

RIGGING DETAILS



Lloyd's model of the *Royal Caroline* contains lashing on the brace blocks (*shown above left*), a fascinating rigging detail that has never been shown on other 21st century models of the ships of this period. The brace blocks on the actual vessel regularly needed to be taken to the deck for inspection. To take the whole brace pendant off the yardarm would mean taking off other rigging. To avoid this complication, a thimble was turned in the brace strop, and made a soft eye in the brace pendant. These were joined by a lashing. To lower the block to the deck, seamen simply cut the lashing and sent the block, still rove with the braces, down. After inspection, it was easy to take the block back up and put on a new lashing.

All the 191 miniature blocks on the model are rounded on their edges just as the actual blocks on the ship were - not simply squared off as often seen on other models. All have served strops with thimbles fitted to the brace pendants. The blocks (*shown to the left*) are 6 times their actual size.

RIGGING DETAILS



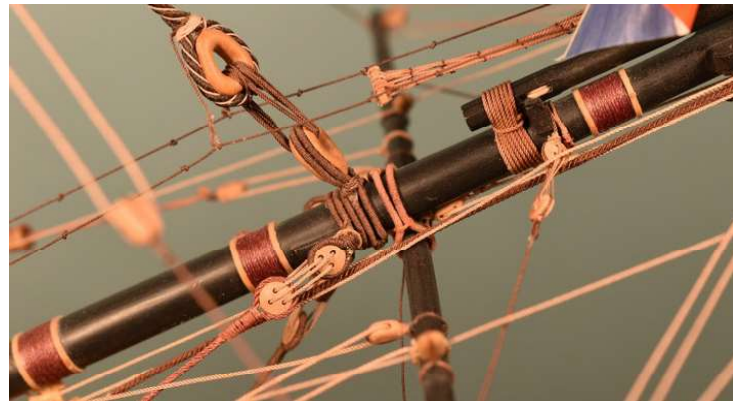
A "mouse" was created to prevent the fore stay collars from sliding up towards the masthead. Lloyd literally wove his miniature "mouse" using an over-under pattern.



On the back of the lower mast the yard parrel holds the lower yard to the mast itself. The parrel is made up of round wooden trucks and spacers all held together by rope when they were braced around to the wind.



Standing rigging and belaying pins at the ready.



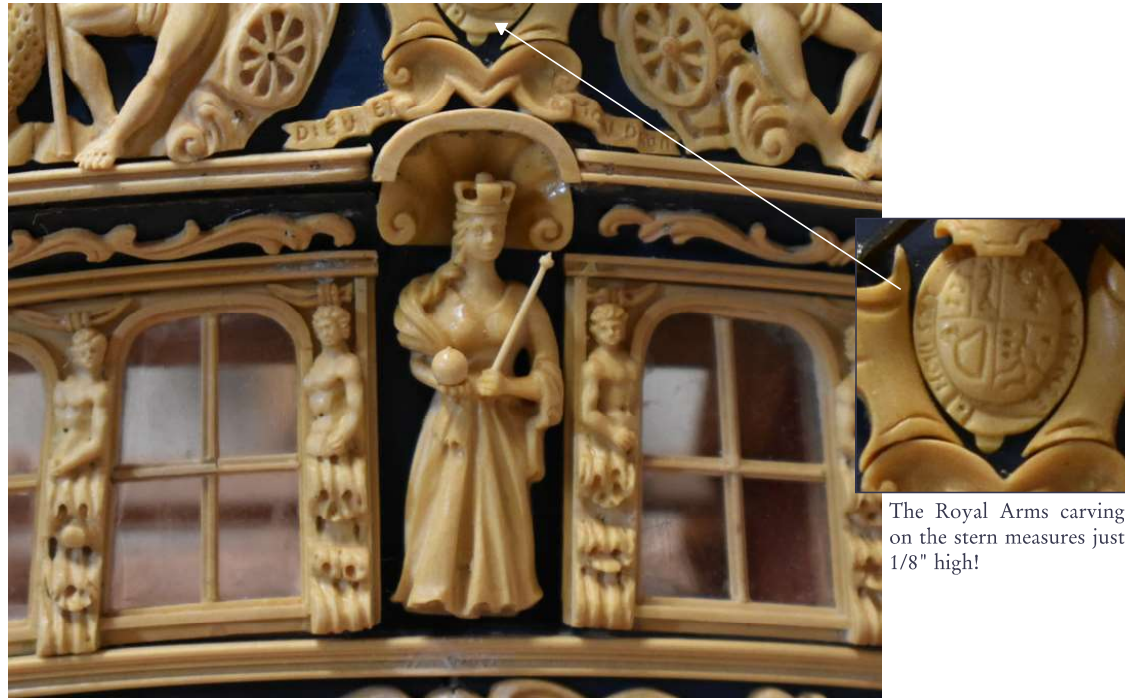
All the stays are cable laid (left-hand twist), the fore and main lower stays are "wormed." Lloyd used a lighter color of rope so the worming is visible on the model.

