Armada period and the fully developed ship-of-the-line of the later seventeenth century. VASA had a two-deck broadside of identical, moderate-size ship-smashing cannon -- light, bronze twenty-four pounders -- on both gun decks, similar to the line-of-battleship's weaponry and unlike the galleon's mixed armament of heavy and light, long and short cannon designed for both long-range and board-to-board fighting, often ending with boarding.

The ship is beautifully recorded and available for modeling.

The ship's history has been written by her rediscoverer, Anders Franzen, in his book *The Warship Vasa* (Stockholm: Norstedt and Bonnier Publishers, 1960), and later editions. Another book by a participant in the salvage is Commander Bengt Ohrelius's *Vasa, The King's Ship* ([London]: Cassell & Co. Ltd., 1962). A journalist's view is *The Vasa Venture* ([Stockholm]: Gebers, [ca. 1961]). These three books are often available in used book stores. *Why Wasa Capsized* (Stockholm: Statens Sjöhistoriska Museum, [ca. 1990]. \$16) by Curt Borgenstam and Anders Sandstrom, deals well with the title's topic. Note the variant spelling of the ship's name.

The carvings are analyzed, illustrated, and located on the ship in Hans Soop's *The*

Power and the Glory, The Sculptures of the Warship Wasa (Stockholm: Almqvist & Wiksell International, 1986, \$35). This is an essential work for any modeler of the ship.

The ship's plans were first published in 1970 (present price unknown). All aspects of the ship are illustrated in Bjorn Landstrom's magnificent *The Royal Warship Vasa* (Stockholm: Interpubshing, 1988, \$35). In addition to building a model of the whole ship, this book would enable modelers to model ship construction tools and techniques, the shipyard, longitudinal and transverse cutaways, guns and gun carriages, the ship's boat, cabins, the whip staff and binnacle, and other features individually. Only one warning is necessary: while the Dutch-style plank-first construction is well illustrated on pages 56 to 59, the next stages of construction would not have proceeded as shown on pages 61 to 64, which illustrates a molding-frame-first system, but futtocks and planking would have been constructed in tandem up the sides, as described in A. J. Hoving's "A 17th-century Dutch 134-foot *pinas*" in *Nautical Archaeology* (17:3, August 1988, pp. 211-222, and 17:4, November 1988, pp. 331-338).

All the recent Swedish publications and the plans should be available from Wasavarvet, 11527 Stockholm, Sweden, at approximately the prices indicated above; some may have changed substantially. *Nautical Archaeology* is available from the Nautical Archaeology Society, c/o Membership Secretary Mrs. Wendy Robinson, 206 Moorview Way, Skipton, North Yorkshire BD23 2TN, England.

The Monterey Boat and its Impact on Yacht Design

By
Charles I. Sweet

The Use of Models in Boat Building

Unable to enlist the Siinos or their cousins the Seenos in building some post World War II clipper bow, double enders and impressed with Vince Seeno's suggestion to build them of fiberglass with an existing boat as a pattern, I set out to do just that with a limited budget.

The broker at Augie Camello's Colonial Yacht Anchorage sent me to Fish Harbor to look at a 28 foot Monterey, which would make it about 30 feet overall, the size we wanted. It was called GLOUCESTER GIRL, and was built in 1932 by F. Castagnola in Pittsburg, the cradle of the Sicilian boatbuilding industry in California. It had a beautiful hull, but some soulless Anglo had put a skyscraper wheelhouse on recently, which completely destroyed the concept and, in fact, made the boat unstable. A fisherman, Red Barnett, bought the boat before I could and cut the wheelhouse down to waist high with a hatch to stand at the wheel. This made it workable and safer, but still unsightly. Determined to keep in touch with GLOUCESTER GIRL, I made Red's acquaintance and occasionally hired him to take my family and friends fishing.

Meanwhile, I set about to find plans from which to produce a scale model of the hull on which I could try several cabins until I found one that was both pleasing to the eye and functional. First, I asked Dewey France

of Southwest Instrument Company in San Pedro where I could get plans and he was the first to disillusion me by telling me there were no plans; they were built by the builder's skill and the knowledge of traditional proportions. Later, Augie Camello will discuss the use of half models under "Other Voices". Skip Larren, then editor of Sea Magazine, came up with articles by Harry Champlin which had line drawings of the 30 foot MALU and the 39 foot version with a pilothouse that foreshadowed Ackerman's Newporter.

Browsing again at Southwest Instrument Company, I finally selected Thomas C. Gilmer's 30 foot motor sailor SEA HORSE because of the unmistakable Monterey like lines, shown with deck and cutaway plan views in a book of his designs. These show the great potential of this boat commercially. It had the traditional pilot house compressed forward of the mast into the living quarters which later distinguished the Skipjacks as the still current successor to the Montereys as small commercial and sport-fishing boats. It was cutter rigged, with a centerboard and cockpit and an aft cabin: both wheel and tiller steering. Power would be two small diesels, which necessitated two canted spade rudders because of its canoe stern. The slight clipper curve in its canted straight bow didn't deter me. I simply freehanded

GLOUCESTER GIRL'S beautiful full clipper bow into my model.

I negotiated for full sized plans for a one-off boat to be built in Italy and designer's fee to be paid if it was used to produce a mold for fiberglass production. In the meantime, my model and its similarity to GLOUCESTER GIRL would demonstrate feasibility of the concept. Years later, I visited Gilmer at Shipwright Harbor in Annapolis after he had been my son John's Marine Engineering professor at the Academy. He told me he had just used the design to test the Academy's first computer because of the extreme changes of curvature within a small area, a typical Monterey boat characteristic. I asked him if he had the Monterey boat in mind when he designed it. I got an affirmative answer, indirectly, when he smiled and said, "I always admired those little boats when I was stationed at San Diego with the Navy".

GLOUCESTER GIRL already had a "go to hell" plywood enclosure over the forward deck opening which resembled the hood of a modern automobile. This was of good construction and we intended to use it in our prototype for the Avalon Sportfisher by continuing the curve downward aft in plywood sides behind a vee windshield to achieve a quick cleanup for a presentable boat to attract our backers and demonstrate feasibility of my ultimate program. I chose, however, to complete my basic model as a traditional Monterey boat type and as close as possible to the way Francisco Castagnola had probably built it. Being flush decked, with hatches over the engine, it was a departure from others of its period. Furthermore, engine instruments on the forward side of the bulkhead separating the forward cabin from the engine compartment suggested a forward pilot house like a

tugboat normally has. Roots of stanchions leading upward to a traditional three paneled windshield were also found in the deck. Accordingly, a hanging console for the wheel was placed forward and the skipper would have stood between the bunks while at the helm. This produced a low profile boat similar to the davit boats of Santa Cruz.

The slides show the conversion of the ugly duckling GLOUCESTER GIRL had become to a sleek modern Avalon Sportfisher and the modular construction of my convertible model enables me to demonstrate the step-by-step metamorphosis during live presentations.

Later, one of the principals of the Vega Boat Company saw the picture of my model in my office and asked who the model builder was, expecting to get a simple commercial reference. He was disappointed when I said I built it myself, but, undaunted, they came up with some pretty good models of their own. Using the same double ended Monterey boat type hull, but with a canted straight bow they presented five different cabin styles as similar sized models to mine at the 1970 boat show to determine the level of interest before starting production of the Vega 30. I wonder where they got the idea?

Figures appearing in the pictures of my model are scale height and illustrate the problem of converting the Monterey "little boats" to pleasure boats. The secret of the original builders was to depress the cabin into the deck, sometimes only a foot or two and for others, all the way into the bilge.

The "Human Engineering" touch of adding scale figures to scale models can be very rewarding in the commercial manufacturing of any product; particularly boats. Not only in personal satisfaction to the designer-

builder but financially, as well, to enable the correction of errors in concept, before the costs of such changes become astronomical. It provides early views of the finished article

for advertising purposes as well as familiarity with the hardware for plant layout, cradles, slings, launching and transportation equipment.

OTHER VOICES

Agostino Camello, Shipwright Napoletano
Colonial Yacht Anchorage, Wilmington, California

I was apprenticed to a boatyard on the Island of Ischia and later in Napoli, where I qualified for an Italian Government license as a builder of ships up to 50 tons. The older shipwrights would not instruct me, as they guarded their trade secrets zealously. As an assigned helper, I had to observe what they did and figure out for myself why they did it.

For the small feluccas, which eventually became the California Monterey Fishing Boat, the builder would literally fantasize his design to make it more functional than his competitors and more distinctive and colorful to attract fishermen, who were themselves extremely competitive and proud of the performance and appearance of their personal boats. As a result, Italian boats could be quickly identified from the Spanish, which differed from the French, the Portuguese and so on. Within Italy, Genovese design differed from Neapolitans and Sicilian boats were another thing entirely. Yet to the European and American eye, they all looked alike, but no two were the same. This accounts for distinctions in the California Monterey Boats; the Neapolitans settled in San Francisco where they developed the San Francisco Crab Boat, the Genovese started in Sausalito and eventually produced the Santa Cruz Lamara Boat and Columbia River Boat. The Sicilians began in Pittsburg, where the two rivers emptied into Suisun Bay. They converted the felucca to the Bristol Bay sprit sail boat for delta fleets and the Alaska

Packers to take north. They also added the clipper bow to go through the Golden Gate and South to Monterey, which gave the name to the classic type. They abandoned it again for the canted straight bow, when it proved too fragile for the cannery infighting. The Sicilians started the Monterey Boat Works to service the type at its destination and continue at that location today. The Portuguese built their boats at Los Angeles and San Diego.

It has been said that we didn't have plans; however, the line drawings of the yacht designer and naval architect that are considered "plans" are merely a system of portraying in two dimensional form on a flat surface, exactly what we accomplished in three dimensional form with half models. Why only half models? Because the other side should be identical and the critical dimensions can be learned from one side with half of the labor. The Venician, of course had an exception to that rule for building their gondolas and I learned the closely guarded secret for making one side different from the other, so that the gondolier could scull or pole his gondola from one side and have it maintain a straight course.

The performance and distinctive sameness of each type of boat was controlled by two things: regulations for the overall proportions and a set of boat curves for the final fairing which were a closely guarded

secret for builders. There were several sets of methods or regulations. One was the San Giovanni, another was the Neapolitan. Under the Neapolitan, the beam was one third or more of the length and the depth of the hull (not the draft) was one half or more of the beam. In laying out a canoe stern, a full semicircle should be used inasmuch as the springback of the planks will tend to elongate and flatten it, making the stern more pointed. Sharp sterns reduce the working area and make hauling over the sternpost hard on the nets. The length of the boat is determined by the longest piece of oak of suitable cross section available. The boat will be planked with cypress or cedar, which are impervious to worms, but the keel is not, so maximum depth of keel will prolong the life of the boat.

After determining the desired overall dimensions of the boat, a suitable scale should be determined, such as one inch to the foot. Then boards of one inch thickness are cut to the overall rectangular size of half of the boat and glued together with animal glue, which we used to call "rabbit glue" and which is water soluble. The hull is then carved with the distinctive features, according to the designer's fantasy, but adhering as closely as possible to the traditional lines of his boat curves; the ogee or "S" of the wineglass, avoiding a slack bilge by using considerable deadrise, flooring the bow, tucking the stern, etc. The protrusion of the keel through the planks must be carved and the drag or descending angle aft must be carefully defined. In building, the keel must be set up on the building loft at the same angle and the frames held rigidly vertical or the boat will not ride level in the water.

After the half model is carved, it is soaked in water to dissolve the glue and separate the

lifts from each other. Station lines, which were scribed vertically on the flat center surface before separating are then scribed on the surface of each lift. Tables of scantling dimensions can then be scaled from each lift for each station at each waterline or transferred directly to a loft surface for each full sized cross section. Transversals may be laid out at the desired angles on each cross section and dimensions from the reference points picked up to test the hull for fairness on each of several angles of heel. Lifts may be clamped together for recarving where necessary to improve the fairness. Bucks or forms are made from each full sized cross section for steaming the pairs of frames or ribs. Sometimes amidships or in a square stern or transom boat, where there is little change in curvature, the same buck may be used for steaming several sets of oak frames. It should be remembered that the builders own proprietary boat curves are used in the connecting of layout points for each station, thus achieving the distinction in hull form attributed to the Monterey Boats of the California Italian family builders.

After all of the dimensions had been picked up and transferred full size, the model was generally screwed together or reglued and hung on the wall for future reference for additional future boats or the development of innovations from year to year. Who said we didn't have plans?

Another regulation was called the Mitre Rule for the Monseignor's hat. It governed the taper of masts to give them maximum strength. A straight line taper would be weak by comparison to a gradual curve outward, leaving material evenly distributed over the length of the mast. This was accomplished by drawing a horizontal line the length of the width of diameter of the mast base. Then with a pencil compass or

dividers set to the length of the line a radius is drawn upward from each end, until the radii intersect. Then a line is drawn across parallel to the base where the distance between radii equals the width or diameter of the mast top. Dividing the space between the lines into as many reference stations as you want and drawing parallel lines across at each level will give you the controlling dimension for each station.

Compared to the modern naval architect or yacht designer, all we lacked was the computer.

Life of the Cherokee

(an American Brig) 1831-1853

by
Johnnie T. Ridgway
Edited by Don Dressel

Many of you may recall that years ago many movies that were made would always start with the ending. You would see how they ended and then there would be a flashback. Well, when I sat down and tried to figure out how to describe the life and actions of the Brig Cherokee I came to the conclusion that they only thing I could really do was to tell you a little about the ending of it, and how I became interested in the Cherokee. So that's what were going to have to do today.

This is a story of a very small merchant vessel that found its way into my imagination. Its kind of a human interest story. As well as probably, I think, an interesting one that will tell us a little bit about what some great people in our country did, sailors particularly, back in the early part of the 19th century that helped make our country as it is and brought to it, it's naval and merchant marine strength. But now for the flashback.

When I was a boy, my mother always told me that my great-grandfather Smith was a deserter from the English Navy in 1847 in Monterey, California. Lo and behold, I found as you do find sometimes that everything you mother tells you isn't necessarily what really happened. And I

through a first cousin and an old uncle of mine, that my great-grandfather wasn't in the

English Navy. He was a young man in England when he was about 16 and his father decided he wanted him to go to sea, for whatever reason I do not know. He had him shipped out on one of his friend's ships to Australia. Apparently he did not like the ship and jumped ship in Sidney, stuck around and finally found his way back to England sometime around 1848 or 1849. He and his sister Mary then went to the United States. At that time he was a young man of 22 years old. He obviously had been a sailor and knew his way around ships. He decided that he wanted to go to the gold fields in California. This was in the spring or early summer of 1850. Well for those of you who are on the know the goldrush in California started in 1849 and by 1850 it was practically all over with. But in any event he signed on board (I am assuming as a sailor) on a little brig called the Cherokee. He (as many sailors do) wrote himself a little poem or sailors chant which was written in old English. He indicates that he was on a brig called the Cherokee, he left Salem on the 6th of July 1850 from the derby Wharf and that he was going to California to get a lot of gold and come back and have all the girls love him. He left Salem on the 6th of July in 1850, making the voyage around the horn, and arriving in San Francisco on the 2nd of January. We lose track of our hero at this point. He evidently married a young lady named MaLinda Packwood, 15 years old.

She is related to the Senator from the State of Oregon. He had a daughter named Matilda and two sons named George and Edward. Edward, who was born in 1856, was my grandfather. John Smith died in 1856 at the young age of 28 years shortly after my grandfather was born. There are quite a few stories in the family about grandma after that, but that's not why we are here today. We are here to talk about the Cherokee.

I did not know that this sailor's poem was in existence until about 1985, when I got a chance to see it. I became extremely fascinated with it. When we had our nautical research meeting in Boston in 1986 my wife and I had a little time. I thought, why not try to see what we could find out about this ship. Through the help of the people at the Peabody Museum and the Boston Library we were able to get some leads on the ship and to our good luck we found the painting of a Cherokee in the Peabody Museum. Unfortunately, we found that there were a lot of Cherokees, as many as 4 or 5, some of which were steamers, all at about the same time. Through persistence and some information obtained which I will show later in this paper we were able to pinpoint which of the Cherokees was grandpa's ship. I do owe a lot of thanks to the people in Boston and San Francisco. Without their help none of this would have come to light. The Cherokee of our interest was very busy throughout her life and made quite a bit of money for her owners.

The Cherokee was built in Hingham, Massachusetts in 1831. It was first registered on February 12, 1831, but was probably not ready in all aspects for sea until early 1832. Her dimensions were 185+ tons, length 89' 7", beam 22' 7" and she drew 10' 3" of water.

The first few trips are rather sketchy since her ownership was transferred several times until about 1835.

VOYAGE A ---(1st Voyage)

Her maiden voyage appears to be documented by the painting which is hanging in the Peabody Museum. The Cherokee under the Master Hozea Winsor sailed from Boston in 1832 to Turkey. The original owner was Ammi C. Lombard, along with a gentleman named Humphrey. Little is known as to what transpired on this first voyage outside of the details already indicated.

There are several interesting comments with respect to the painting of the Cherokee hanging in the Peabody Museum. When I started to build a model of this ship, I found I was having some problems with the painting, particularly with the angles, such as the bow astern, and the angles of the booms on the mast. It became evident to me that this painting had been painted from a naval architect's plans of the ship and that the background was nothing more than fill in.

Another interesting note on this painting is that there are 28 stars on the American flag. Yet the date of the painting is supposed to be 1832. Texas, the 28th state to join the union, did so in 1845, some 13 years later. I do not have any idea whether the artist painted the painting after 1845 or simply did not know how many stars to put in the flag.

VOYAGE B -- (2nd Voyage)

This voyage was much better documented, since we were able to find a log kept by Samuel Benson, who was her Master in April of 1833. The log was found in the Essex

Institute. The log he kept is fairly complete. The ship went around Africa and into the Indian Ocean to enter into the spice trades. At this time Ammi Lombard still owned the vessel, but she had a new part owner partner in Mr. James Stedson.

This was quite a trip for the little vessel. The Cherokee left Boston on the 24th of May 1833, endured some heavy storms toward the end of July, and was land on Christmas Islands about the first of August. On the fourth of August she was off the coast of Java and made several attempts to get into the harbor. Evidently they got in and unloaded their cargo, for they indicated that they loaded sugar and tea. They went into a small town called Bitavia on the coast of Java. The next log indication is on the 15th of September, were it appears that the Cherokee was acting as transport for another company, not her owners. She took on 450 tons of sugar, coffee and black tea to be delivered in Rotterdam. She departed for the Atlantic Ocean on route to Rotterdam. The log indicates that they sighted the island of St. Helena on 16 November. The log also notes that their sails were covered with a very fine red sand on 12 December, evidently from the continent of Africa and probably off the coast of Morocco during a large wind storm. They must also have had other problems, since the log notes that they had to pump 800 strokes per hour to keep the water out of the bilge while in the middle of the English Channel. They finally landed in Rotterdam harbor and discharged their cargo. This is were the log ends -- how the little ship got back home is not known.

VOYAGE C --- (3rd Voyage)

Starting about the middle of January of 1834 until the middle of August of 1835 there is no firm record of the activities of the

Cherokee except for one registration. It certainly would be logical that after she had unloaded in Rotterdam in January of 1834, that she returned to her home port in Salem, Massachusetts. From there she apparently made her way down the coast into the Caribbean for some reasons unknown and was registered into the New Orleans harbor on March 2, 1835. Again it was registered in Boston Harbor on August 29 1835 and from the other various records, we have been able to determine that apparently John Bertram of Salem acquired the ownership of the vessel.

VOYAGE NO. 1

There were a number of confusing transactions that took place involving the Cherokee, but apparently of the 4th of April, 1836, John Bertram sold 80% of the ownership of the vessel to four other gentleman. These new owners were Michael Sheppard, Weston, Sutton, and the Master of the vessel, William B. Smith. They each apparently paid \$1200.00 for their share of the vessel. The registration of the vessel was changed on the above date to indicate that these five individuals now owned the vessel jointly.

There is every indication that the main individuals involved in the ship herself were her master and Mr. Sheppard. Mr. Sheppard was apparently a very astute businessman and kept meticulous records of the comings and goings of the Cherokee, what her cargoes were, etc. Of great interest to me is the original Bill of Sale were Mr. Bertram sold the Cherokee to these 4 gentlemen. This is the key which tied the original building of the vessel to the one that my great-grandfather ultimately went around the horn on in 1850. Near the middle of the bill of Sale it indicates registration No. 234 that

expired in the Port of Boston-Charleston on the 10th of August of 1835. In any event, back to our story of this voyage.

It was to leave Salem on the 4th of April 1836 and head ultimately to Bombay. The letters of instruction to Captain Smith which were written in New York on the 4th of April 1836 do not appear to be signed. But after having read the handwriting of the various people involved, this letter of instructions appears to have been written by Michael Sheppard. They must have been in a big hurry because the registration was the 4th of April, the letter to the skipper was the 4th of April and the ship sailed on the 4th of April. The instructions were quite detailed in that he was to make his way as rapidly as possible to Mozambique then on to Zanzibar. At that point he was to go to Brava and let off "your second officer or some trusted sailor if you have one with \$1000.00 and sufficient provisions to last 6 to 8 months, then returning to Zanzibar." This letter indicates that he is very concerned about running into another ship or finding another ship called the Elsa. It was imperative that the Cherokee stay ahead of the Elsa wherever possible. It was then to proceed on to Bombay and wait there to pickup a load of dates. Quoting from that letter it states that "when you are on your next trip you will go to Bombay which will be your next port you will go to. After you get to Bombay you must leave it to your judgment what course to pursue, whether to lay there and wait for dates to come from Muscat or to go there after them. If you can gain time by doing so, if not, you may find time to go to Cachin and see what can be done there. It is however, important that you should be the first home with the dates. Consequently, if you find any other vessel will be likely to get home before you, come directly home from Bombay and leave the man on the coast

till next voyage, giving others to understand that you are going after him." I would sure have hated to be the poor guy who was left behind at Brava on the east coast of Africa, which is now part of Ethiopia. The log does not indicate whether they left him behind or not, but they were in a big hurry to get home. They arrived back in Salem on or about the end of February or the first of March. They had a return of investment on this voyage of between \$13,000.00 and \$14,000.00 - a successful voyage with an excellent return profit - the first of many such voyages.

VOYAGE NO. 2

The second voyage started on the 7th of March, 1837 and returned on April 25, 1838. Captain Smith went to about the same places as before. This time they did not go to Bombay, however, but traded instead in Mozambique, Mocca, Muscat, and Zanzibar. They shipped brown shirting, a number of bails of which they disposed of in Mocca - also barrels of pitch and rosin and Tobacco. As they discharged their cargo, they picked up items which they wished to take back home. The voyage took them from the northern part of Madagascar directly up to the Arabian peninsula to Mocca and ultimately to Muscat, then they turned and headed back south again to Brava, Zanzibar and ended up in Mozambique. In February of 1838 they decided to head home, arriving in Salem after a good passage on the 25th of April as indicated above.

Some interesting things about the crew and how they worked in those days: this vessel had a crew of 12 including the Captain. These individuals were composed of the Captain, the first and second mates, a cook, a steward, a clerk and six able-bodied seamen. The Captain got part of the share of

the cargo, being part owner, along with his salary. The first mate drew \$23.00 per month, the second mate \$20.00. The rest of the seamen drew \$13.00 a month except the cook, who got \$14.00. They must have been short a steward on this voyage because they hired one in Madagascar - he is indicated as one Mosa Ben and was given \$4.00 a month wage. He only stayed aboard for 4 months and 25 days, where he was paid off for the sum of \$19.25. They then hired another man, a Henry Williams, who commanded \$10.00 a month plus passage home to Salem. For his efforts he received \$31.33. The total salary paid for this voyage (not counting the Captain) was \$1,413.00. As for her cargo, the manifest indicates that she had \$14,500.00 worth of Ivory aboard. Also on board was turtle shells, gum, copal gum, Arabic gum, cloves, goat skins, sheep skins and sacks of dates. The total value of the cargo was \$25,239.00. The records indicate that the cargo was sold in Boston and Salem for a handsome profit for the owners of the Cherokee.

VOYAGE NO. 3

The third voyage is rather confusing - there is even some question as to who was the Captain of the Cherokee. They left Salem on the 23rd of May and again headed for Bombay and Zanzibar. They spent most of their time in Bombay, buying sugar, tea, wine, beef, vegetables (most of this for the crew) and 85 bales of coffee, turpentine and other small articles. Also purchased were dates and Arabic gum. They headed back for Salem sometime after the 16th of January, since she was still in Zanzibar at this time.

VOYAGE NO. 4

The Cherokee left on her forth voyage on the 20th of April 1837 and returned around the first of February of the next year. This voyage was similar to the previous ones, but the cost and profit of this voyage are interesting. The total cost for the 5 owners to pay the crew, outfit the ship and pay for the cargo came to about \$20,000.00. The Cherokee got to Mocca where the Captain sold a good share of his merchandise and where he bought coffee, ivory and gum. In Zanzibar her purchased more ivory and shells. They then returned home with \$42,000.00 worth of merchandise, having left with \$18,000.00 worth of merchandise. The \$42,000.00 worth of merchandise sold for \$53,000.00, which results in a profit of \$10,600.00 for each owner. According to Johnnie's reckoning, this is the equivalent of making a profit of \$600,000.00 today for the voyage.

VOYAGE NO. 5

This 5th trip of the Cherokee was very much like the previous ones, except it had a unique twist. She left on the 23rd of February 1840 which indicates that the ship was only in Salem probably less than 20 days. It again took off for Zanzibar and supposedly Mocca and Genoa. The records indicate passing numbers of ships on its way out of Salem in February and stowing the anchors again, seeing sperm whales and dolphins. It arrived in Zanzibar on the 25th of May. The unique thing about this trip is that there were no further entries in the log until the 20th of November 1940, where it indicated that it was leaving Zanzibar and heading for Genoa which is in the Mediterranean. We were fortunate enough to find that this was a six month period in which the Captain Webb had entered into a contract with an Arab. He had agreed to sell what appeared to be the bulk of his cargo to him. In return, the Arab was

to give him cash in Mocca dollars, he was to receive a large portion of hides and also he was to get a sizable amount of copal (used in the making of varnish.) He was also to get ivory, but some of the ivory was to be delivered at a latter date. Therefore, Captain Webb agreed for 5 months apparently to lay in Zanzibar and wait for the Arab to deliver all of his merchandise. The contract was signed on the 6th of June and everything must have worked out, since Cherokee sailed on the 20th of November for Genoa. They arrived in Genoa on the 28th of February and were quarantined for 10 days. They left on the 6th of March for Leghorn Harbor. They again shipped out on April 13th, went through Malaga, and then on to Salem. They found a man stowed away in the forehold, but no mention is made as to what was done with him.

VOYAGE No. 6

The Cherokee was again ready to sail on the 22nd of June, but this time there was a new skipper, Captain Joseph Cheever. He took Cherokee out on her usual route to Mozambique, Zanzibar and other ports in the Indian Ocean. Just prior to reaching the Cape of Good Hope, on August 20th, the lost a man overboard named George Coltman. They did everything they could to find him but to no avail. About 2 weeks after he went overboard, George's personal property was sold at auction for \$72.98.

They landed in Madagascar with no further incidents on the 4th of October 1841. They discharged some of their cargo here and left the 2nd mate to dispose of it. They then sailed to Zanzibar, arriving on 21 October. The next entry in the log is 8 months later, when the ship left Zanzibar to go back and pick up the 2nd mate. The log is again empty, and the next thing we are aware of is

that the ship is being surveyed for damage by the owners on February 3rd, 1843! Apparently the Cherokee got home all right, but what profit, if any, was made is not known. The survey being conducted in March 1843, the cargo was found to be OK but not the Cherokee. When put into dry-dock, it was found that the keel was badly damaged and about 1/2 of the copper on her bottom was missing. The fore and aft foot of the vessel was also determined to be in bad shape, the rudder needed repair and the stantions were in bad shape. She was repaired, since she left on her next voyage on the 6th of April 1843.

VOYAGE NO. 7

Having a new skipper, Captain D. H. Mansfield, the Cherokee made its second trip to South America to Montevideo and Buenos Aires - apparently as a shakedown cruise. It left on the 4th of April 1843 carrying 100 boxes of gun powder, tea, casks of rice, domestic fabrics, cod, brown flannel, cords and flour. It arrived in Montevideo on June 13th where it unloaded some 399 coils of cord or rope that weighed 38 thousand pounds. Then she went on to Buenos Aires where its cargo was in good shape with the exception of some stains on the flour which was caused by water from the breaks in the deck. On the 16th of August they sold all their cargo at auction and turned around to start home with a load of oxen cowhides. On the 16th of October 1843 they landed in Salem and the crew was discharged.

VOYAGE NO. 8

The Cherokee left Salem on the 28th of October 1843 for her old haunts, again with Captain D. H. Mansfield in charge. She had a large cargo of brown sheeting for Zanzibar.

being sick and of the crew. The liked the crew, who were a Swede, a Welshman, a Prussian, two Yankees and the cook, an Ethiopian. He had a hard time understanding why the skipper didn't shorten sail when they hit bad weather in May. Another quote is "it is enough to make a Christian turn Turk to have such weather as we have had for the last 3 weeks." They arrived in Zanzibar on the 6th of July. He really liked Zanzibar and compared it to Eden. On the 10th of July they went on to Mocca. His diary is extremely interesting as he spent a lot of pages writing about what he saw in Arabia and the nature of the people. On the 10th of September they left Mocca. On the 26th of September, a mate named David Breckett was lost overboard from the main rigging. He was 26 years old and left behind a wife and child. While in Muscat they had a lot of experiences buying rugs. On the 8th of November they left Muscat. One other note in his diary was kind of humorous. Evidently, the Ethiopian cook drank himself to death. Since the captain did not drink, he did not notice that all the liquor on board ship was disappearing. The cook had consumed 3 gallons of brandy, 3 gallons of gin, 2-3 dozen bottles of wine plus whatever liquor he had obtained in port! The diary ends in the middle of the voyage about at this point - apparently the young man decided to become a real sailor. At any event, the voyage ended in the spring of 1848.

VOYAGE NO. 12

The Cherokee by this time was 16 years old and was showing a lot of wear and tear. But, on 6 April 1848, with a new skipper named John Wallace, she again took off for the waters around Zanzibar. She reached Zanzibar on 30 June, and Mocca on 26 September. They reached Aden in Saudi Arabia on October 2nd and went back to

Muscat on November 30th. She then went through Zanzibar on her way south and back home to Salem, arriving on 20 May. She had been gone 14 months. There are little details of the actual voyage, but financial records do exist with indicate that the owners made a little over \$4,000.00 profit on this voyage. Although the profits were less, the Cherokee was still carrying the same cargo, going out with 600 bales of brown sheeting and sugar and bringing back ivory, cloves and copal.

VOYAGE NO. 13

By June of 1849, the Cherokee must have been a familiar sight in the Indian Ocean, particularly on the east coast of Africa. On the 2nd of June, 1849, she departed on her last voyage into these waters. Her skipper was again D. H. Mansfield who had been her skipper on a trip back in 1845. Her cargo again was primarily brown sheeting and tobacco, muskets and gun powder. As a matter of fact she had quite a supply of muskets on board, (she unloaded them in Zanzibar) almost to the extent you would think she might have been a gunrunner. On the 17th of November she again went into Aden and on January 16th of 1850 she hit Muscat. She loaded up with dates and went back through Zanzibar, arriving back in Salem on June 5th. Each owner made a profit of \$3,962.34. Not bad for an old ship. But, for whatever reason, the partnership broke up and John Bertram once again became the sole owner of the Cherokee. It was decided to take the Cherokee around the Horn one more time, still retaining D. H. Mansfield as Captain.

LAST VOYAGE

On the 6th of July 1850 a crew was put on board and the Cherokee sailed from Salem to

She arrived in Zanzibar on March 16th 1844 and went on to Mocca in the later part of May. She did her usual trading in the area and was ready to head home by August. She arrived back in Salem on the 17th of December 1844 with large quantities of coffee and ivory along with goat skins, cowhides, copal and dates.

VOYAGE NO. 9

She was again off to Zanzibar and the Indian Ocean on February 26th 1845. She landed in Zanzibar on the 6th of June and then on to Bombay, arriving toward the end of July. Between July and December 1845 it appears that Cherokee had a unique roll. Apparently Captain Mansfield contracted with a wealthy East Indian to carry passengers. There exists a manifest which states that the Cherokee transported approximately 26 people and all their belongings for some short distance within the Indian Ocean. One rich Hindu woman brought her own water for religious reasons. Some of the other passengers were apparently the Maratha Hindu cast dancing and singing girls, called a hatch curnarre. There was another lady listed as Iairam Hindu Bhalia's wife. Knowing how small the Cherokee was and knowing some details of its structure there was certainly very little room for passengers. It must have been interesting. In any event, this voyage ended in Salem in the middle of April 1846 and was immediately prepared for its next trip.

VOYAGE NO. 10

On May the 19th 1846 a new captain named John Lambert took the Cherokee on her run again to the Indian Ocean, first stop Zanzibar. On September 1st it checked in with the consulate in Zanzibar. The cargo was again one of 280 bales of one kind of sheeting and 308 bales of another. The

Cherokee also had 500 barrels of gun powder on board. In November 1846 she got to Muscat and picked up about 3500 goat skins and some dates. In December she made her way to Zanzibar where she picked up 313 elephant tusks and 296 bags of Copra along with 18 bags of Cloves. She continued on down to Majon in Madagascar where Cherokee picked up some more hides and took on provisions, then headed home. It was a very profitable voyage. The original investment for a quarter share by the owners was \$9,532.90. After paying off all the bills and selling off the merchandise, the final accounting as done by Michael Sheppard indicated that a quarter share returned \$14,787.06. This indicates a profit of \$5,254.16 for 11 months investment - a very good return. This may have been one of her best trips as far as profit is concerned.

VOYAGE NO. 11

The next voyage started out on April 5th 1847 with a new skipper, Captain Bates. There was an interesting member of the crew on this voyage, which makes the trip interesting. A young man named Horace Putnam, who latter became a very well known figure in the New England shipping business, shipped out on board the Cherokee as ordinary seaman. While on the trip, he kept an extensive diary for a time. Some of the interesting highlights of the dairy he kept. He first indicates that the ship was 185 tons and was a good, but wet, sailing ship. He talked about the leaks on board and how wet the ship constantly was. He said "her forecastle is narrow, small and a contemptible thing but 8 feet wide 12 feet long and not high enough to stand straight up in. 6 chests and 6 cloths for 6, would be heaven that each ships owner was obliged to live in these unhealthy holes and to breathe its unpure air forever." He talked about

San Francisco. She was at sea for 173 days making the passage. My great-grandfather was aboard the ship at this time. The San Francisco papers on the 7th of July advertised a cargo sale from the brig Cherokee which said "Just received from Salem one of the Best assorted cargoes ever brought to this market consisting of the following...." and then listed the number of items including blankets, drills, fruits, cigars, pickles, crackers and all kinds of goods which the gold miners were starving for. After searching the various records that are available and the newspapers for a period of 4 years we determined that the Cherokee unfortunately ended up in the harbor with the other 750 odd ships that were either abandoned, deserted, or sold for very small prices. We were fortunate enough to find that the Cherokee was turned into a Store Ship. As a store ship, she was advertised on the 7th of July 1852. She was located near the Broadway Wharf. We checked all departures of ships out of San Francisco harbor from that date on up to and through 1855. We also checked all the listings of all the ships which either were burned in the several bad fires that they had on the docks in San Francisco back in the early 1850s as well as the actual burning of a number of ships in South San Francisco to recover their iron fittings. These searches turned up to be negative. So after much debate, it was concluded that the Cherokee really never left the pier at the foot of Broadway. In 1849, a large part of the waterfront was sold to various land speculators. This waterfront was underwater for the most part and had to be filled. As we know San Francisco today a very large portion of the Embarcadero and the waterfront is fill. It happens that the Broadway pier was included in that fill area and we were able to find maps indicating these fill areas and the various ships that they believe were scuttled or left in place in these

fills. There was a map produced in San Francisco in 1855. It shows a number of vessels and in most cases the names of those that were left in place and ultimately became part of the fill in the Embarcadero. There was a small vessel, a brig, that ultimately became part of the Bay Hotel at the corner of Battery and Green which is at the foot of Broadway. It has been determined that this is probably the last resting place for the Cherokee.

THE MANY VOYAGES OF THE BRIG CHEROKEE
Home Port of Boston, Massachusetts
1832-1850

Voyage	Dates	Master	Destination
A	3/7/1832 to 2/22/1833	Horatio Windsor	Turkey
B	4/18/1833 to 11/13/1834	Samuel Bensen	Indian Ocean-Rotterdam
C	8/10/1835 to 2/12/1836	William Davis	Caribbean, New York
SOLD TO Bertrum & Shepard			
1	4/4/1836 to 2/1/1837	William Smith	Indian Ocean
2	3/7/1837 to 4/28/1838	William Smith	Arabia
3	5/23/1838 to 3/15/1839	Smith-Webb ?	India-Bombay
4	4/20/1839 to 2/1/1840	Webb	Arabia
5	2/23/1840 to 5/15/1841	Webb	Arabia- Italy
6	6/22/1841 to 9/15/1842	Joseph Cheever	Arabia (ship damaged)
7	4/4/1843 to 10/16/1843	D H Mansfield	So America - Buenos Aires
8	10/28/1843 to 12/17/1844	D H Mansfield	Arabia
9	2/26/1845 to 4/18/1846	D H Mansfield	India (passengers)
10	5/10/1846 to 4/5/1847	John Lambert	Arabia
11	4/19/1847 to 11/7/1847	Bates	Arabia (Horace Putnam)
12	4/6/1848 to 5/20/1849	John Wallis	Arabia
13	6/2/1849 to 6/5/1850	D H Mansfield	Arabia
14	7/6/1850 to 1/2/1851	D H Mansfield	San Francisco (Last Voyage)

SPEAKERS AUTOBIOGRAPHIES

Randle McLean Biddle, MS

Randy Biddle has been a member of the Nautical Research Guild since 1970 and contributor to the *Nautical Research Journal* over the years, through inquiry and correspondence. He is the author of the December 1981 article "Pacific Debutante: A Brief History of United States Submarine Torpedo Boat *Grampus*, A-d, SS-4." His 1:24 scale model of *Grampus*, the first modern submarine launched in the Pacific Ocean in 1902, fittingly resides in the San Francisco Maritime Museum, as *Grampus* and her sister boat *Pike* were built there by the Union Iron Works.

During the 1970's Randy built several diorama style models for the Los Angeles County Museum of Natural History. Among them are the Continental armed schooner *Hanna*; a Colonial Bark ca 1640, after Wm. Baker; and the Continental gunboat *Philadelphia*. These models were used as teaching aids in a kind of lending library service performed by the museum. The 1:96 model of *Hanna* was returned to the builder in 1990 but suffered badly in the 1994 Northridge earthquake. The disposition of the other models is unknown as the lending service has been discontinued.

Various (as yet) unpublished research efforts have been conducted over the years, including the Provincetown whaling schooner, *Agate*, 1853; the Farmouth

brigantine *Island*, ex *Lady of Avenel*, 1874; and the bomb vessel *Carcass*, 1764 in which Nicholas Biddle of Revolutionary War fame served with Nelson. Randy has been collecting plans and other information on vessels in the U. S. Navy which carry the Biddle name, including an early torpedo boat destroyer, and a four piper destroyer of WWI vintage. The Canadian tern schooner *McLean Clan* has also been a research subject with interesting results.

Model building activities over the ensuing years have been limited to an extensive reconstruction of the San Francisco Bay scow schooner, *Gaslight*, 1874. Randy's 1:48 plank on frame model is nearly completed. Future plans include the publication of a book on the unique aspects of West Coast scow construction and rig, including the possible inclusion of the substantial collection of scow photos from the Robert A. Weinstein estate. These were recently gifted to the Los Angeles Maritime Museum and are now in the process of being cataloged and properly archived.

Randy's model building career began in 1967 with a rough, semi-scratch model of the Colonial schooner *Chaleur*, 1767. Most recently, he is attempting to reconstruct her appearance as a sloop -- her original rig, at the time of acquisition by the Royal Navy. Another possible project is a hypothetical model of the English (or Colonial) vessel *Henry & Ann* which brought the first Biddles to the new world, via Barbados to West Jersey in 1681.

Randy is a software sales executive by profession and holds a master of science

degree in Business Administration from California State University, Northridge. As a private pilot he holds a rating for Single Engine Land and Sea. Randy has been fortunate in his travels to be able to record the experiences and council of several significant contributors to ship modeling and maritime history, and descriptions and photos of vessel types they loved. Sadly, most of the individuals, and the vessels, have now largely vanished from our nautical scene.

Sara Conklin, ISA, CAPP

Sara Conklin began her career teaching visitors the difference between bow and stern at the National Maritime Museum in San Francisco in the late 1970's. By 1980 she was supervising the transfer of the artifact collections from San Francisco's Municipal Maritime Museum to the National Park Service, a task that required in depth documentation of approximately 18,000 ship models, navigational instruments, vessel fittings, scrimshawed ivory, fine art and what seemed to her like a billion doo-dads. She left her job as Registrar in 1989 and, after taking the educational offerings from the International Society of Appraisers (from which she has now reached the level of "Certified Appraiser") and half the training with the American Society of Appraisers, she is the only appraiser of nautical artifacts in the country with dual credentials. Sara now appraises nautical doo-dads for private clients and maritime museums throughout the United States and Canada. Sara writes about nautical doo-dads as the appraisal columnist in "Nautical Collector" magazine and gives speeches about appraising museum projects to museum professional meetings. Sara comes to us from the San Francisco Bay area and her talk was on the appraisal

process, how to find and appraiser and evaluate their work.

Dana M. Wegner

Dana Wegner received his bachelor's degree at Elmhurst College in Elmhurst, Illinois and his master's in the field of museum curatorship at the University of New York College at Oneonta/Cooperstown. He participated in graduate work at the Munson Institute of American Maritime History where he studied under Robert Greenbalgh Albion. Mr. Wegner began his government career in 1974 as an historical researcher for Admiral Rickover in the Navy's Division of Naval Reactors and was then an exhibits archivist at the U. S. National Archives. He has published numerous scholarly historical articles, presented at numerous symposia, and has written "Fouled Anchors: The Constellation Questions Answered," (1991). He has contributed to "Rickover and the Nuclear Navy," (1989), "Naval History: Sixth Symposium," (1987), "Dictionary of American Biography," (1980), "The American Image," (1979), "In Peace and War," (1978), and "How the Battleship Maine was Destroyed," (1976, updated and reprinted 1995).

Mr. Wegner began his study of historic half-hull technical models and ships plans as an intern at the Smithsonian Institution in 1968 and has been the Department of the Navy's Curator of Ship Models located at the David Taylor Model Basin in Bethesda, MD since 1980. In his capacity as curator he oversees the research, display and conservation of over 1800 museum-quality ship models, 1812 to the present. Mr. Wegner is the 1993 recipient of the Peterson Award for his work on the *USS Constellation*.

Rob Napier

Building, repairing, and writing about ship models has been Rob Napier's chief endeavor for nearly twenty-five years. His work may be found in private, corporate, and museum collections in this country and abroad. He is consultant for ship models in the Museum of Fine Arts in Boston, and in the Forbes Collection. His models have won regional and national awards including a gold medal at the 1985 Mariners' Museum Competition for Scale Ship Models. He returned to the Mariners' Museum as a judge for their 1991 and 1995 Competitions. His articles and reviews concerning nautical research and ship modeling have appeared in the "Nautical Research Journal," "The American Neptune," and "Model Shipwright." Prior to his full-time commitment to ship modeling, Rob Napier was a United States Navy journalist and photographer and a small boat builder. He is currently the editor of the "Nautical Research Journal" and lives in Newburyport, Massachusetts.

Edward Von der Porten

Mr. Von der Porten is a naval historian, archaeologist, museum director and educator with research experience in maritime subjects as diverse as Viking shipbuilding, Henry VIII's *Mary Rose* and the development of the big-gun warship, Francis Drake's California encampment, and the World War II German Navy. His publications include a book on the German Navy in two versions and fourteen editions, one of which was a book-of-the-Month-Club alternate, an article on the Hanseatic League in "National Geographic" magazine and numerous technical reports and magazine and

newspaper articles on maritime and archaeological subjects, in addition to three small text books. He and his wife Saryl have traveled extensively in the United States and Europe for research photography. He is a consultant to the National Geographic Society on nautical archaeology and is a fellow of the Explorers Club and a member of historical and archaeological associations here and in Europe. He has presented slide lectures at numerous professional conferences and to many clubs and historical organizations.

He was the director of the Treasure Island Museum (Navy/Marine Corps/Coast Guard) for seven years until his retirement in 1992. His museum work has included conceptual designing and program planning for a variety of California museums, museum-association presidencies, large-scale public-events organizations, exhibit design for large and small museums and museum gift-shop design.

Until he became a museum director, Mr. Von der Porten had been an educator for twenty-nine years, most of that time at Santa Rosa High School as history teacher, department chairman and journalism advisor, and at Santa Rosa Junior College as evening-program administrator and instructor of archaeology.