T H E S T E R N



Lloyd's unique ability to accurately replicate complex, decorative ship carvings at an extremely small scale is one skill that distinguishes him from other miniature modelers throughout history.

THE STERN CARVINGS



The Royal Arms carving on the stern measures just 1/8" high!

Detail of the carving of the Queen Caroline, the central figure on the HM Y *Royal Caroline* stern.

The stern decorations on the model of the *Royal Caroline*, seen above and on the facing page, demonstrate Lloyd's extraordinary ability to meet the challenge of creating the carvings to fit a hull's multi-curved surfaces. The entire stern is in a typical upside down u-shape in the Georgian style, reflecting the aesthetic of that age. Various bas-relief and full round figures fill and decorate the areas around the stern lights or windows. Many people have conjectured the identity of the various carvings. What is certain is the central sculpture depicts *Queen Caroline*, namesake of the ship. She wears the crown, and holds the orb and scepter. The Royal Arms (*shown in enlarged photo above right*), minus the dexter and sinister supporters, can be seen above her. The motto '*Honi Soit qui mal y pense,*' meaning '*Evil Be To He Who Evil Thinks,*' in Middle French, is carved on the "garter" belt surrounding the arms (*see detail in image above and on opposite page*) and '*Dieu et mon Droit,*' meaning '*God and my Right,*' written on a ribbon below. The quarter figures are ladies of indefinite Greek designation. Various hippocampuses (seahorses), and dolphins round out the assembly. Lloyd's ability to articulate these so that they are recognizable and convincing at this size is absolutely astonishing. While the hull decorations on the actual ship were gilded, experience has taught Lloyd that the intricacies of miniature carvings can be best appreciated when the carvings are left "natural" as he has done on this model.

THE STARBOARD QUARTER



In this view of the ornamental carvings on the starboard quarter of the model, mythological creatures and figures surround the quarter gallery window. Atop it sits the quarter badge which includes the rose - representing England - and thistle - representing Scotland, surmounted by a crown symbolizing the monarchy.

THE STARBOARD FRIEZE



Elaborate miniature carvings of mythological figures and animals run all along the starboard side of the model. These images are enlarged to show the intricate details of the frieze.