A native of Brooklyn, he graduated from Stuyvestant High School in New York City and has B.A. and M.A. degrees in history from San Francisco State University.

Charles I. Sweet

Charlie's ancestors were Welsh shipbuilders, indentured to the Colonies, which accounts

for his inherent dedication to historic marine craft.

Working in an Italian foundry as a patternmaker while waiting for college gave him communications skills to relate to the Northern California Italian family boat builders, with whom he and his family spent much vacation time over the years. As a result, he not only learned the history of the Monterey fishing boat but supported efforts to project the design concept into the fiberglass boat era until corporate interests took over.

You will observe how his patternmaker-related skill as a modelbuilder gave him a clear insight into their design and construction methods and facilitated the transition between the old craftsmen and the emerging fiberglass boat industry.

He recently restored one of the last Monterey Salmon Trollers, a combination boat that his family launched in 1954 at the Seeno Brothers Boat Shop in Pittsburg, California. They were the grandsons of Erasimo Siino, who imported the original felucca version from Sicily. Charlie has lectured at the Los Angeles Maritime Museum with his boat *Mary Ann* at the dock.

Johnnie T. Ridgway

Johnnie Ridgway was born in Yakima, Washington in February 1926. He served in the U. S. Navy between December 1942 and May 1946 as an Electronics Technician 2nd Class. He graduated from the University of Washington in 1949 with a B. S. in Business Administration, Major in Accounting. He became a Certified Public Accountant in February, 1950.

He is married and has three grown children. Since 1950 to the present day he has been involved on corporate and financial management in Arizona, Washington and California.

He began model building in 1968 and joined the Nautical Research Guild in 1984. He has presented at NRG conferences in New Jersey in 1990 and Manitowoc, Wisconsin in 1994.

The first 15 years of his model building consisted of building and modifying kits. In the last 15 years he has found great interest in the research of specific model subjects, usually U. S. Naval ships and then building models of them, incorporating the ship's history into his collection. He has also found it interesting to build scratch models of ships or boats related to friends or vessels that he has seen on his travels. The research of these little known vessels and their unique history is fascinating and is like putting together a puzzle.

He has made good friends with the U. S. Constitution Model Shipwright Guild and has joined some even though he cannot attend weekly meetings.



Demonstrations

JHM

SHIP MODELERS
Association



Rope Walk

demonstration by
Russell Long

Russell Long, a member of the Ship Modelers Association, demonstrated the use of a rope walk of his own design. The drawings which follow provide all the design information needed to make a rope walk for your personal use.

Notes on Rope Making Machine

1. "Cone"

(Snap-on plastic spinner for model airplanes)
Most hobby shops will have this type of plastic spinner, which will make the "cone" part of the assembly. After cutting off the spinner, sand the flat surface to flatten the irregularities on the base. A vise can be used to aid in holding the cone while cutting the slots with a coping saw. A jeweler's saw may also work well. Taper the slots out to the tip and most importantly, try not to damage the very tip of the cone. Use an xacto knife to remove any burrs and epoxy the 3 x 3 MM guide bar to the cone.

2. "Dowels"

All of the dowels used have been store bought, and are of standard sizes. Only the main drive gear dowel has to be adapted to the gear itself. This can be done with your lathe and drill press. The other three gear dowels will require a small amount of carving on one end.

3. "Gears"

Most hobby shops will have these types of gears in their RC cars section. They are referred to as the "Drive and Idler gears" for a model car.

4. "Copper Tubing"

This tubing can be bought at any plumbing store. It is 3/8 in. O. D., and 5/16 in. I. D. It is driven or pressed into the 3/8 in. holes with a hammer and a piece of hard wood, and then reamed and filed flush with the wood surface.

5. "Reducer"

The reducer is nothing more than a common coat hanger. It is very important to make burr-free bends.

6 "Changes"

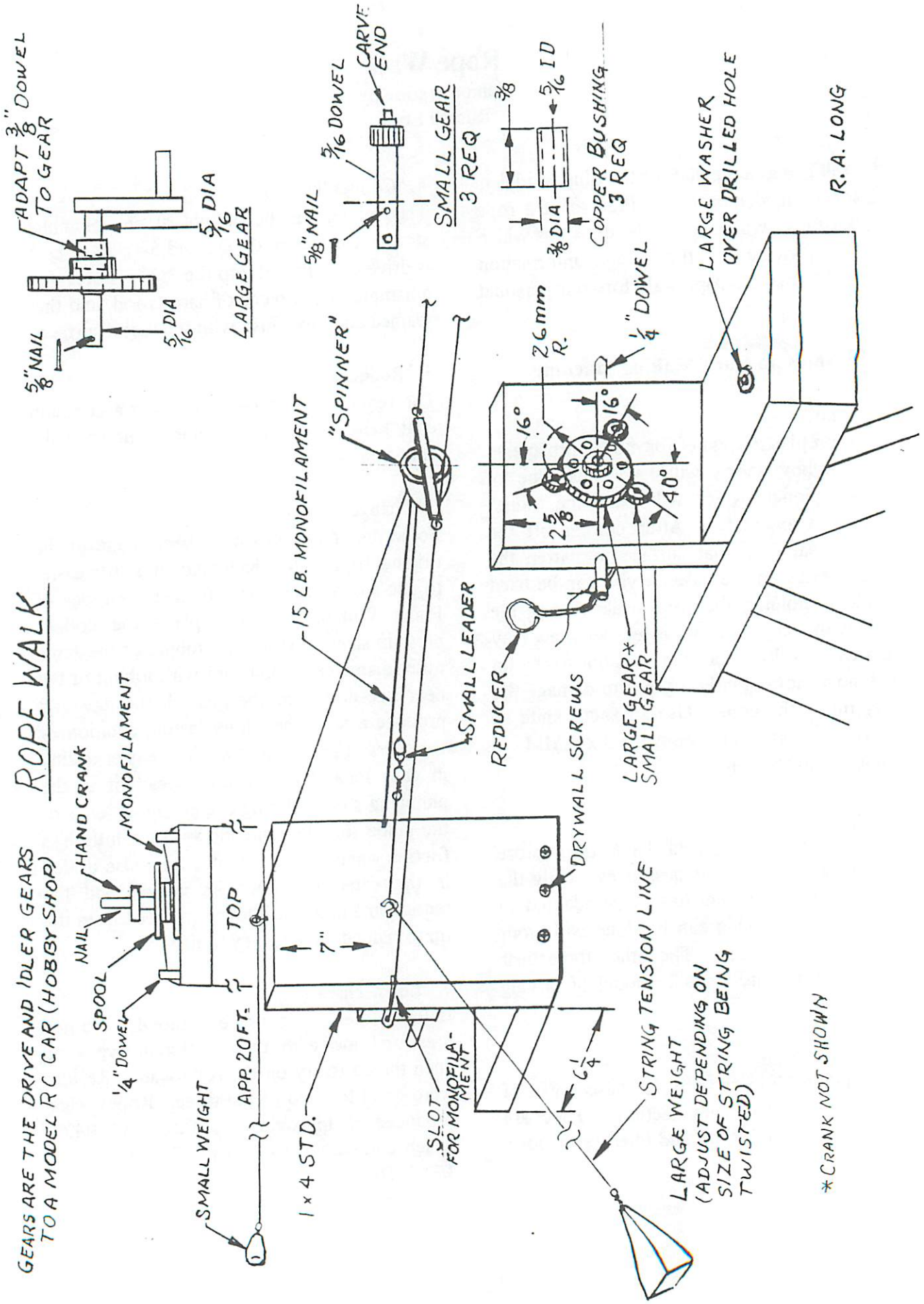
Some minor changes have been made to the original rope walk which made it a little easier to use and a little more efficient. An idea of Frank Wilhite was to replace the copper press-in sleeves with brass tubing of the same outer diameter. Combined with tubing of the next size down for the gear shafts, it would produce a smoother, long lasting rotation of the gears. (These tubes are also easier to find in your local hobby shop instead of at the plumbing store.) Using eyelets on the ends of the guide for the cone allows for a little less friction when moving. Holes were also drilled in the cone to reduce its weight and the tension line hole was moved to 5/16" from the tip to reduce its tendency to droop.

7. "Linen Thread"

Before the Conference, Lloyd Warner presented me with three different types of linen thread to try on the rope walk. Results were good for two of the three. Ropes were produced of approximately .021" and .042", which correspond to 2" and 4" at a scale of 1/8" = 1ft.

ROPE WALK

GEARS ARE THE DRIVE AND IDLER GEARS TO A MODEL RC CAR (HOBBY SHOP)



*CRANK NOT SHOWN

R. A. LONG

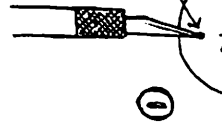
IF YOU USE A HAND DRILL DON'T BE AFRAID TO PUT THE CONE IN A VICE TO HOLD IT. THE CONE WILL BEND A LITTLE BUT DON'T WORRY ABOUT IT, JUST ENOUGH TO HOLD IT IS ALL THAT COUNTS.

HOLE

ROTATE BACK AND FORTH

PILOT HOLE

← CONE (FRONT VIEW)



①

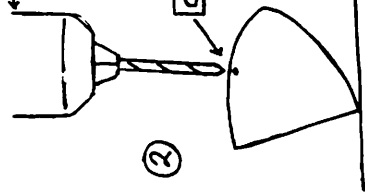
← DRILL PRESS

CONE TENSION HOLE

USE XACTO KNIFE TO START HOLE. (SO THAT THE BIT DOESN'T SLIP ON YOU.) HOLD THE CONE AT AN ANGLE UNTIL THE BIT GOES THROUGH. WITH THE ROTATING BIT STILL IN THE CONE, TIP THE CONE UP.

DRILL PRESS TABLE

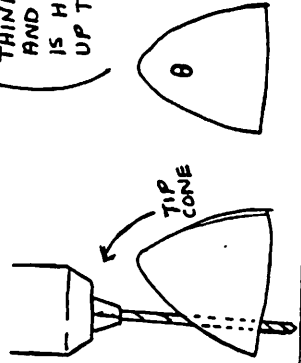
②



WITH A DRILL PRESS YOU CAN USE TWO HANDS TO HOLD THE CONE STEADY OR REST IT ON THE TABLE.

SOME PEOPLE MIGHT NOT THINK STEP ③ IS NECESSARY AND THEY'RE RIGHT BUT THIS IS HOW I DID MINE, IT'S UP TO YOU. BE CAREFUL!

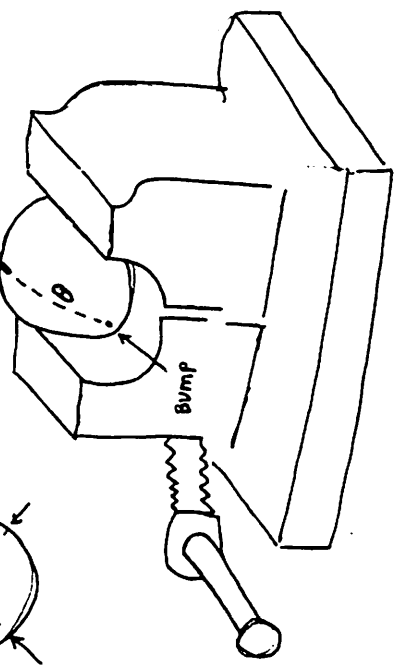
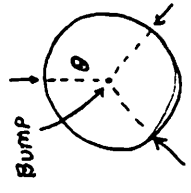
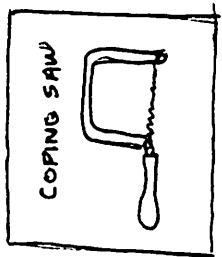
③



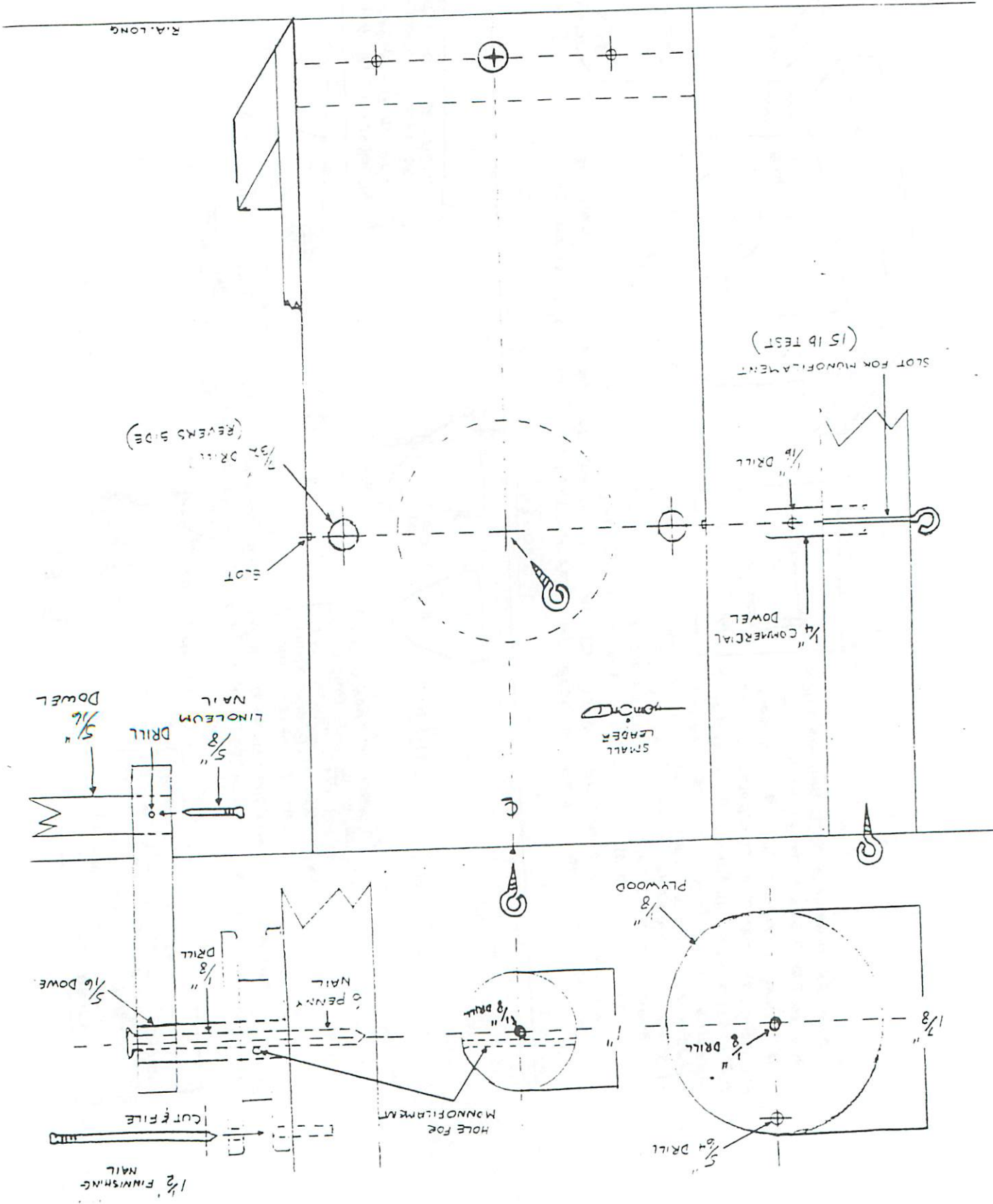
FINISHED!

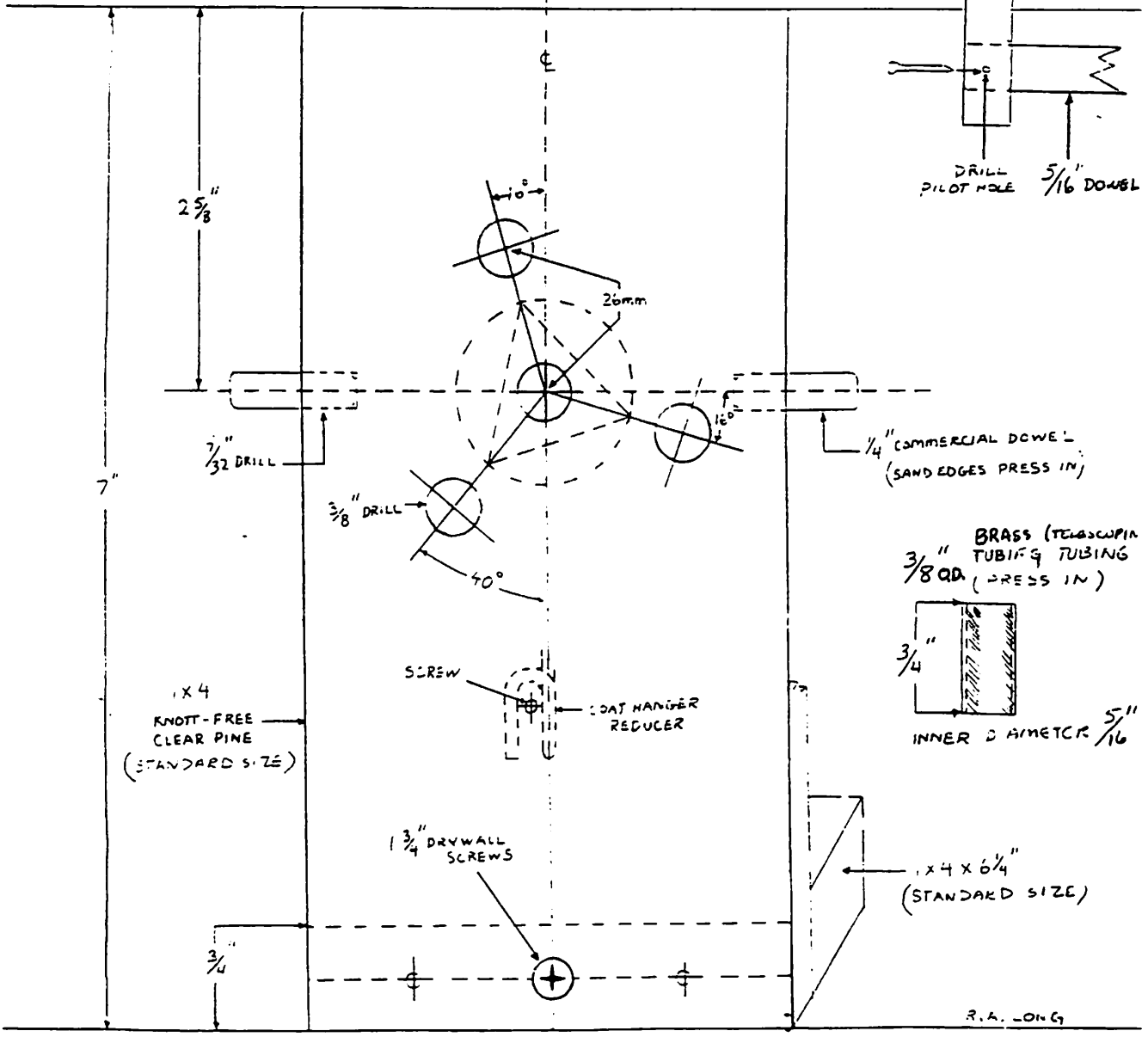
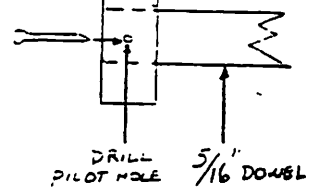
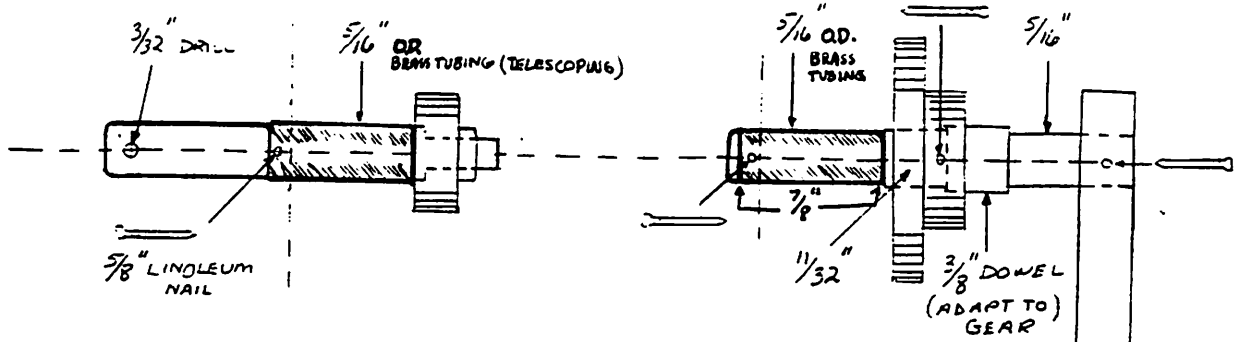
GROOVES

FIRST, MARK THE CONE WITH FELT-TIP PEN AT BASE WHERE THE GROOVES SHOULD BE. THEN, USE THE BLADE OF THE COPING SAW TO GIVE YOU AN IMAGINARY LINE FROM THE MARK AT THE BASE TO THE TIP OF THE CONE. (IF YOU LOOK CLOSE AT THE TIP OF THE CONE YOU WILL NOTICE A SMALL BUMP CAUSED BY THE MOULD, THAT'S YOUR REFERENCE POINT.) START AT THE BASE USING YOUR THUMB ON THE CONE TO KEEP THE SAW FROM SLIDING. FOLLOW YOUR IMAGINARY LINE, FIRST SLIGHTLY UNTIL THE SAW BITES. THEN YOU CAN DETERMINE HOW DEEP YOU WANT THE GROOVES TO BE, (ABOUT ONE MILLIMETER IS DEEP ENOUGH.) FOLLOW THE CURVE OF THE CONE KEEPING TO YOUR IMAGINARY LINE.

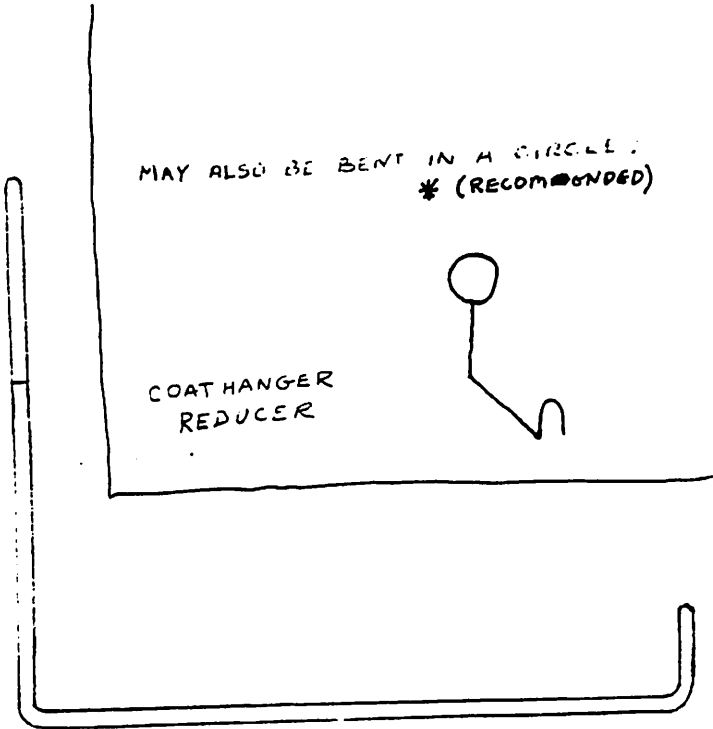
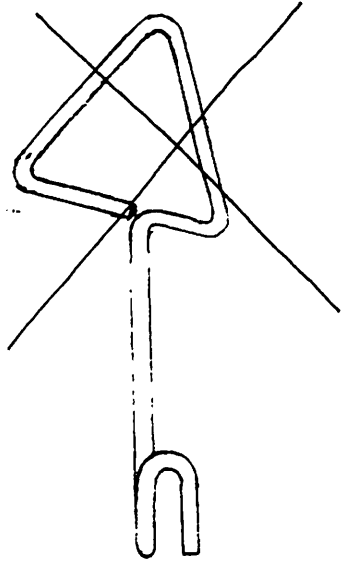


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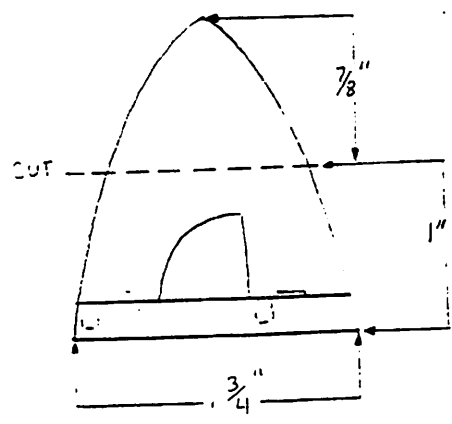


R.A. LONG

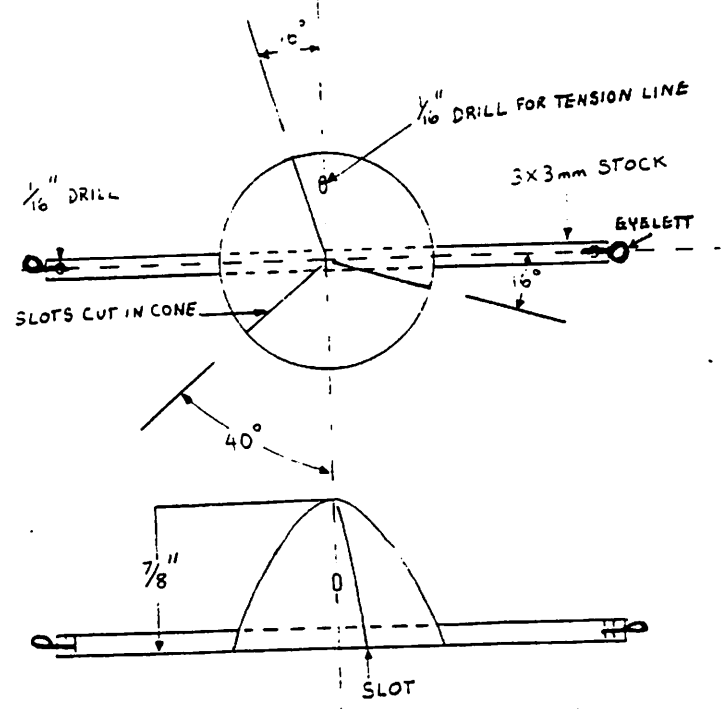


MAY ALSO BE BENT IN A CIRCLE.
* (RECOMMENDED)

COAT HANGER
REDUCER



SNAP-ON TYPE MODEL
AIRPLANE SPINNER



R.A. LONG

3-D Carving Pantograph

demonstrated by
Richard Denney

Paul Greenlee, a member of the Ship Modelers Association, made a 3-D carving pantograph some years ago, based on plans published in Science and Mechanics Magazine published in about 1960. That magazine is no longer being published. Paul showed the pantograph to other members, and approximately a year ago, considerable interest developed. As a result, several were made by Richard Denney, and these are now in use by SMA members.

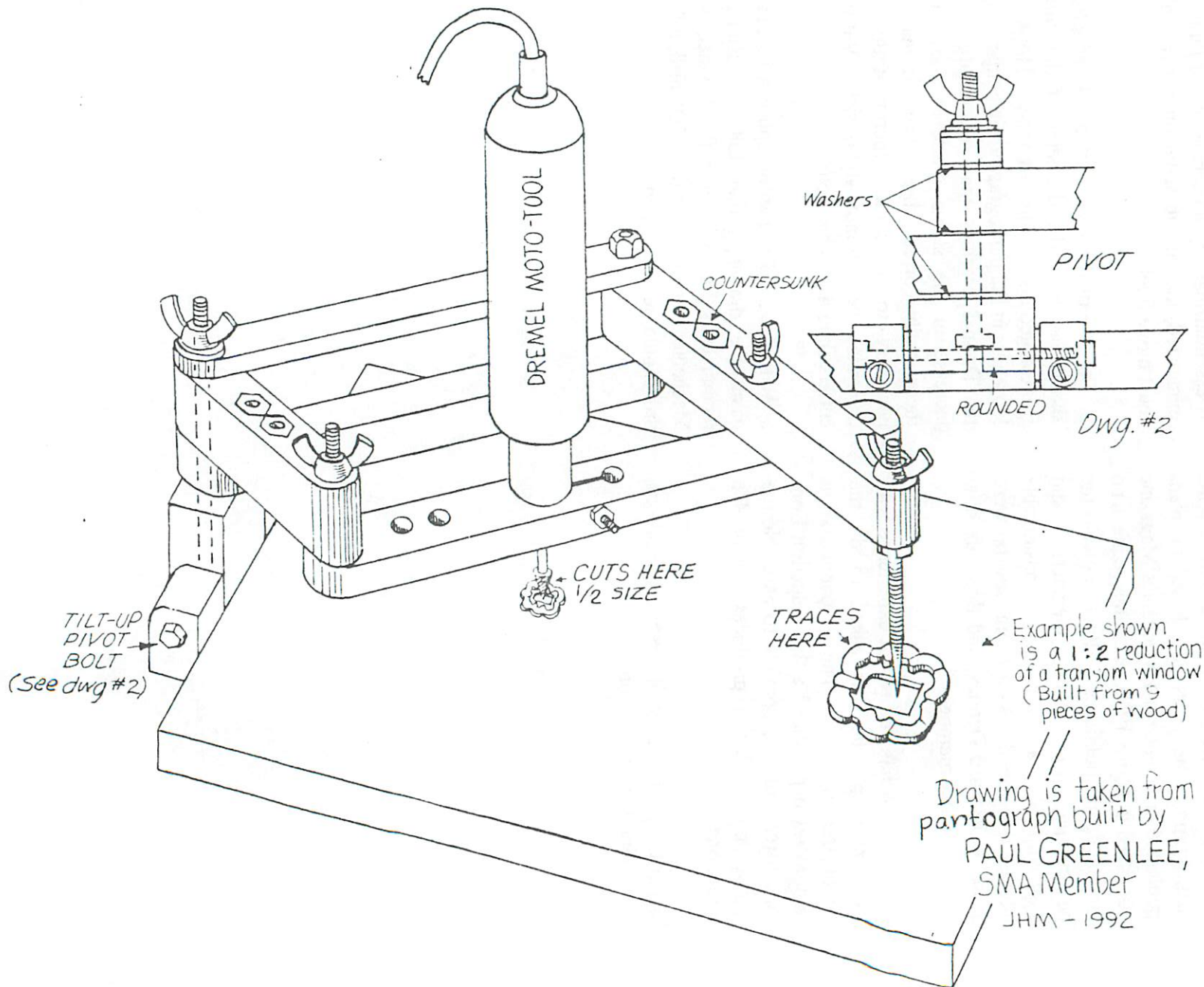
Since Richard has had recent experience with the pantograph, he was asked to do the demonstration. The configuration demonstrated produced a 2:1 reduction from the master, but it is possible to assemble the pantograph so that it produces 3:1 or 4:1 reductions.

Richard offers several recommendations concerning the pantograph.

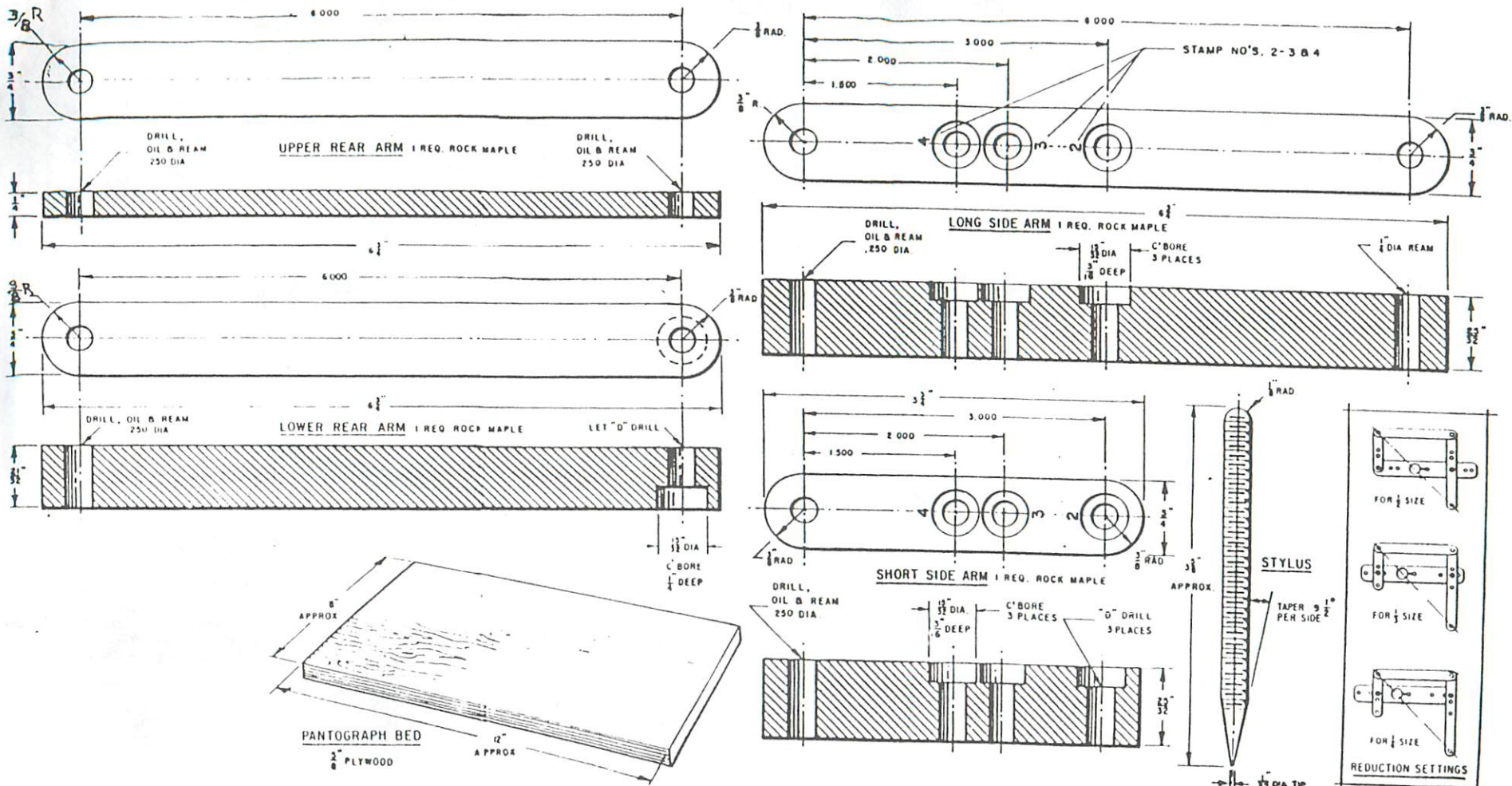
1. When building and assembling the device, it is essential that any looseness in the joints be minimized, and at the same time, everything must move freely.

2. The size of the stylus, for a 2:1 reduction, should be twice the diameter of the cutter from a geometric point of view. However, looseness in the pantograph or irregularities in the Dremel bearings may necessitate some increase in the stylus diameter above the theoretically correct size. Thus, it may be necessary to do some experimentation to determine the optimum stylus size. Various cutters should also be tried.

3. With care, a 3-D pantograph can be made using the drawings that follow. Richard recommends that wherever the Science and Mechanics drawing calls for a "D" drill, a "C" drill should be substituted.



3-D Carving Pantograph



MATERIALS LIST — CARVING PANTOGRAPH

No.	Req'd	Size and Description
2		1 1/8" O.D. x 17/64 I.D. x .060 thick 1" dia. nylon washer
10		9/16 O.D. x 17/16 I.D. x .060 thick nylon washer
2		9/16 O.D. x 9/32 I.D. x 3/64 thick steel washer
3		1/4" A.S.A. medium lock washer
3		1/4" 20 N.C. lock nut (plastic insert)
7		1/4" 20 N.C. standard hex nut
3		1/4" 20 N.C. standard hex nut
1		8-32 N.C. standard hex nut

2	1/4" 20 x 1 3/4" N.C. hex head cap screw
1	1/4" 20 x 2" N.C. hex head cap screw
1	1/4" 20 x 2 3/4" N.C. hex head cap screw
1	1/4" 20 x 3" N.C. hex head cap screw
1	8-32 x 1 1/4" rh machine screw
2	228 x 1 1/4" rh wood screw
1	1/4" 20 x 4" threaded rod

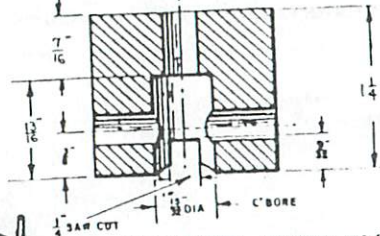
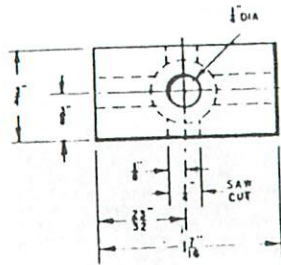
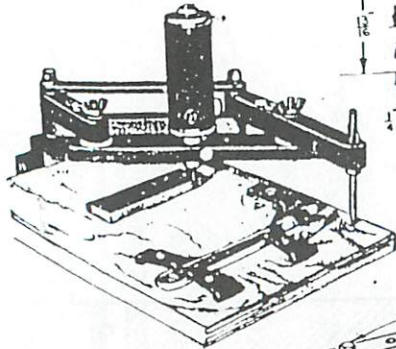
Lumber Required
 1 1 x 6 x 14" clear rock maple — planed two sides to 3/4" thick
 1 5/8 x 8 x 12" fir plywood — good one side

Cut clamps and blocks from scrap maple as needed

3-D Carving Pantograph

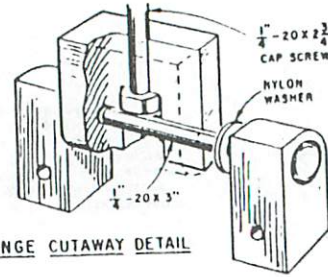
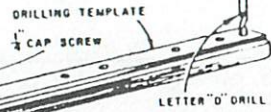
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DESIGNED FOR SCIENCE AND MECHANICS
BY BENCH-CHAFF

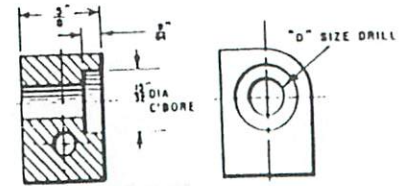


HINGE BLOCK 1 REQ (ROCK MAPLE)

DRILLING DETAIL

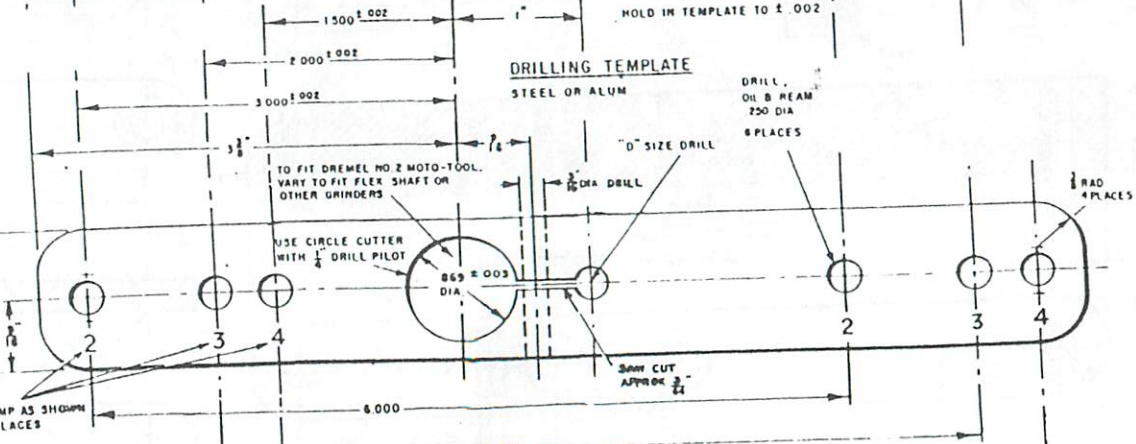
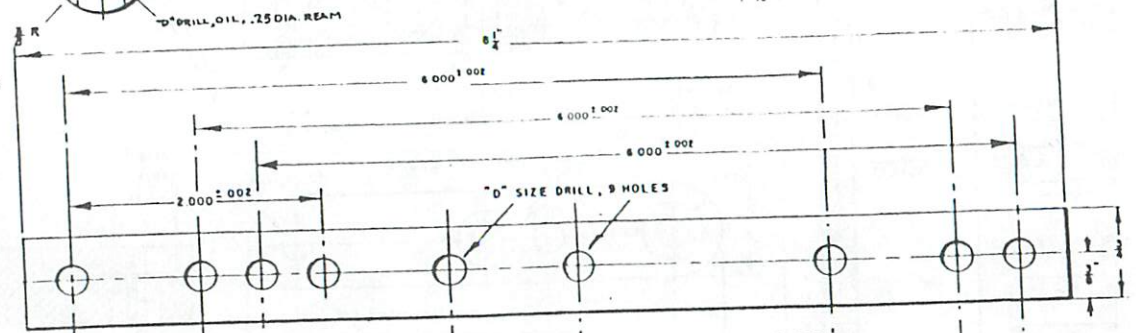
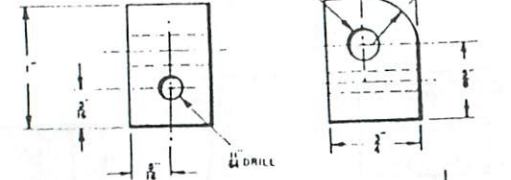


HINGE CUTAWAY DETAIL

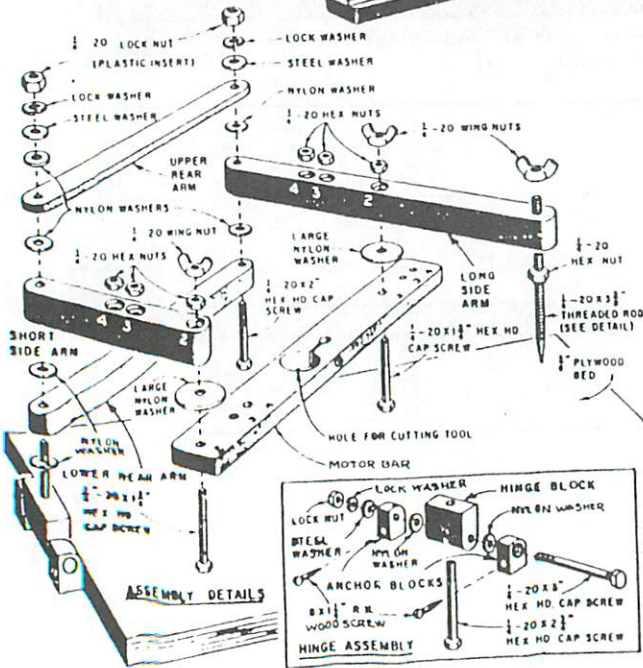
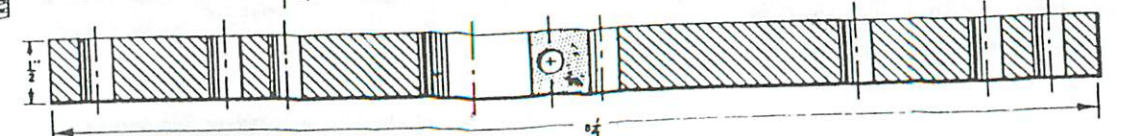


ANCHOR BLOCKS

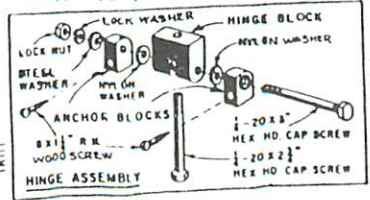
2 REQ (ROCK MAPLE) "D" DRILL 1/4" RAD



MOTOR BAR
1 REQ. ROCK MAPLE



ASSEMBLY DETAILS



CNC Machining

demonstration by
Bill Amour

The CAD-CAM (Computer Aided Design - Computer Aided Machining) demonstration began with a brief showing of how a CAD design is made using lines and arcs. Used for this demonstration was Autocad LT for Windows. No attempt was made at this time to create a design, because of time constraints, but it was shown how this design is transferred to a DXF (Data Exchange Format) file to transfer the CAD design to a file a CAM program will understand.

Next was shown how the DXF file is changed to a format that the CNC (Computer Numerical Control) machine will understand using Bobcad CAD - CAM program. The Bobcad program converts the DXF program of lines and arcs to letters and numbers the CNC Machine understands.

The first machining done was scroll work on the Continental Frigate Confederacy. Next, 1/4" = 1 ft. belaying pins were made. Then, without changing anything except for an entry in the program, 3/16" = 1 ft. scale belaying pins were made, and then 1/8" = 1 ft. scale pins.

After adding a fixture, 3/16" = 1 ft. scale 12 pound cannon barrels based on Harold Hahn's plans were made using brass stock. Approximately 14 cannon barrels were made during the demonstration.

Hardware and Software Programs Used

- Sherline mill covered with Ah-Ah software, stepper motors, and hardware.