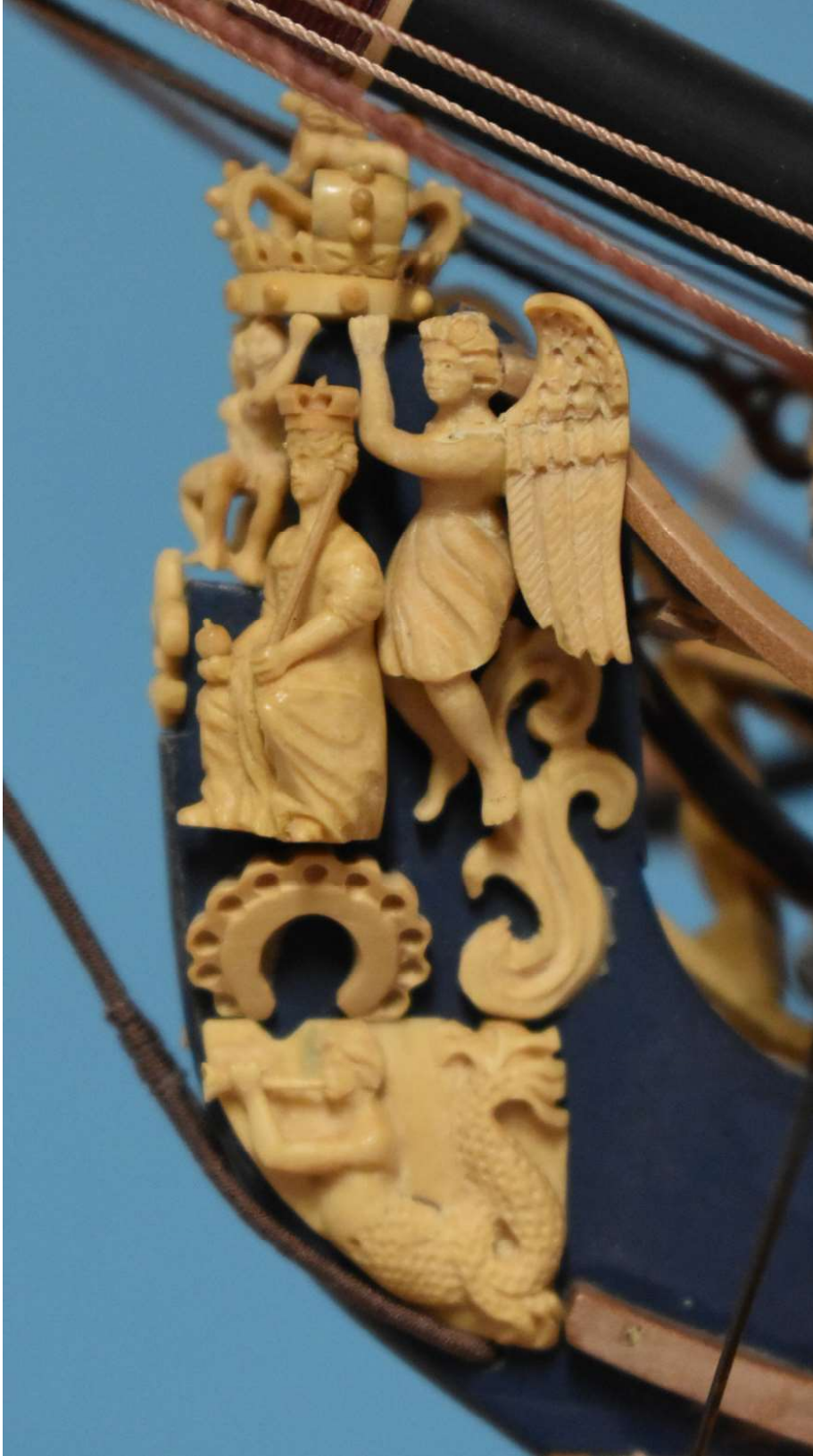
Actual size = 1" high



THE FIGUREHEAD

Lloyd's extensive research revealed that there has been some controversy over the true appearance of the figurehead on HMY *Royal Caroline*, with some sources claiming that it was just a single figure. However, the pen drawings by Naval Architect Fredrik Henrik Chapman (1721-1808), very clearly show that it was an unusual double figure (*see our Reference section*) with a seated sculpture of Queen Caroline on each side and all the supporters repeated in reverse. She wears the royal crown, and holds the orb and scepter. There is a larger crown suspended over her by an angel with wings and a cherub. This crown is surmounted by a lion. A sea creature with a tail is seen blowing a horn and supporting the composition from below.

Port side view of the figurehead (*shown to the left*).