- Autocad LT CAD software. Not needed to run mill, but recommended to accelerate the design process.
- Bobcad CAD-CAM software. Not needed to run mill, but used to convert complex designs to machine language.
- 486-66 DX computer. To run the mill with Ah-Ah software, a 386 PC is the minimum that can be used, but a 486 DX or higher is recommended for faster machine response and application of the CAD-CAM software.

Hardware and Software Sources

There are several sources for hardware and software needed for CNC milling. The company Bill Amour worked with to assemble his system is Personal CNC of Lawndale, California. Refer to the sheet that follows for details concerning Personal CNC. Sherline is the manufacturer of the milling machine, and they have provided a list of companies who do conversions on Sherline equipment.

Machining Fixtures

Special fixtures are often needed to adapt small machine tools for particular CNC operations. The drawing that follows shows the adapter that was used during the CNC milling demonstration. Of course, the specific dimensions may be varied, depending on your particular setup.

Personal CNC

PC Motion Control Products

Fax & Voice: (310) 542-7866

**Mail: 4435 Redondo Bch. Blvd. #420
Lawndale, CA 90260**

May 1, 1994

PRODUCTS

COMPANY

PRODUCTS

ah-ha Design Group, Inc. - Minnesota

CNC PRO - PC Motion Control Software
Stepper-Motor Driver Boards (OEM's only)
Stepper Motors
Complete CNC Control systems
PC Digital Readout Systems
Educational Materials

Minitech Machinery Corporation - Georgia
(We do not represent to schools)

CNC Mini-Mill/2 (Desktop CNC Milling Machine)
Sherline Mill Retrofit Package
Sherline Lathe Retrofit Package
Educational Materials

Rockford Ball Screws - Illinois

Ball Screws
Preloaded Bridgeport Retrofit Kits

Arbor Image Corporation - Michigan

Draftsman (Software to convert scanned raster images into CAD drawings)

BOBCAD-CAM - California

CAD/CAM Software for Milling, Turning & EDM

SOON

Large Table CNC Routers
CAD/CAM for surfaces
Heavy Duty Benchtop CNC Machines



CNC Conversion Companies for SHERLINE Equipment

* Shortcut back to beginning of Dealers List.

A number of aftermarket manufacturers supply equipment to convert your SHERLINE tools into Computer Numeric Controlled tools. SHERLINE only produces manually operated machines. These companies purchase SHERLINE machines and, using their own conversion designs, stepper/drive motors and software, modify the machines to CNC. Some offer kits for you to convert your own machine to CNC.

* Indicates companies that sell primarily to the educational field and offer more safety features/bells & whistles; therefore, their prices are higher.

** Indicates companies that offer retro-fit kits and/or affordable CNC machines designed for the end user, not for the educational system.

**BACK TRACK. Attn: Gary Gaspord
1924 Glen Oak Drive. Glenview, IL 60025
(847) 998-0821

**BOBCAD-CAM. Attn: Ed Shiang
138 Arena Street. Unit B. El Segundo. CA 90245
(310) 606-9340

*D&M COMPUTING. Attn: Dave Ortner
1100 32nd Avenue South. Moorehead, MN 56560
(218) 233-5172

*DENFORD MACHINE TOOLS USA, INC., Attn: Andy
815 W. Liberty Street. Unit 5. Medina, OH 44256
(216) 725-3497 (E-mail: sales@denford.com)

*LIGHT MACHINES CORPORATION. Attn: Dieter
444 E. Industrial Drive. Manchester, NH 03109-5317
(603) 625-8600

**MICROKINETICS CORPORATION. Attn: Maurice Khano
1220 Kennestone Circle. Suite J. Marietta, GA 30066
(770) 422-7845

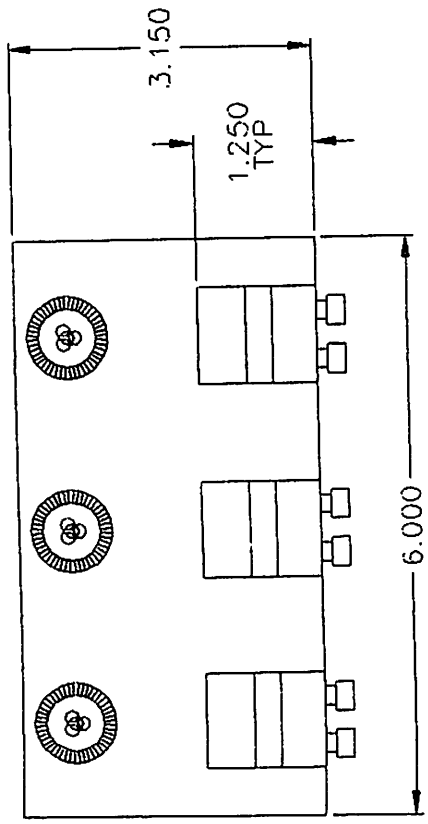
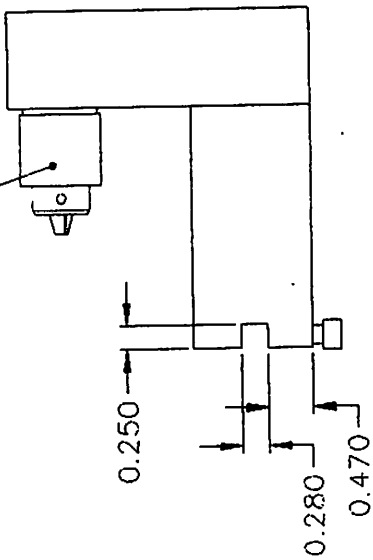
**MINITECH MACHINERY CORPORATION Attn: Jack Heald
1897 Wildwood Place NE. Atlanta, GA 30324
(404) 607-7228

* MTI TECHNOLOGIES. Attn Dwight Howell
6701 Olympic Highway. Unit H. Aberdeen, WA 98520
(360) 532-6984

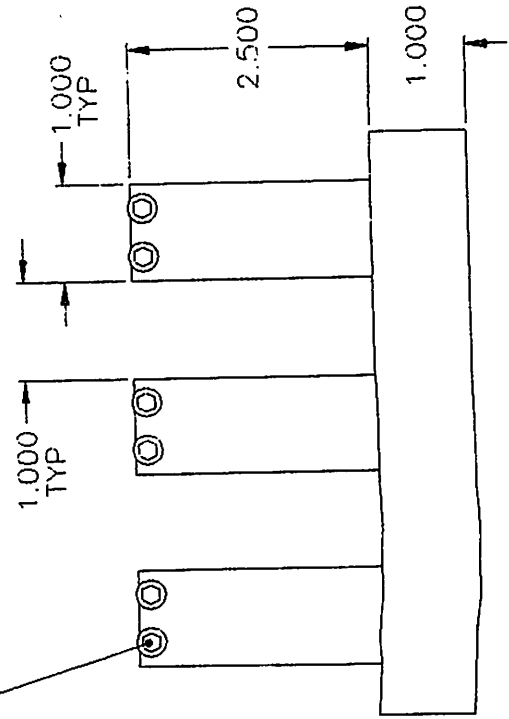
| [Home](#) | [About Sherline](#) | [Lathes](#) | [Mill](#) | [Accessories](#) | [Dealers](#) |

[Tool Prices](#) | [Accessory Prices](#) | [Contest](#) | [Full Size Tools](#) | [Loadmaster](#) | [IMMA](#) | [Resources](#) |

JACOBS' MODEL O DRILL CHUCK
TYP 3 PLCS



10-32 SOCKET HEAD CAP SCREW 6 PLCS



THIS LATHE FIXTURE FOR A CNC MILL WILL HOLD UP TO 3 DIFFERENT 1/4" TOOL BITS AND UP TO 3 DIFFERENT DRILL BITS. BASE AND TOOL HOLDERS MADE FROM 6061-T6 ALUMINUM PLATE.

Room Temperature Vulcanization (RTV) Mold Making

Demonstration by: Kathryn St. Amant

The ability to manufacture your own model parts and accessories gives you possibilities limited only by your imagination. The versatility of the room temperature vulcanization (room temperature curing, or cold molding) mold compounds allows you to use a variety of materials for your finished product. The RTV mold can accept resins, silicone rubber, foam and urethane rubbers, low temperature metals, and wax (for high temperature casting) for production.

When RTV molds are chosen for your parts and accessories production, you may use many alternative materials for your master model creation. Basically, refrain from using any material that will melt with prolonged moisture contact. With that in mind, picture what can be done with a little experimentation and forethought.

The decision to begin production of your own model parts and accessories need not rest on the cost of tools. The tools necessary to begin can readily be found around your shop, house, and local hardware store. The decision to begin rests solely on your desire to embark on a new and fun modeling experience. One that will allow you to expand your talents into new areas you never thought possible, and smile at the marked improvement of your completed models.

Sound like fun? Do you want to try it? Wondering what you can make using this process? Most folks think of using molds for reproducing large quantities. This is a tool that can allow you the luxury of extra time on your original pieces. Your men, artillery, supplies, decorations, etc. can then be reproduced quickly and beautifully detailed.

Quick re-production is a great attribute of RTV molds, but it is not the only reason to consider them for your modeling experiences. Since RTV mold compounds allow the use of alternate master model materials, you can create your one of a kind masterpiece in a compound that will not be used for the finished piece. You may choose a material that allows you to manipulate it into forms not possible using the material you wish your piece to be completed in. Followed by making a mold of the master model and casting your masterpiece in the material of choice.

The capability of mold making comes in very handy when you have only one of an item that you need more of. What would happen if while building your model, a piece gets lost and the model manufacturer doesn't make it anymore? You could be left out in the cold, or you could make one yourself. Say you are visiting your friend, and see the perfect "doitmathingy" that you have been looking for. You could just adore it from afar, or borrow it and make one for yourself. And you won't even damage your buddies'. Are you getting the picture?

Here is one more example. Your model is complete, but something seems to be missing. After deciding that adding a crew would bring scale and animation to the static scene, you may think that you just don't have the time or patience to start modeling a whole crew from scratch. And, you tell yourself, the only scale figures that you can find at the hobby shop don't have anything to do with your model and wouldn't complement it. What if you could detail the figures to your satisfaction? Borrowing from

commercial figures, say WWII commandos, and changing them to fit your model's theme would save you hours. With the work you put into them, they can become 17th century sailors, WWII submarine officers, an Alaskan salmon fisherman, etc. And they may evolve from just one figure that you purchase.

Now that your creative juices are flowing, and you have some ideas about what you want to do, what does it take to make a Room Temperature Vulcanized Mold?

TOOLS

SCALE - A good scale or balance is imperative to properly weigh the RTV silicone rubber and its activator. There are some nice digital postal scales available in the \$30.00 range. For most purposes in modeling small parts, having gram weight can save you a lot of rubber. A 2 to 5 pound capacity is plenty.

MIXING CONTAINER - I use big plastic cups, like you get from the local hamburger stand with your favorite ball player on it. They have smooth interiors, so the rubber and activator can't get caught in ridges, and they are of sufficient size for two or three small molds to be mixed at once. The container must be four times the volume of the rubber to be mixed if you plan on using a vacuum on it.

MIXING STICK - I have found that paint sticks are perfect for the job, and are easily found. They are also great because you can just throw them away and have a fresh one for the next time.

MOLD FRAMES - Styrene plastic, Dixie cups, milk cartons, wood, cardboard (small jewelry boxes are great) all make good

frames. Having masking tape, scotch tape, wax, and clay (I use KLEAN KLAY brand, or sulfur free clay, that is compatible with silicone rubber) will come in very handy for sealing the frames. Wood and cardboard need to be sealed before pouring in the rubber compound. I seal the inside of cardboard with scotch tape. You may seal the wood in the usual manner, or paint a coat of molten wax inside. I find that the scotch tape trick works here too. It will stick long enough for the mold to cure.

BASE FOR FRAME - I use old Compact Disc jewel boxes. Other Plexiglas or glass works well. These can also be used for the "capping" of the frame.

MOLD RELEASE - The RTV silicone rubber doesn't stick to many things, but if it does, it's almost forever. Porous materials such as wood stick to it, seal the model by working wax into the model, it will fill the grain pattern and smooth out the model. Rubbing a thin coat of Vaseline, or a spritz of silicone mold release spray will work too. Silicone rubber will glue itself to silicone rubber. Always use a parting agent when making multi-part molds, or when casting silicone rubber parts.

CLEAN UP SOLVENTS - I use acetone for minor clean up. For the major clean up, and I usually spill the stuff all over the place, I wait until the next day. It will be cured and will just peel off of just about any surface. That includes the mixing cup and stick.

A TUBE OF SILICONE CAULKING COMPOUND - Yes, from the plumbing department of your favorite store. This can actually be used to make your mold. Give it a try for an inexpensive trial mold. The mold will only last for a few castings. Be sure to get clear compound so you can see

everything that is going on while cutting it open! The reason to have this around when you get busy with the REAL silicone rubber is it will stick broken mold pieces back together.

VACUUM CHAMBER AND PUMP - Used to get the air bubbles out of the rubber. It is a requirement for some of the rubber compounds, so be aware of what you are buying. I have included a very inexpensive pump and chamber sketch for you to consider making. It really is a good idea to have one if you decide you enjoy mold making. A trick used by those that don't have a vacuum is to punch a small hole into the bottom of your mixing container (after the compounds are thoroughly mixed), and drizzle the mix onto your model. This will pop most bubbles.

SCALPEL OR X-ACTO - Have a selection of blades and handles to cut open the mold. I prefer scalpel blades for their flexibility and extreme sharpness. My favorite blade is the #12 hooked tip. It will reach around lots of corners that a straight blade won't go.

CHURCH KEY - Nail a church key, with the pointed end out, to your bench for a grip to hold your mold while cutting it open. See the diagram.

YOUR USUAL TOOLS - Your regular model tool kit will most likely be used quite often while making molds.

THE RUBBER

It is beyond this paper to delve too deeply into rubbers and their properties. Basically, the model maker uses latex, urethane, or RTV silicone rubbers. To make a long story short, RTV silicone rubbers are the way to

go. They recreate the most exacting detail of your original, and undercuts are welcome. The silicone is resistant to most chemicals and heat from low temperature metals. The best thing you can do is to go to your local supplier and discuss your project with them to find the best one for you. The main characteristics to discuss are:

Tear Strength - or tear resistance

Shore A Hardness - the stiffness of the rubber

% Elongation - how much stretch the rubber has

% Shrinkage - an important consideration when modeling parts to fit together and for scale.

THINGS TO WATCH OUT FOR - Don't use rubber cement around the silicone rubbers, or sulfur based clay, polyurethane sealers or paint. Be careful when using the clean up

solvents. If you clean up like I do, by peeling the cured rubber, you are much better off.

There are different catalysts used for the RTV silicone rubbers and they react to what they come in contact with. Tin and platinum catalysts are the norm. Be sure and discuss what your original is made of with your rubber supplier as not all materials are compatible with one or the other. You may open your mold only to discover it and your original model are ruined (ugly).

MAKING THE ROOM TEMPERATURE VULCANIZATION SILICONE RUBBER MOLD

ATTACH YOUR MODEL TO THE MOLD BASE - You need to stick your original model to a base, you cannot allow it to float when you put in the rubber. My favorite base

is the CD jewel box lid, or similar plastic. All the sticky stuff listed below will adhere to the plastic. Decide what will stick the best to your model; Crazy glue, melted wax, clay, double stick tape, Quake Wax, etc.

BUILD THE MOLD FRAME - The mold frame should allow 3/8" space on all sides of the model. Use the clay or wax to seal the corners, edges, and the frame to the base. Consider where your sprues (see model preparation) are and design the frame for easy access to the sprue button. See the sketches for some ideas. Remember that after you pour your rubber, if you plan on using a vacuum pump, the frame must allow for an expansion of the "boiling" rubber. I use masking tape on the top. Also consider that the silicone rubber is soft and can distort when you are using the mold. Therefore, I usually design the frame to be a partner to that mold. In other words, leave the mold in the frame when you are casting your parts. It will hold it in perfect alignment and won't squeeze or expand while you are casting. If you are planning on casting low temperature metals in your mold, the frame needs to withstand the temperature of the pour. Don't use cardboard for a "hot" mold frame. Using metal (brass sheeting) or wood is a good idea. The wood will remain cooler while pouring.

MOLD RELEASE - If you need to use a releasing agent, be sure the application is completed ahead of time, as it needs to be completely dried.

RUBBER VOLUME - How much rubber do you need to mix? First determine the cubic inches of the mold frame (multiply the length X width X height). Using the information provided by the manufacturer on the cubic inches per pound of your rubber, you can then calculate the amount needed. Do

consider that your model will take up some space and you need to deduct for that volume.

WEIGH THE RUBBER AND CATALYST

- Weigh the proper amount of rubber for your mold. I use various sizes of dixie cups for the weighing container on the scale. They don't max out the scale when you tare. Weigh the proper amount of catalyst. Be careful with your proportions, which are usually a 10 to 1 mixture. I weigh the catalyst separately, in it's own dixie cup, so that when (not if) you pour too much, you can put it back in it's original container. If you pour the catalyst directly onto the rubber, it cannot be returned.

MIX THE COMPONENTS - The rubber is usually white, the catalyst is in living color. When mixing, you can use this to your advantage. If there are darker streaks in your cup, then you need to mix longer. The compound is thick and takes some muscle, keep at it for at least 5 minutes. Scrape the sides and bottom of your container often, and don't worry about taking too much time here. The rubber has a long cure time, check your data sheets.

BUBBLE BUST - It's time to get rid of all the bubbles you just mixed into the rubber. If you have a vacuum set up, put the mixing container into the chamber and start it up. Run it, at 29 lbs if possible, it will boil and collapse continuously, continue vacuuming for 2 minutes or so after it collapses and doesn't boil up again. Release the pressure, and pour the rubber into your mold frame. Put the model, frame, and freshly poured rubber back in for another round. If you don't have the vacuum, then use the hole in the bottom of the container trick. It does the job satisfactorily.

HIDE THE MOLD FOR 24 HOURS, DON'T TOUCH, BUMP, OR DISTURB

REMOVE THE MODEL FROM THE MOLD - Cut out the model, using locking cuts, or pop out the model if you have made an open ended mold. The cutting of the mold is part of the learning process. You want to cut the mold for the easiest release of your cast piece, and to have the mold part lines in places that are easy to reach for removal. Try to part the mold where there is the least amount of detail. Now the mold should be set aside for one more day to allow it to cure completely. Your mold will last longer if you allow this time.

VENT THE MOLD - Using your scalpel blade, cut lines from areas in the mold that create pockets where air will get trapped. When you pour your new piece, and it comes out with craters, that is the air trapped in the mold. This is where you need to vent. The cut does not have to be too deep. In fact keep it shallow for the integrity of the mold. As an example think of a face. the nose sticks out and will be the spot where the bubble will form. Make the cut from the middle of the nose all the way out of the mold. See the drawing for clarity.

NOTES ON THE MASTER MODELS

As mentioned above, the materials that can be used for your master model can be just about anything. Consider metal, plastic, baked Fimo or Sculpy, epoxy puttys, Plasticine clays, glass, ceramics, and wax. Also good, if sealed before using, are wood, paper, cloth, and the spider that you used last night, etc. Don't seal with Polyurethane, as the rubber will not cure next to it.

In the discussion of models above, I may have enticed you with promises of easily

working with commercial scale model people. The common methods of working with the plastic people involves melting the plastic to get the changes needed. Another method that goes hand in hand with the RTV mold process, is to use wax build-up instead of pushing around the plastic. Just file off all of the parts that don't work (shoes, long pants, mustache) and build what you want using wax. It is faster than waiting for the plastic to cool and you can take details to extremes. For example, if you have a barefooted original, putting shoes on him is a piece of cake. Need a tri-corn hat? Easy. When you have finished, make your mold and pour your "army".

If you need each person to be doing and wearing something different, make the mold of the original figure after you filed off everything. Pour your new blank, and work each one into what is needed. Add the costume of choice, and then make a new mold. Now you can have your army and you can make it more than once.

Sculpting with wax can be accomplished using the same tools you use for your modeling. The addition of a few more tools will make it easier. Dental tools are great for carving wax. Also, I use a commercial wax pen for the buildup process. Look for the sketches of a home made pen that you can make for about \$12.00. You will probably end up using it for many other applications once it is in your tool box.

Try using wax to detail models made out of the materials you use already (wood for example). After you finish carving, note where you would like to get cleaner details, add wax and carve it. If you lathe wooden cannon, take one and add the shields and lifting handles in wax, make your mold and have your local foundry cast them in bronze!

Go one step further and try the cannon lathed in wax. Jewelers supply houses sell hard carving wax. It works great on milling machines as well as the lathe. It does not have a grain running through it, and can be highly polished. Your finished work will really show a marked difference without wood grain.

SPRUNG YOUR MODEL - A sprue is a rod that supports the model while the mold is being made. It also provides the passage way for the casting material to get to your piece. The sprue needs to be positioned on your model to minimize turbulence as the mold is being poured. I have found wax wire works well. The sprue can minimize porosity if it is attached to the thickest part of the model. If your model is large, forming some escape vents out of the wax wire will allow free air flow out, while the casting material flows in. See the diagram for clarity

The sprue is used to attach the model to the mold base. Think of the orientation of the model in the mold when planning the sprue attachment. When attaching the sprue to the

base, add a button. When casting, most materials have some shrinkage factors as they cure. The button gives them more material to draw from. Then when it is cured, the button will have the dimple and not your piece. This also acts as a funnel that allows for easier pouring.

The best advice about spruing a model, other than experience counts, is think ahead. Picture how the casting material will flow in, where trouble could occur, and orient the piece for smooth flow. Think "downstream", try to avoid a reverse direction of casting material. Add another sprue to the part that otherwise would reverse the flow. Attach it to the button cone along with the main sprue.

GOOD LUCK AND HAVE FUN

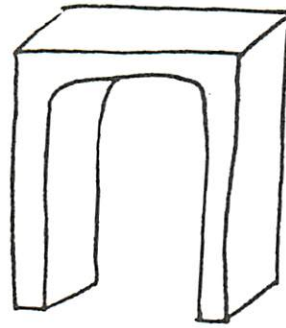
I do hope that this gives you a good starting point to try your hand at mold making. Your local hobby store, jewelry supply houses, and rubber supplier can be a big help when you are ready to purchase your compounds and jump into the rubber feet first.

MOLD FRAMES

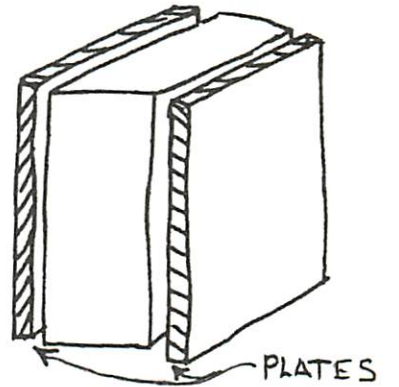
HOMEMADE
VACUUM CHAMBER



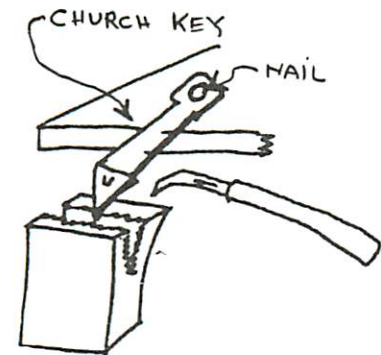
WOOD-ALUMINUM



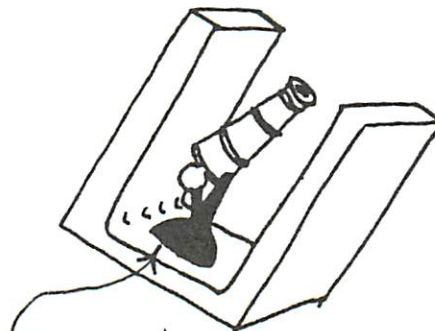
COVER WITH
GLASS OR ALUMINUM



CLAMPS OR RUBBER BANDS -
SEAL WITH CLAY OR WAX



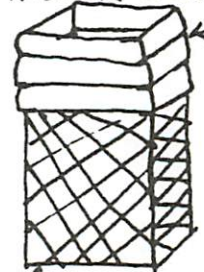
USE KEY TO HOLD OPEN
RUBBER MOLD WHILE
CUTTING OPEN



SPRUES &
BUTTON

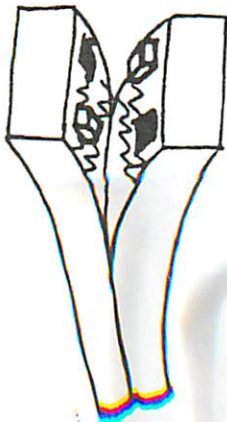
PUT PLATES ON
& POUR RUBBER
IN TOP

MASKING TAPE FOR
RUBBER BOIL

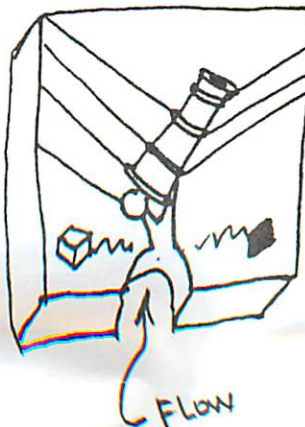


MOLD FRAME
BOX

CUT INTERLOCKING
BLOCKS AND RIDGES

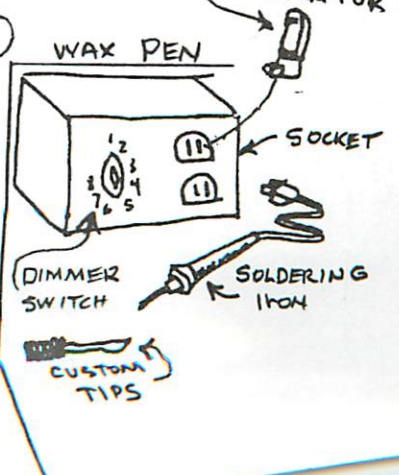


SCAPEL CUTS FOR VENTS

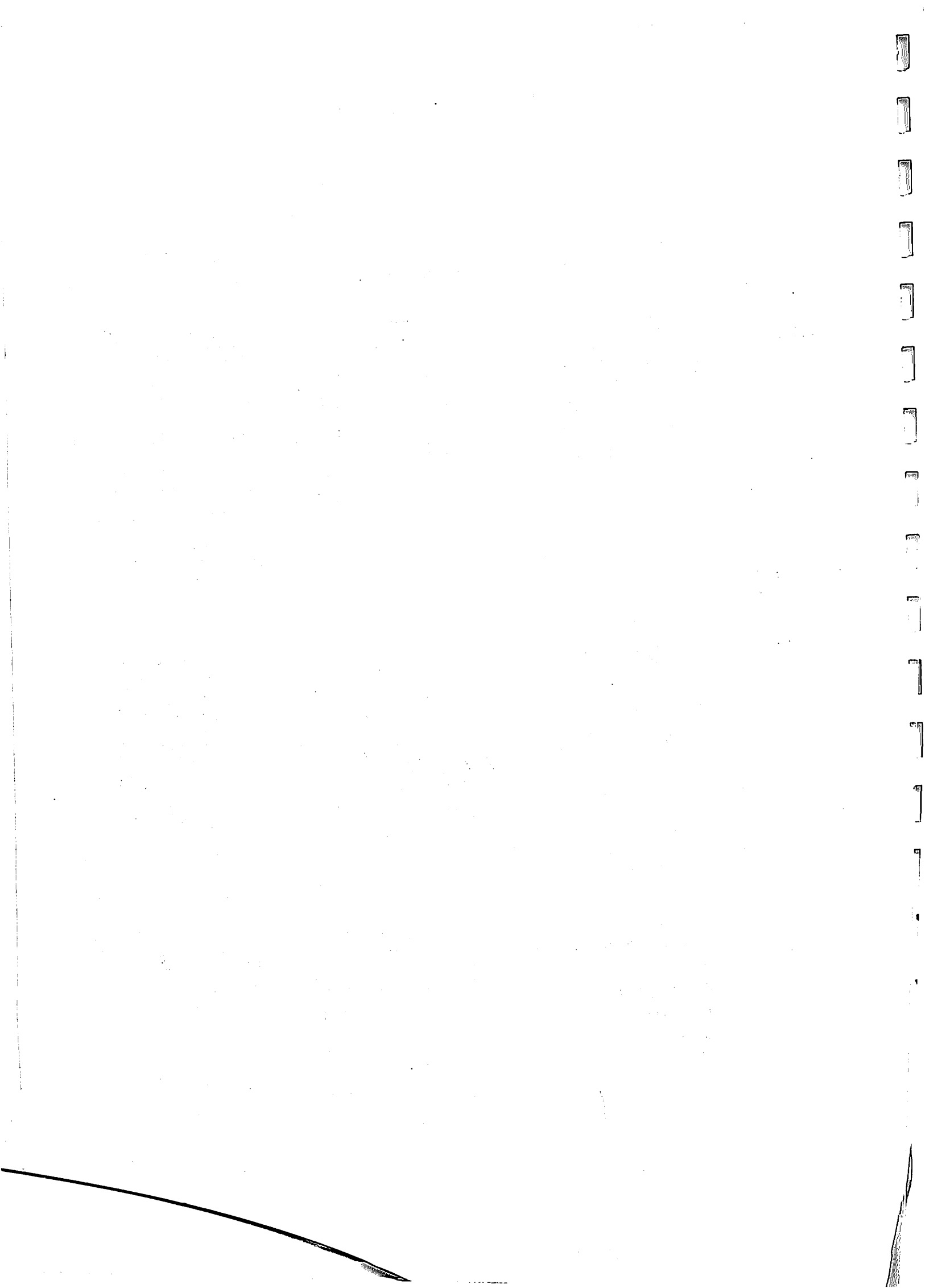


FLOW

NIGHT LIGHT
ON-OFF
INDICATOR



LOCK MOLD TOGETHER





Exhibits

JHM

SHIP MODELERS
Association



Models and Builders

Whaling Launch 1880 1:16
Jerry Magnuson

British 74-gun 1813 1:64
Sidney I. Siegel

Armed Launch 1803 1:17
Frederick P. Reynolds

(Clyde Puffer)
West Highland Coaster 1920 1:32
James D. Cummings

44' Trawler
Trawler 1920 1:24
Crawford Westering

96' Yacht
Yacht 1900 1:48
Crawford Westering

African Queen
Steam Launch 1898 1:24
Bob Herrera

Alma
Scow Schooner 1891 1:24
Bob Herrera

Amaryilis
Catamaran 1876 1:48
Paul Payne

America
Yacht 1850 1:64
Craig Coleman

America
Half model 1851 1:64
Eric Dodson

America
Sloop 20 th Century 1:50
Ventura County Maritime Museum

America
Fishing Schooner 1920 1:96
Tom Cleaver

Anchor Hoy
Service boat 1818 1:48
Paul Payne

Anchor Hoy
Service boat 1825 1:64
Henry Bridenbecker

Arkansas
Half Model 19 th Centruy 1:24
Gale Pinel

Armenia
Side Wheel Steamer 1847 1:48
William Borneman

B.F. Packard
Ship 1889 1:96
Eric Dodson

Baal

Assiro-Phenician War Ship 1700BC 1:40
Gaetano Pellegrino

Battlestation

Hull Section 1815 1:23
Richard Walton

Benjamin W. Latham

Fishing Schooner 1902 1:48
Clyde Emerson

Benjamin W. Latham

Fishing Schooner 1920 1:24
Allen Cott

Block Island Boat

Fishing Boat 1860 1:16
Roland Kalayjian

Bluenose

Grand Banks fishing schooner 1920 1:64
David Yotter

Bluenose

Schooner
Kathy St. Amant

BO DE J

Monterey Fishing Boat 1940 1:18
James B. Moore

Bon Voyage

Schooner 1900
Clyde Ramdwar

Brooklyn

Railroad Assist Tug 1910 1:24
Bob Morgan

Brooklyn

Tugboat 1910 1:32
Larry Garrett

Californian

Topsail Schooner 1850 1:64
David Yotter

Cannon

32 pdr. muzzle loading 18th Century 1:12
Robert Graham

Cannons: Victory & San Felipe

Cannons 1805, 1690 1:30
Frederick P. Reynolds

Caroline

Lumber Schooner 1902 1:64
David Yotter

Caroline

Royal Yacht 1749 1:48
John Kopf

Caroline

Schooner 1902 1:64
David Yotter

Chaleur

Naval Schooner 1768 1:64
George Dunton

Chinese Pirate Junk

Junk 1890 1:96
Henry Bridenbecker

Chris-Craft

Runabout 1947 1:96
Larry Garrett

Clara Maersk
Container Ship 1993 1:192
Doug Huntzinger

Coetta
Pilot Schooner 1800 1:48
Randy Biddle

Combat Station
Gun Emplacement 1815 1:23
Frederick P. Reynolds

Comte de Smet de Naeyer
3 Masted Ship 1904 1:96
Eric Seel

Confederacy
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Clyde Emerson

Confederacy
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Bill Amour

Confederacy
Frigate 1779 1:64
Frank Wilhite

Confederacy
36-gun gallery/frigate 1778 1:64
Jim Azbill

Congo Star
Steam Launch 1910 1:12
Mark Weitzman

Connie J
Tug 1910 1:16
Eric Dodson

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American Frigate 1825 1:85
Wayne Medeiros

Creole Queen
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Tom Chestnut

Dallas
Schooner 19 th Century 1:50
Claire Hess

De Spiegel (The Mirror)
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Sidney I. Siegel, M.D.

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River Push Boat & Barge 1990 1:22
Mark Weitzman

Dutches of Fife
Side Wheel Steamer 1903 1:48
William Bornemann

Eagle
Topsail Schooner 1847 1:64
Robert Graham

El Bahran
Persian Gulf Sambuq 1900 1:50
Lloyd Warner

Elizabeth
Baltimore Clipper 1812 1:98
Donald Dressel

Essex
32 gun frigate 1799 1:64
Bill Amour

Eutepe

Full Rig Ship 1863 1:48
Eric Dodson

Fishing Dory

Fishing Dory 1900 1:16
David Yotter

Flying Cloud

Clipper 1851 1:96
Robert Graham

Ford FFG-54

Frigate 1980 1:96
Butch Plake

Forester

Schooner 1900 1:96
Eric Dodson

Friesland

Dutch Ship-of-the-Line 1663 1:78
Donald Dressel

Frigate Hancock

American Frigate 1776 1:96
Bill Russell

Gaslight

Scow Schooner 1874 1:48
Randy Biddle

Gela War Ship

Venetian Sciabecco 1700 1:60
Gaetano Pellegrino

Generic Norman

Trading Ship 1300 1:60
Arnold Levine

Gloomph

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Jack Moffett

Golden Hind

English Warship 1577 1:50
Roy Tomooka

Grampus

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Robert H. White

H. H. Cole

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Charles West

H.M.S. Alfred

74-gun ship-of-the-line 1776 1:96
Henry Bikhazi

H.M.S. Beagle

Bark 1:64
Jack Moffett

H.M.S. Bounty

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Henry Bikhazi

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Henry Bridenbecker

H.M.S. Endeavour

Bark 1764 1:64
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H.M.S. Victory

English ship-of-the-Line 1765 1:850
Gaetano Pellegrino

H.M.S. Victory
English ship-of-the-Line 1758 1:79
Paul Gagne

H.M.S. Victory mid-section
English Ship-of-the-Line 1812 1:98
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Gallion 1609 1:64
Martin Green

Hancock
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Wayne Medeiros

Hancock
Naval Schooner 1777 1:96
George Dunton

Hancock
Frigate 1776 1:96
Bill Lanning

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Frigate 1776 1:96
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Hannah
Naval Schooner 1775 1:48
George Dunton

Hannah
American Colonial Schooner 1775 1:64
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Hansianic Yacht
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Donald Weld

Harvey
Baltimore Clipper 1847 1:50
Charles Gibbs

Harvey
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Mark Weitzman

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Boat engine 1910 1:96
Bob Herrera

Hicks (2 cyl.) engine
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Jack Moffett

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John Kopf

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Bob Herrera

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Tom Fordham

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James D. Cummings

Joe Lane

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L.A. Dunton

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Jim Azbill

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Phantom

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Carlo P. Silvio

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Jim Berger

Rob't E. Lee

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Robert E. Lee

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Roy Tomooka

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Royal Barge

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Royal Caroline

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Fang Cheng

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USS Constitution
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Jerry Magnuson

Whale Boat
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Tom Palen

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Roland Kalayjian

Victorine
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Clyde Emerson

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Roland Kalayjian

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Whithall
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J.L. Bickelhaupt

Vivan B
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William Bornemann

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Donald Dressel

Wasa
Swedish ship-of-the-Line 1628 1:48
Tony Devroude

Yawl
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Jack Moffett's Drawings

A small display of Jack Moffett's drawings attracted considerable attention at the Conference. All the drawings exhibited were originally made for the Ship Modelers Association newsletter.

Mr. Moffett has produced several different types of drawings for the newsletter, primarily in the following categories:

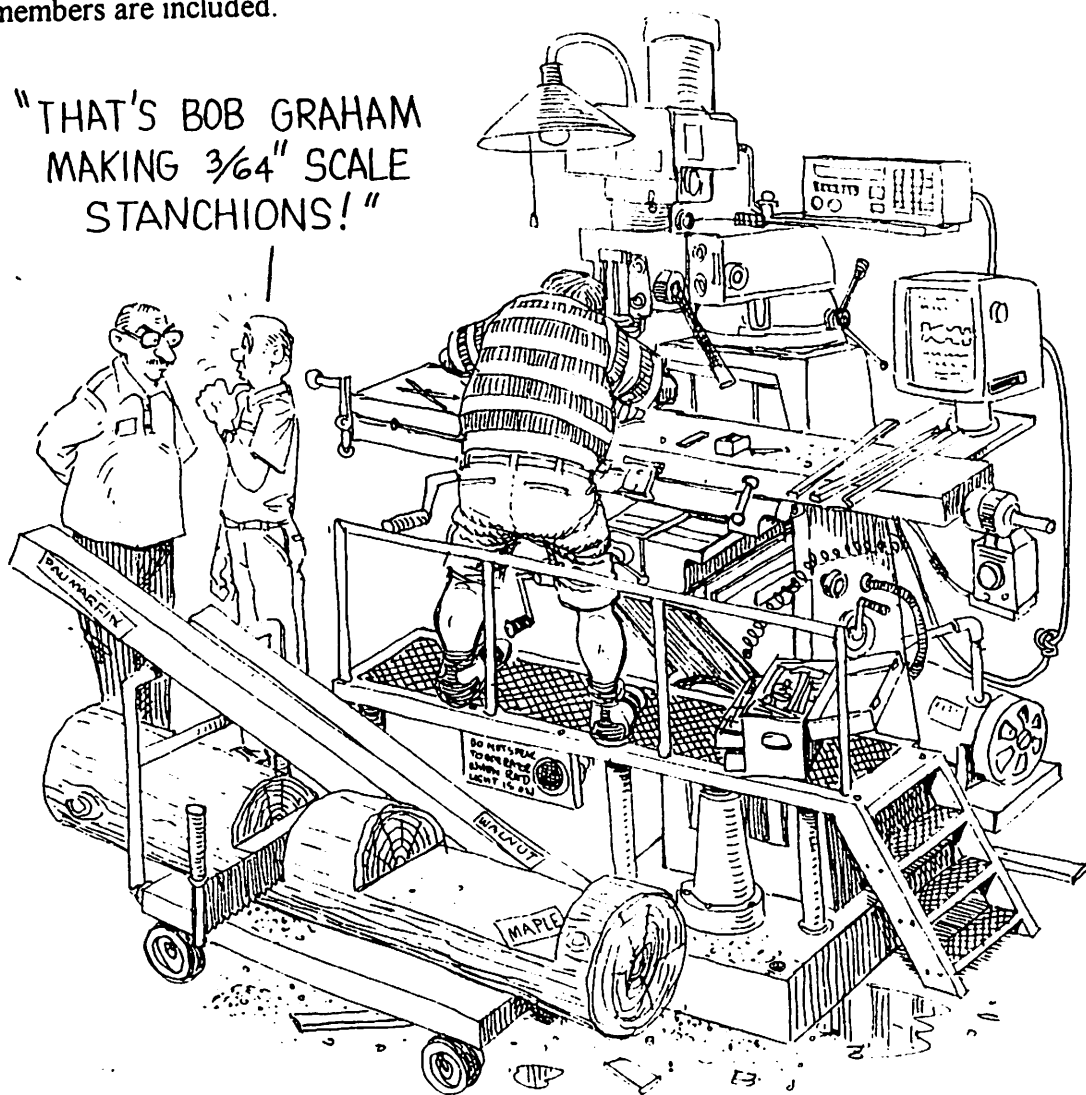
- Humorous Cartoons about ship modeling
- "Poster Drawings" about individual club members. Drawings of two well known members are included.

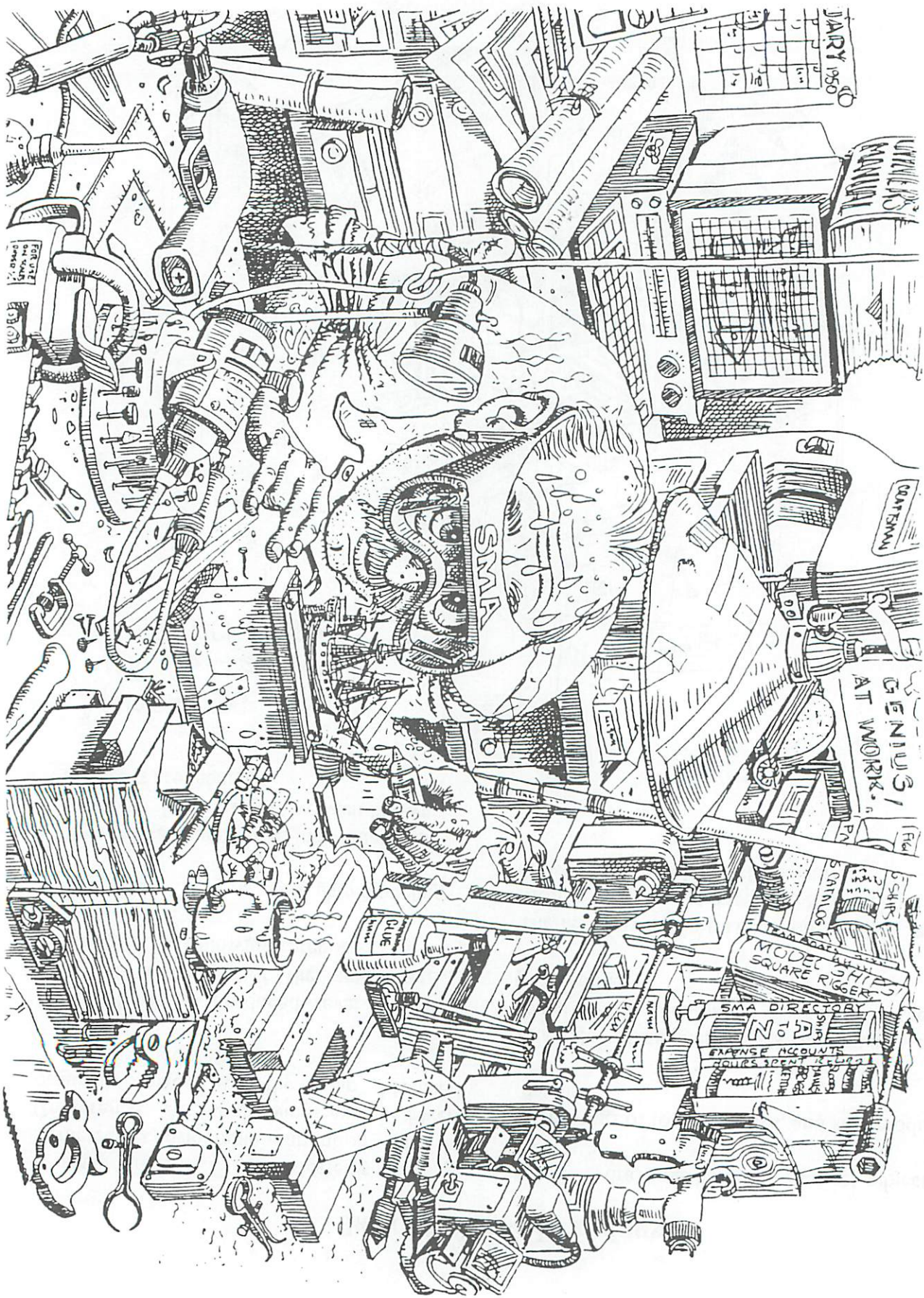
- Serious drawings based on nautical subjects
- Drawings of tools, fixtures, and ship model details.

Examples of all these types of drawings are found in this section, or elsewhere in these proceedings.

The last drawing in this section is about Jack Moffett, but is not by Jack Moffett. It is drawn by the SMA newsletter editor.

"THAT'S BOB GRAHAM
MAKING 3/64" SCALE
STANCHIONS!"

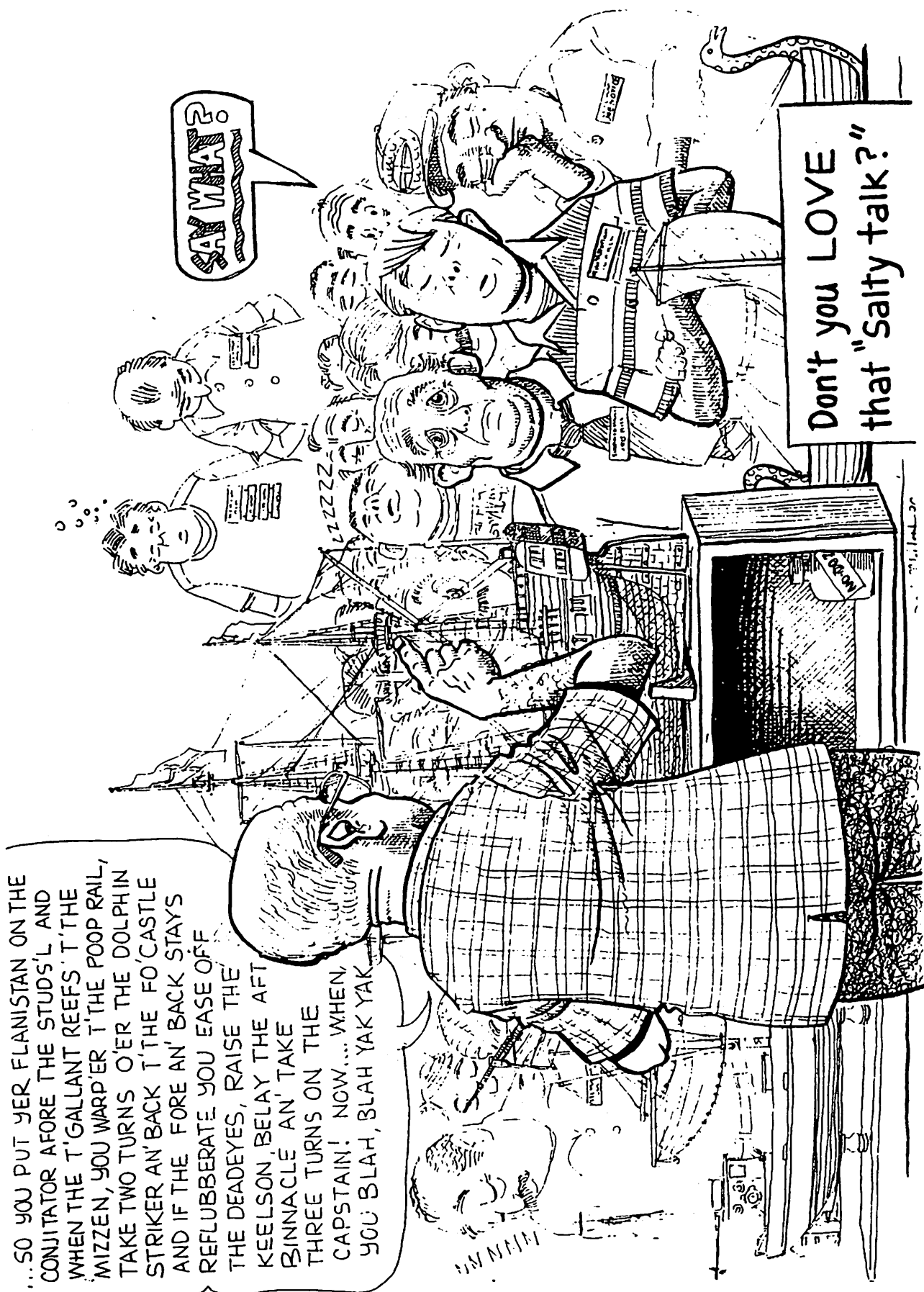




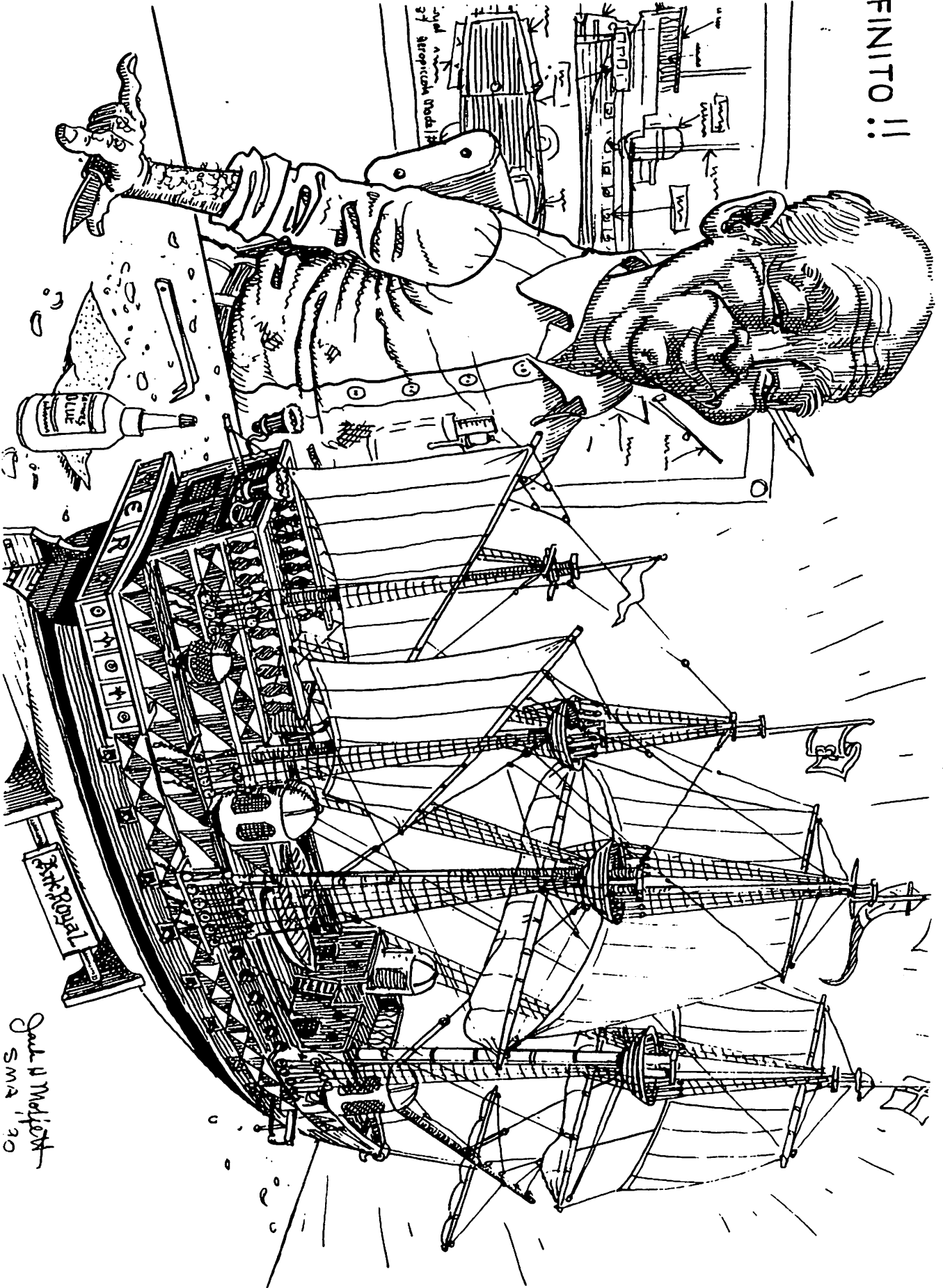
...SO YOU PUT YER FLANISTAN ON THE
CONJITATOR AFORE THE STUDS'L AND
WHEN THE T'GALLANT REEFS T'THE
'MIZEN, YOU WARP'DER T'THE POOP RAIL,
TAKE TWO TURNS O'ER THE DOLPHIN
STRIKER AN' BACK T'THE FO'CASTLE
AND IF THE FORE AN' BACK STAYS
REFLUBBERATE YOU EASE OFF
THE DEADYES, RAISE THE
KEELSON, BELAY THE AFT
BINNACLE AN' TAKE
THREE TURNS ON THE
CAPSTAIN! NOW... WHEN
YOU BLAH, BLAH YAK YAK

SAY WHAT?

Don't you LOVE
that "Salty talk?"

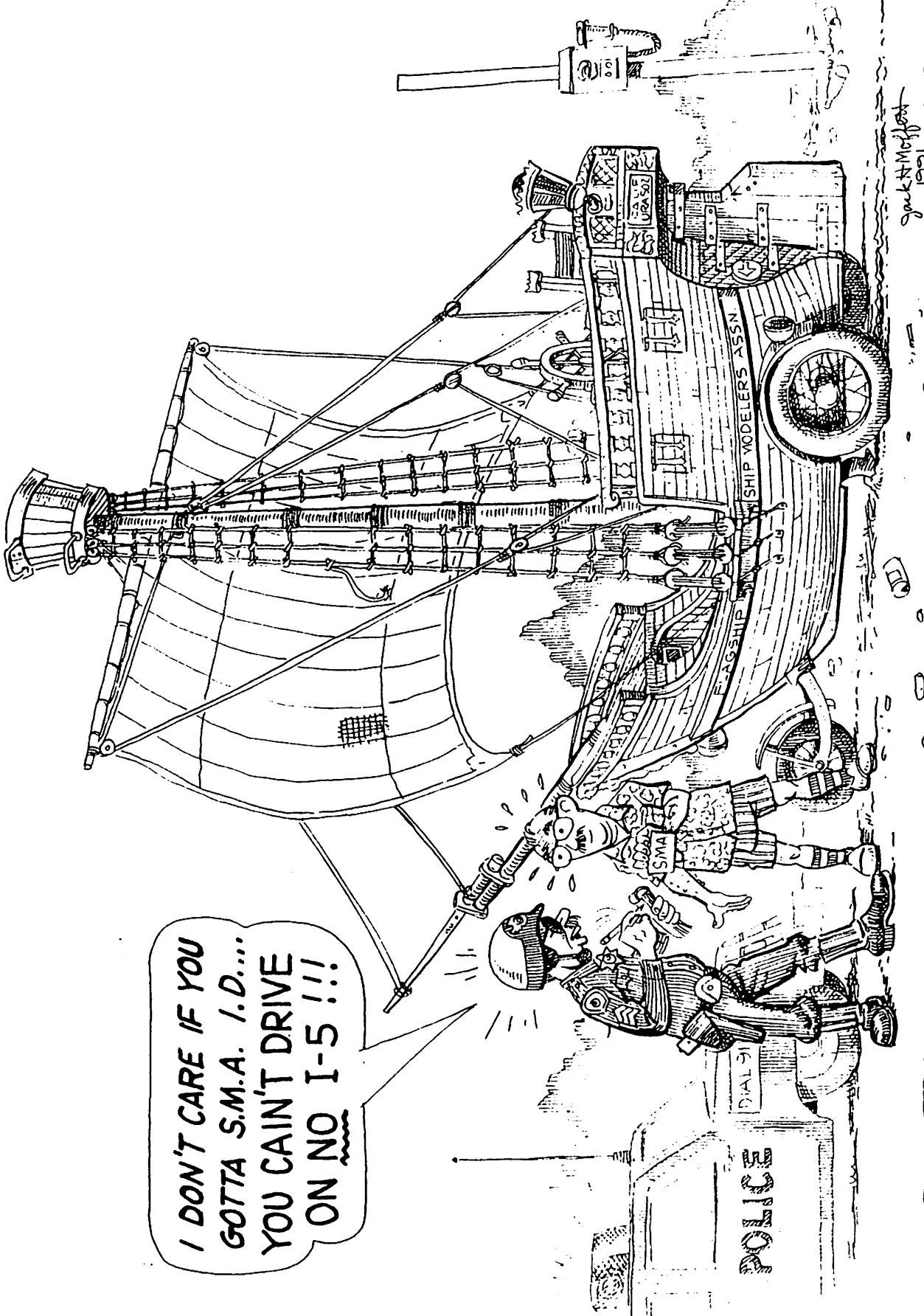


FINITO !!



Gul. H. Mollath
SMA '70

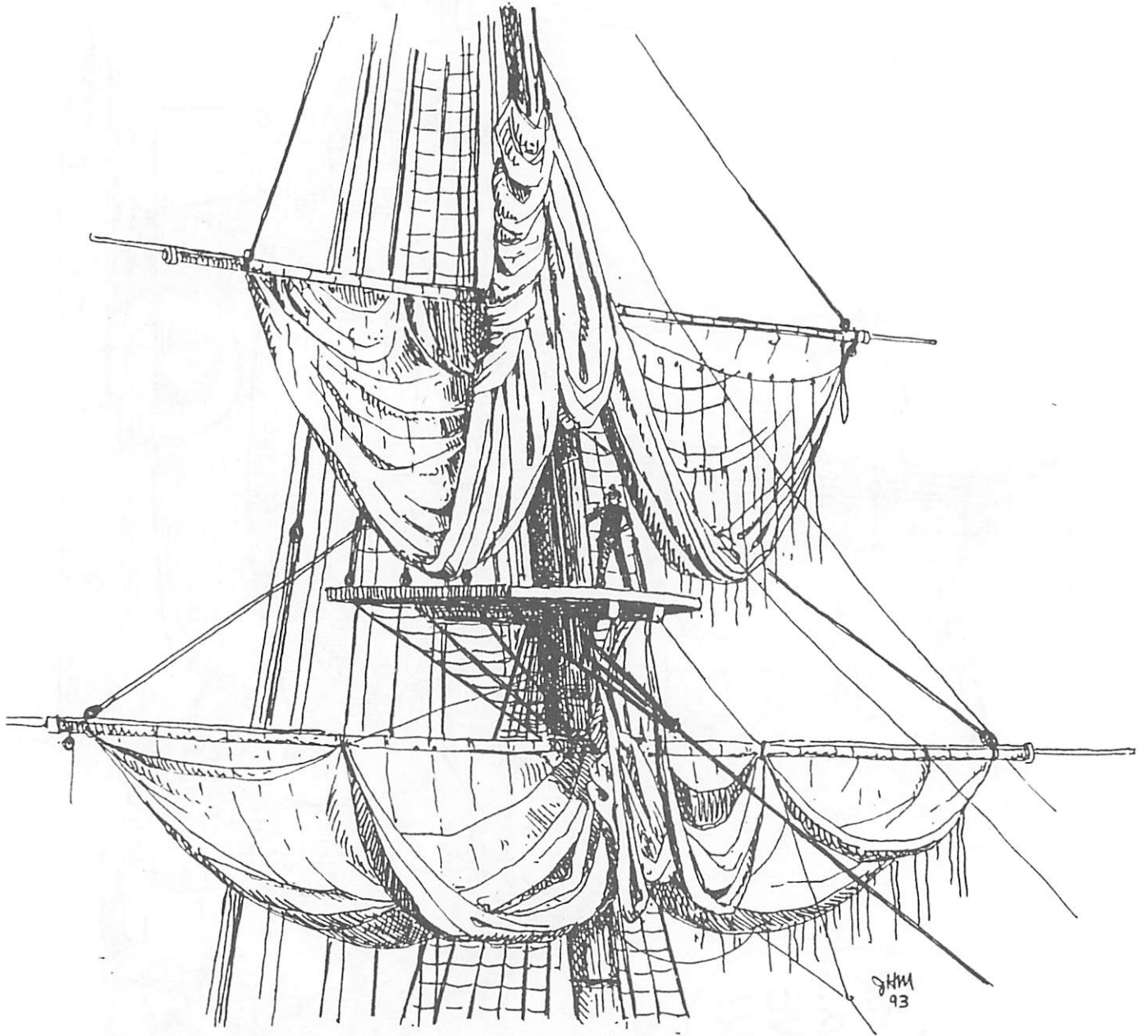
and a
of the SMA



I DON'T CARE IF YOU
GOTTA S.M.A. I.D....
YOU CAIN'T DRIVE
ON NO I-5 !!!

POLICE

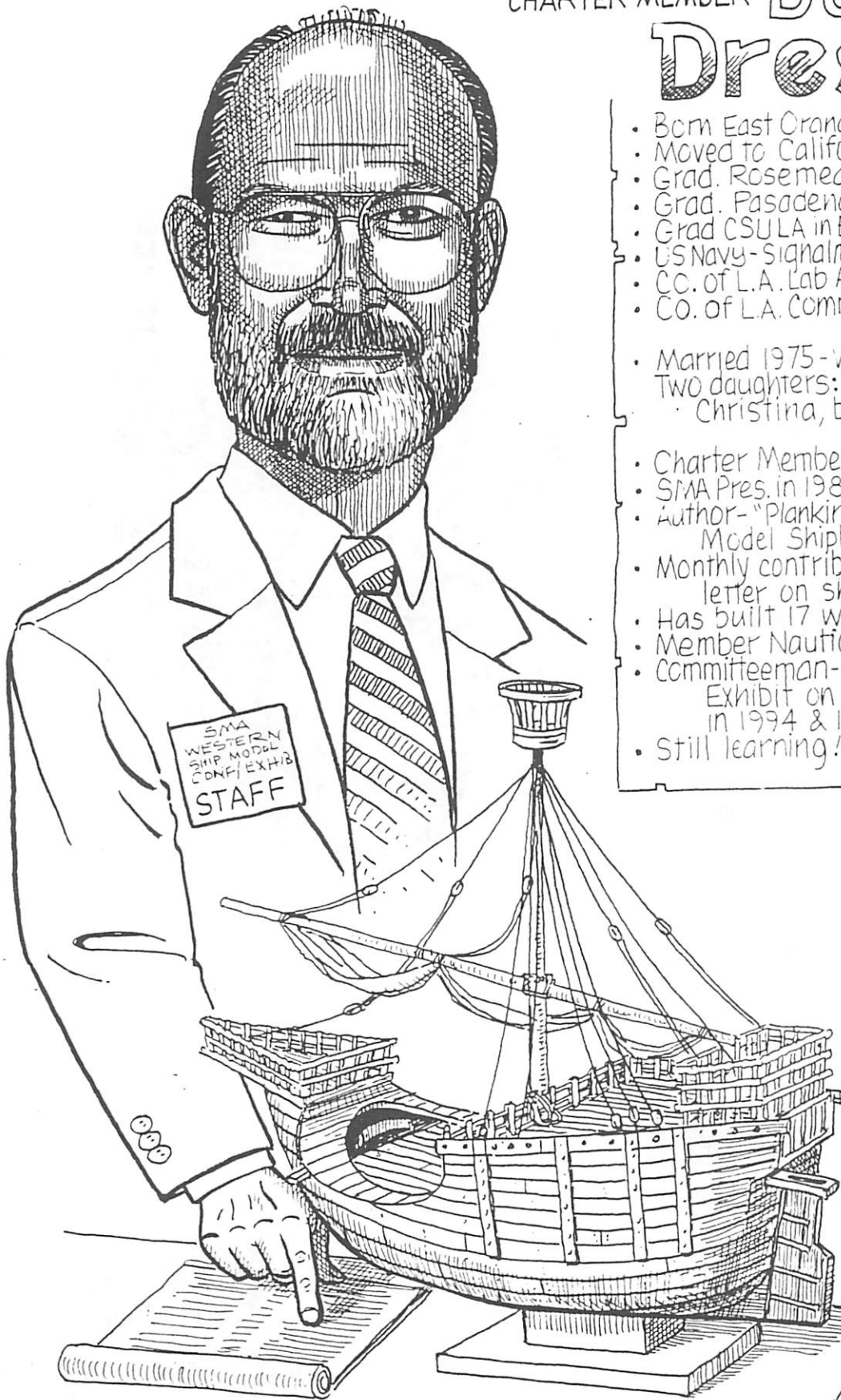
Jack McLeod
1961



*A unique method of displaying sails on your model-
a ship becalmed, the sails brailed up instead of
being furled around the yards...so they can quickly
be released the moment a breeze comes up.*

*From "The Great Age of Sail."
Edita Lausanne*

CHARTER MEMBER **Don** OF THE SMA
Dressel



- Born East Orange, NJ Apr 15, 1944
- Moved to California 1949
- Grad. Rosemead HS 1962
- Grad. Pasadena CC 1965
- Grad CSULA in Engineering 1974
- US Navy - Signalman - Viet Nam 65-67
- CC. of L.A. Lab Asst. LAC/usc Hosp 1968
- CO. of L.A. Commun. Dept. 1974-present

• Married 1975 - wife Elizabeth.
Two daughters: Olivia, b. 1978 and
Christina, b. 1980.

- Charter Member-SMA - 1977.
- SMA Pres. in 1984. Presently - Scty.
- Author - "Planking Techniques for Model Shipbuilders." 1988
- Monthly contributor to SMA News - letter on ship histories
- Has built 17 wooden ship models.
- Member Nautical Research Guild.
- Committeeman - Western Conf. and Exhibit on RMS Queen Mary in 1994 & 1996.
- Still learning!

Jack H Maffett, SMA
1996



Jack Moffett



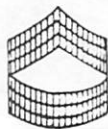
Ship Modelers Association President 1992



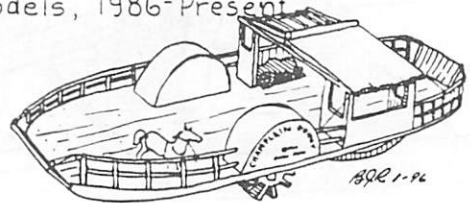
- ◆ The Moffetts are a Scots family.
- ◆ They came to America in the 1700's.
- ◆ In 1857, they came to California in covered wagons.



- ◆ Jack was born Sept. 18, 1922, Tulare Cty, CA.
- ◆ Completed high school there.
- ◆ US Army:
 - World War II, 1939-1944
 - Korea, 1950-1952



- ◆ Jack married Louise Cecilia LaCoste, 7-4-1942.
- ◆ Son Michael Richard born 1945.
- ◆ Walt Disney Productions, Cartoonist, 1945-47
- ◆ LA County, Sheriff's Dept.
 - Head Graphic Artist, Forensic Artist, 35 yrs., Retired 1982.
- ◆ Model Airplane Building, 1937-1950.
- ◆ Models related to crime scenes.
- ◆ Ship Models, 1986-Present



BQR 1-96



Lloyd was our Committee Chrmn. and Chief Mover & Shaker for the March 1994 Western Ship Modelers Conference and Exhibit held aboard RMS Queen Mary in Long Beach, CA, the first ever held on the West Coast.

"Well Done, Matey!"

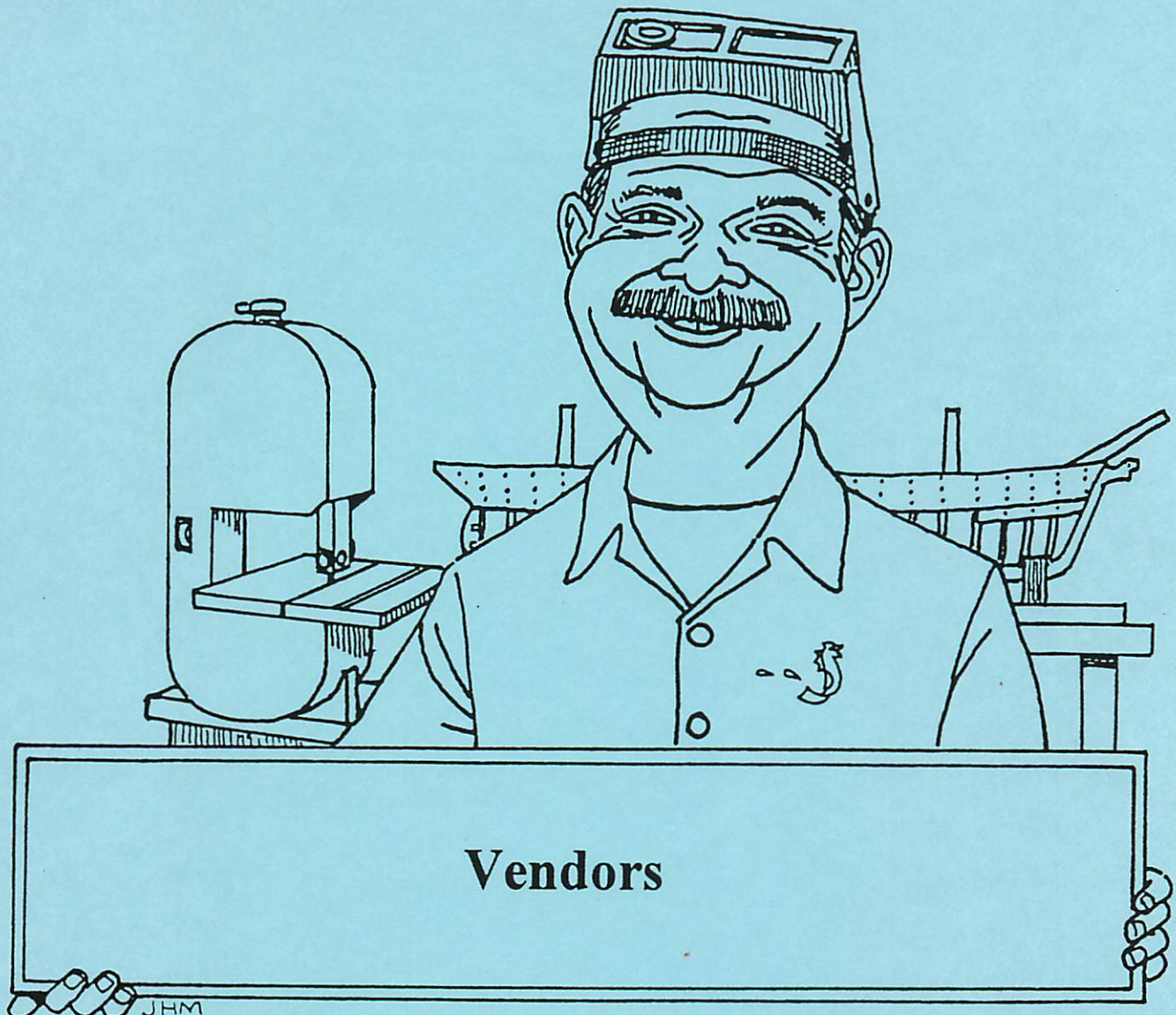
Lloyd Warner

WARNER WOODS WEST
EDITOR* OF

"Ship Modelers Association Newsletter"
Southern California

- Active modeler for over 40 yrs.
- Member of Ship Modelers Assn. over 16 yrs.
- Secretary of Nautical Research Guild.
- Member of Friends of the Los Angeles Maritime Museum in San Pedro, CA.
- Works part-time as a model builder aboard the Queen Mary, Long Beach.
- Retired from Aerospace Industry (now a consultant for TRW) as a senior research & development Engineer for materials & processes.
- Warner Woods West, a nation-wide mail-order business supplying modelers with custom woods & display cases.

* Editor until September 1994.



SHIP MODELERS
Association



Vendors

Dromedary 915-584-2445
6324 Belton Drive
El Paso, TX 79912

Frank's Mosquito Boat Hobbies 310-547-3464
866 West 19th Street
San Pedro, CA 90731

K. H. Lee Supply Company 310-920-3834
9078 Artesia Blvd.
Bellflower, CA 90706

Los Angeles Maritime Museum 310-548-7618
Berth 84 Foot of 6th Street
San Pedro, CA 90731

Pier Books Inc. 914-268-5845
P. O. Box 5
Piermont, NY 10968

Preac Tool Company, Inc. 516-333-1500
512 Main Street
Westbury, NY 11590

Royal Products 909-867-9272
P. O. Box 453
Running Springs, CA 92382

Scroll America 909-980-0367
10700 Jersey Blvd., Suite 670
Rancho Cucamonga, CA 91730

Sherline Products Inc. 800-541-0735
170 Navajo Street
San Marcos, CA 92069



Ship Modelers Association History

JHM

SHIP MODELERS
Association



'Steady As She Goes...'

The Log of the SMA

Being an account of the launching of the Ship Modelers Association in 1974, and of its continuing voyage (now in its 23rd year), as seen by its first log-keeper, Tom Palen

March, 1996

Pre-launch Activities

Shortly after the opening of the Ship Shop in Anaheim, California in 1973, owner Richard Nicholson and his assistant, Craig Coleman, started holding open-house meetings in the back room of the shop. Ship-modeling customers were invited to attend these monthly sessions and to bring their models under construction to discuss problems and compare modeling techniques. These meetings were an instant success. The Shop's extensive library of ship modeling books was made available to the visitors for their guidance. Craig issued a monthly newsletter, and those attending the meetings started giving informal discussions on their progress--thus the 'Show and Tell' format was started. Many of us were novices in the art of ship modeling. However, the relaxed maritime atmosphere, along with the expert guidance of Craig, Richard, and some of the more experienced modelers, soon generated an enthusiasm for ship modeling that has, if anything, increased with time.

It provided the key so to speak, and the ballast, for the launching of the good ship 'SMA'.

The Voyage Begins.

We all regretted receiving the news that The Ship Shop would discontinue operations late in 1975. Our last meeting would be in November, but none of us wanted to see the group disband. We voted to establish a set of officers for the first time and to continue meeting as the 'Ship Modelers Association.' After some two years of enjoying the sheltered cove of The Ship Shop, the SMA was on its own, come gale or high seas!! We were fortunate in locating an excellent meeting room at the Glendale Federal Savings & Loan Association in downtown Fullerton, free of charge. (No need to batten down the hatches -- we made the move in December without flooding the decks.)

Our membership was (and still is) an eclectic group, comprised of individuals with varied, unrelated occupations having little or nothing to do with ships or the sea -- doctors, lawyers, teachers, college professors,

machinists, carpenters, welders, engineers, chemists, salesmen, etc. But we all agreed that we should keep the meetings as informal as possible, and to date have not missed holding the scheduled sessions every month.

In keeping with the informal structure of the SMA, we have never drawn up articles of organization, rules, or requirements for membership. Toward the end of the first year we decided to have annual elections only for the president and vice-president, with the other officers and directors serving as long as mutually agreeable, with the belief that this arrangement would tend to provide continuity for the club. Some twenty years of operating in this manner seems to reinforce that early decision.

Initially, the officers were known as Captain, First Mate, Log-keeper, Purser, and Helmsmen, in keeping with the nautical nature of the SMA, but later changed to the 'land-lubbers' terms of President, Vice President, Secretary, Treasurer, and Board of Directors, respectively. Therefore, the currently-used titles are observed in this account.

Typically, these two groups meet about two weeks before the regular monthly meeting to make plans for programs, seminars, exhibits, etc. By general agreement, outgoing presidents are invited to serve on the Board of Directors at their pleasure. Any club member may attend these meetings to make suggestions or to make known any complaints that he/she may have.

Early Speakers and Guests.

At our final meeting at The Ship Shop in November, 1975, Mr. Dennis Holland presented slides and a discussion of the building of his 100 foot old-time sailing ship.

A master craftsman, Dennis personally selected the trees which were cut to provide the lumber for construction. The interior is finished like a custom built ship, but he yielded to modern features only to the extent required to meet Coast Guard requirements, such as an auxiliary engine. The ship was named the '*Pilgrim*' after *the one in which* Richard Henry Dana made his 1834 voyage, described in his book, Two Years Before the Mast. Dennis placed the ship in charter service when completed, operating out of Ports of Call in San Pedro.

Mr. August Crabtree is considered to have been probably the premier ship modeler in recent generations. His life-long collection is displayed in a specially-built wing of the Mariners Museum in Newport News, Virginia. He and Mrs. Crabtree visited our club meeting in September 1978. During the day, prior to the evening club meeting, your log-keeper escorted them around Orange County, stopping briefly at Craig Coleman's recently opened 'Seaport Models' in Orange, and later to see Dennis Holland's '*Pilgrim*' under construction. Mrs. Holland graciously showed us through the ship, which they were using as their home, pending final completion and launching. Later we had dinner with a number of other club officers. At the SMA meeting Mr. Crabtree showed slides of his collection and displayed his latest creation, a Dutch State Yacht, which required some seven years to complete. Perhaps 12 to 15 inches long, it was covered with numerous carvings which were beyond description. He kept this beauty locked in a heavy metal box.

Mr. William Ficker, a Newport architect and yachtsman, was the skipper of the 12 meter yacht '*Intrepid*,' which won the 1970 America's Cup race. He attended our meetings in October, 1981 and described his interesting experiences and the events

leading up to that victory. As has been truthfully said, 'Ficker was quicker.'

The M.A.C. Shows.

In May, 1976, SMA members entered 26 models in the annual Model an Craft (M.A.C.) Show held at the Anaheim Convention Center. This was a weekend show, sponsored by an association of Southern California hobby shops and suppliers, and included exhibits of model trains, planes, circuses, boats, ships, and doll houses. This annual event draws a large attendance -- some 20,000 to 25,000 in the two days. The SMA exhibit generated the most public interest, and three or four of our members remained on duty, both to answer the many questions and to prevent curious hands from handling the models. Our models were given eight awards for excellence.

The publicity that our club received was gratifying, and we entered subsequent M.A.C. shows (later held in Long Beach Convention Center) until they were discontinued after 1987. Our entries had increased to about forty to fifty models, and awards were given to some fifteen to twenty models at these events.

The SMA Exhibit at California State University, Fullerton.

In November, 1977, SMA member Cameron Stewart arranged for an exhibit of 25 models in the main library at CSUF, where he was a professor of History. The two-week display elicited much favorable comment from the staff, student body, and the many visitors who use this upscale facility.

The First 'Queen Mary' Exhibit.

The 'Queen Mary' liner in Long Beach has a marine museum as a part of the guided tours. In 1979, the SMA was invited to place models on exhibit in this museum for a period of two to three months, and in April, as the M.A.C. Show closed for the year, 26 models were taken to the 'Queen Mary' nearby. These about filled up the available space for this exhibit, which was an excellent adjunct to the marine museum. The display proved to be popular with the public, and the 'two to three month' display period became a full year before we removed the models. During this exhibit, an executive from the Smithsonian Institution in Washington, on a business trip to the 'Queen Mary' was enthusiastic with what he saw, stating that our exhibit was equal to the best of those shown on the East Coast.

New Masthead For The SMA Newsletter.



Beginning with the January, 1978 newsletter, a new masthead has been employed. The design has also been used as the SMA logo for other applications, such as on small nameplates for placement in model cases to identify the modeler as an SMA member. Conceived by the late Jack Elem, our 'innovative generalist,' he described it as follows:

"Some thoughts behind the new masthead design -- The protective eye dates back to 3000 B.C. and the oldest known sailing ships. It has been used all through the centuries and still can be seen on fishing boats in the Mediterranean.

The beautiful thought out and unique interlocking triangle design is from the Osbert ship of 900 A.D.

The Royal Lion in some form has been seen on ships of all the world's great sea powers since 100 A.D., and has grasped in his paws the initials B.L., in honor of the great Bjorn Landstrom, who by his beautiful art and fantastic research has possibly inspired more ship modelers and lovers of ships than anyone else that I know.

Last but not least, the little sea horse who is trying to look like a ferocious sea dragon is an attempt at a design that is modern and at the same time ancient. (He would look great on a club burgee (flag) to be flown from operating ship models.)"

Thanks, Jack.

Regatta/Picnics.

Not long after the formation of the SMA, several members became interested in the building of operating ship models, controlled by radio ('R/C' models). The models of historical multi-masted sailing ships do not readily lend themselves to control by radio. Hence, the operating models are of more modern vintage -- sloops, tug boats, paddle wheelers, freighters, tankers, submarines, etc. A number of beautifully constructed models have been built. In order to demonstrate these models, regatta/picnics were held annually from 1976 to 1988. Usually, one or two other R/C clubs (the 'Maritime Modelers', the 'Helmsmen,' the '96 Task Force') joined us for the all day event. And on a number of occasions a group from San Diego brought their models to add variety.

The Mayflower Group.

In April, 1990, Bill Wicks proposed that the less experienced modelers who could use some detailed instruction in technique should meet at his home on weekends, and all work on identical models. The idea found ready acceptance. A number of members all obtained identical plans of the 'Mayflower,' and starting together under Bill's guidance, have found that construction has been better understood and was much faster than when working alone. While the 'Mayflower' model was finished some time ago, other models have been started, and the group still has monthly work sessions at the home of one of the group, still calling themselves the 'Mayflower' group.

Bill is to be congratulated for the idea and for giving much of his time to the project.

The Brea Gallery Exhibit.

The city of Brea operates an Art Gallery in the Civic Cultural Center, having approximately five exhibits each year. As is customary, upscale exhibits of this nature require extensive planning and are scheduled at least a year in advance. After a number of preliminary discussions, Bob Beach headed up an exhibits committee within the SMA to work with Gallery personnel to plan a ship model exhibit. One of the hurdles to overcome was the lack of display tables of the style needed to display approximately 100 models. (The Gallery's typical exhibits normally are wall hung pictures and paintings and employ square pedestals for the display of sculpture and similar art objects.) For a period of about two weeks prior to the opening, SMA members worked as carpenters and painters to build the many required tables, mounted along the walls of the Gallery. Following the exhibit, the SMA

removed the tables, restoring the Gallery to its normal condition.

The Gallery maintains a mailing list of several thousand, all of whom receive invitations to the opening reception of each exhibit, which in this case was October 19, 1990. Response was enthusiastic. Attendance at the ship model exhibit and voluntary donations to the Gallery) exceeded that of any prior event. The exhibit was on display until November 20.

The Ventura County Exhibit.

Ventura County opened a new maritime museum at Channel Island Harbor, Oxnard, in 1991, and in August, 1992 conducted their First Annual Ship Model Show. In order to help promote the event, SMA members provided 15 or the 31 models on display for the two-week exhibit. Attendance was excellent, and we were invited to participate again in future exhibits.

The Muckenthaler Exhibit.

Situated on the crest of rolling hills in Fullerton, the Muckenthaler Culture Center was the backdrop for the exhibit of SMA ship models. Aptly titled 'Sailing through History with Model Ships,' it ran from December 7, 1993 to February 27, 1994. Featured in articles appearing in the Los Angeles Times and the Orange County Register, this showing generated wide public interest --- a source of satisfaction to those who participate in these events.

The Western Ship Model Conference and Exhibit, 1994.

The first **Western Ship Model Conference and Exhibit** was held aboard the *Queen*

Mary in Long Beach on March 25,26 &27. It was sponsored by the Ship Modelers Association and a total of 164 ship models were displayed in the historic ship's Exhibition Hall during the conference. Six seminars were presented on various phases of ship modeling. During a wood carving demonstration, a figurehead of the Continental Frigate *Hancock* was carved by SMA member Tony Devroude.

A total of 226 people attended the conference. These were from the USA, Australia, Canada and Japan, thus giving an international flavor to the event. Over 400 of the general public aboard the *Queen Mary* visited the ship model exhibit.

The Placentia Library Exhibit.

During the months of November and December, 1995, the SMA exhibited 15 models at the Placentia City Library. We were fortunate that the size and arrangement of the book cases used in this facility made for easy viewing of the models. The library staff was vocal in their appreciation of our efforts, and many complimentary comments were made by the public.

The Upcoming Western Ship Model Conference and Exhibit, 1996.

Planning for the 1996 Western Conference is nearly complete as this is being written. This will be held again aboard the *Queen Mary*, March 22, 23 &24.

Recent Developments in Ship Modeling Techniques.

Significant changes and additions have occurred in the last few years that present new techniques which may be employed in

the building of model ships. Computer-aided drafting and computer-controlled fabrication tooling permits the carving of very intricate designs and their duplication in any scale with near-perfect accuracy. **Information sources:** use of the internet now allows us to tap knowledge of nautical data from erstwhile unknown sources -- historical data, material sources, methods, etc. Computer-controlled photographic techniques can now instantly vary the scale of plans, designs and anything else required to build the perfect model to any desired scale.

(Editor's note:--These comments are not intended to (and should not) discourage anyone from taking up ship modeling as a hobby simply because such 'high-tech' equipment may not be available to that person. Most of the beautiful models being shown at current exhibits were made using tools and methods that have been in use for many years. But it is nice to use new methods, tools, etc. when they become available to us.)

A Log-keeper's Commentary.

In pursuing the 250 (plus) SMA Newsletters that accumulated in my file that was used for the preparation of this 'log,' I re-discovered a nearly forgotten article by Carl Arrowood for the January, 1983, issue, entitled, "I Miss Benny." It is a rather moving article pertaining to the friendships that develop at club meetings and to the importance of having an appreciative audience (for the 'Show and Tell,') even though a number of members (such as Benny) do not build and display ship models themselves. Carl further mentioned his ".....fascination with the sheer magnitude of human accomplishment embodied in a centuries-old hull made of tons of Oak, thrust across thousands of miles

of ocean by acres of canvas and controlled by miles of rigging....”

I believe that this same fascination is shared by a large segment of the public and accounts for the interest in ship model exhibits of quality whenever presented. The public thus is an extension of this ‘appreciative audience,’ as those who tend the booths at such exhibits will readily testify.

‘Steady As She Goes.....’

Tom Palen (March, 1996)

**

SMA Meetings Locations.

December, 1975 through June 1987

Glendale Federal Savings & Loan,
Fullerton, California

July 1987 through August 1989

Republic Savings & Loan
Santa Ana, California

September, 1989 to the Present

Bachs Community Building
201 North Bradford Avenue
Placentia, California

Books Published.

A number of books dealing with various phases of ship modeling have been written by SMA members. These include:

<u>Author</u>	<u>Title and Year</u>
A. Richard Mansir	<u>How to Build Ship Models. A Beginner's Guide</u> , 1979 <u>A Modeler's Guide to Hull Construction</u> , 1980 <u>A Modeler's Guide to Naval Architecture</u> , 1981 <u>A Modeler's Guide to Ancient & Medieval Ships</u> , 1981 <u>A Modeler's Guide to Rigging</u> , 1982
Henry Bridenbecker and Richard Mansir	<u>A Scratch Modeler's Log</u> , 1984
Richard O. Roos	<u>Keys to Successful Ship Modeling</u> , 1984
Donald Dressel	<u>Planking Techniques for Model Shipbuilders</u> , 1988

While these books were not published by the SMA, the numerous color photographs shown were mostly of models made by SMA members. As pointed out by Dick Mansir in the Introduction to The Art of Ship Modeling:

"The ship models pictured here are.....the work of 'amateurs' hobbyists, who for the love of it, have invested thousands of hours necessary to their creation. In this regard, one should be aware that the common distinction between 'amateur' and 'professional' ship modelers is often reversed. Few 'professionals,' given that they must make a living wage from the craft, can afford to invest the time of the amateur without pricing themselves out of the market. Thus, it follows that the work of the hobbyists frequently outshines

that of the 'pros.' Among ship modelers, the appellation 'amateur' usually means 'the best there is.'

Warner Woods West.

Lloyd Warner, one of the early members of the SMA, soon recognized the need of many members for the availability of high quality hardwoods, especially in the small dimensions needed for hull planking and for dead-eyes. He imported a wide variety of hardwoods and started 'Warner Woods West' to provide these to the modeling trade. By using specially-designed saws he produces small-dimension wood to very close tolerances.

Lloyd has been active in the nation-wide Nautical Research Guild and became its secretary in 1994.

S.M.A. OFFICERS

<u>Year</u>	<u>President</u>	<u>vice-president</u>	<u>Secretary</u>	<u>Treasurer</u>	<u>Editor</u>
1976	Jonas Josselson	Jack Elem	Tom Palen	Roger Van De Walker	Tom Palen
1977	Craig Coleman	Don Dressel	Tom Palen	Dick Roos	Tom Palen
1978	Henry Bridenbecker	Howard Judson	Tom Palen	Dick Roos	Tom Palen
1979	Dick Roos	Howard Judson	Tom Palen	Roger Van De Walker	Tom Palen
1980	Jack Elem	Art Robinson	Tom Palen	Roger Van De Walker	Tom Palen
1981	Art Robinson	Howard Judson	Tom Palen	Roger Van De Walker	Tom Palen
1982	Howard Judson	Bob Sadoris	Jess Laughlin	Dick Roos	Tom Palen
1983	Bob Sadoris	Carl Arrowood	Jess Laughlin	Howard Judson	Dick Mansir
1984	Don Dressel	Dave Yotter	Jess Laughlin	Howard Judson	Lloyd Warner
1985	Carl Arrowood	Dave Yotter	Jack Elem	Tom Palen	Lloyd Warner
1986	Dave Yotter	Paul Greenlee	Jack Elem	Tom Palen	Lloyd Warner
1987	Paul Greenlee	Alan Ikemura	Dave Yotter	Tom Palen	Lloyd Warner
1988	Bob Graham	Ken Matassa	Dave Yotter	Tom Palen	Lloyd Warner
1989	Jerry Magnuson	Henry Bikhazi	Dave Yotter	Tom Palen	Lloyd Warner
1990	Henry Bikhazi	Bill Wicks	Don Dressel	Tom Palen	Lloyd Warner
1991	Ed Averkieff	Jack Moffett	Don Dressel	Tom Palen	Lloyd Warner
1992	Jack Moffett	Bob Beach	Don Dressel	Tom Palen	Lloyd Warner
1993	Bob Beach	Bill Wicks	Don Dressel	Tom Palen	Lloyd Warner
1994	Bill Russell	Bill Amour	Don Dressel	Gary O'Donnel	Pete Petry
1995	Allan Ambruso	Bill Amour	Don Dressel	Gary O'Donnel	Pete Petry
1996	Richard Denney	Eric Dodson	Don Dressel	Gary O'Donnel	Bill Russell