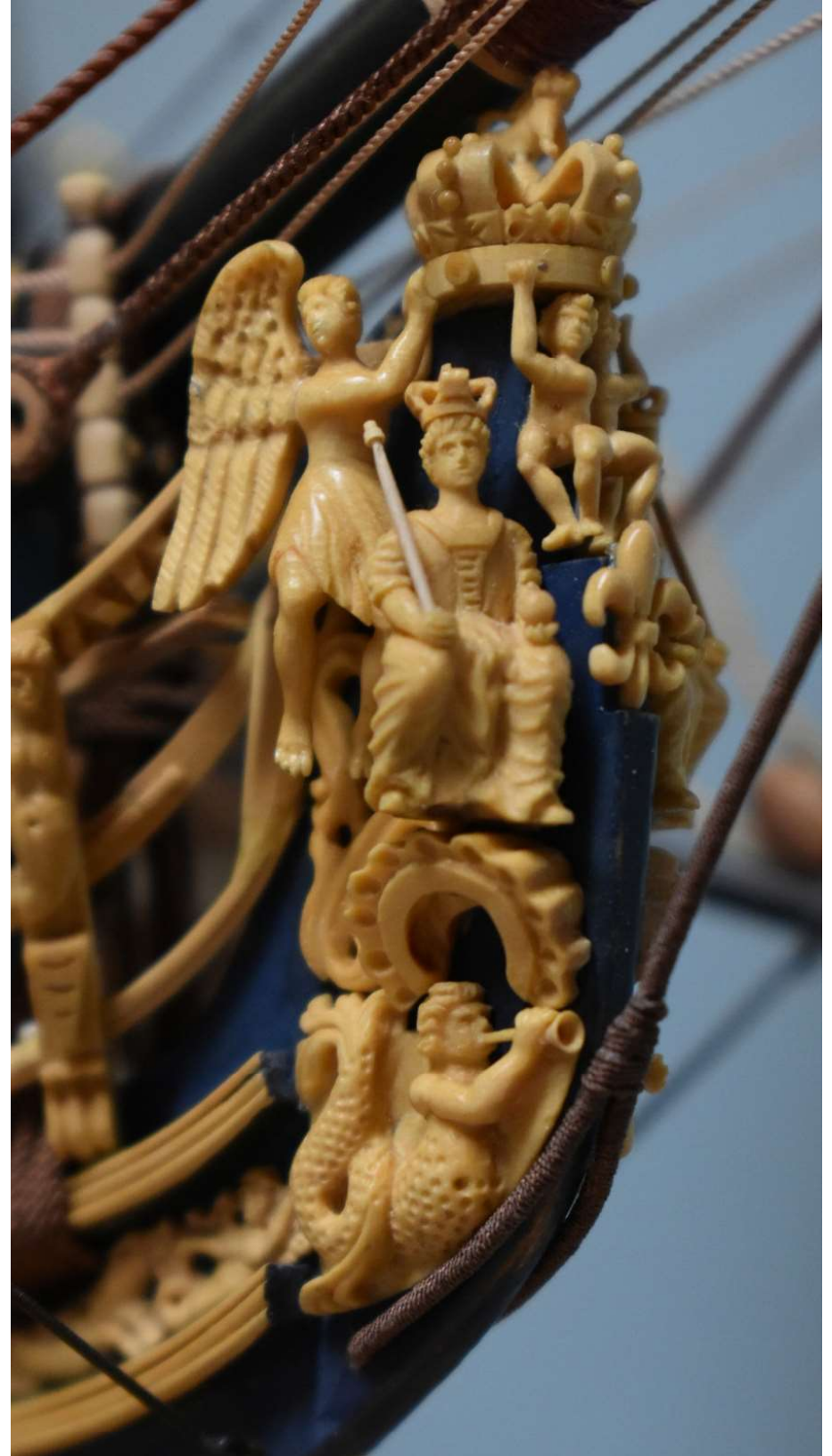


A 'fleur- de- lis' carved on the stem can be seen from the bow (*shown to the right*). The figurehead on the model - measuring only 2" high - was built using many components. All appendages, such as the orbs, scepters, trumpets, and crowns were turned by Lloyd on a jeweler's lathe. Some of these accessories were made of Lilac or Apple wood. The stem part of the model was built up of Apple wood. The stem tapers outward and upward from the rabbet line. The area that supported the figure was a little over half the siding of the stem at the rabbet line. The cutwater, that is the leading edge of the ship, is rounded over.



Actual Size = 2"

Starboard side view of the figurehead (*shown to the right*).



"The ability to carve and work at an extreme miniature scale is developed only through experience. I cannot stress enough that this is a solitary endeavor."

Lloyd McCaffery

THE FIGUREHEAD

The Sculpture



In order to fully understand the intricacies of the design of the figurehead and the challenges of carving it only 2" high, Lloyd first carved it 7" high, as a freestanding sculpture, scaled to 1:12. This allows us to clearly see additional details, such as the lion above the crown.

THE INTERIOR



After several years of extensive original research, Lloyd began building his ultimate ship model of HMY *Royal Caroline* in 2015, completing it seven years later in 2022. He handmade every part of the model and constructed it timber for timber, peg for peg, and part for part, exactly as the original ship was constructed in 1749-1750.

INTERIOR DETAILS



A crew member is placed just aft of the mizzen mast to show scale and give an idea of the cramped conditions aboard the ship. The port side of the keel has Lloyd's initials carved in the wood.



Lloyd's dedication to complete accuracy is seen in this complex, unique shipbuilding joint, when the iron u-shaped plate was inset to join the keel to the stem and the boxing scarf with six treenails as seen.



A white cat stretches in the cable tier - Lloyd has set a white cat somewhere in every model he has built since 1985.

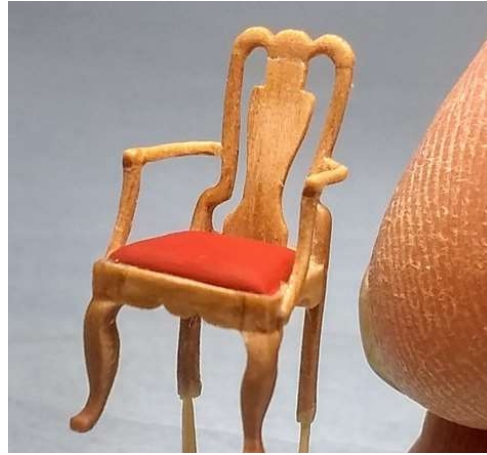


Lloyd included extensive details throughout the interior to reveal what the ship looked like below decks.

MINIATURE FURNISHINGS



A Blueware vase in the King's bedchamber.



The five Georgian chairs on board are each just 1/2" high.



A gold candelabra and Blueware teapot and 1/16" diameter teacup sit on a table in the aft cabin.



Another view of the King's bedchamber.



Lloyd actually painted three miniature oil paintings in gold leaf frames for the wall of the aft cabin.



A miniature globe and writing desk are set in the King's cabin. Casks with actual bungs are stored in the fore cabin below.

MINIATURE FIGURES

There are twelve miniature figures set above and below decks around the model to show scale and add interest. On deck, King George II rests his left hand on his staff, while watching the Captain dressed in the Royal Naval uniform - introduced in 1748 - shooting the sun with a quadrant of the period. Two women can be seen examining lace through the standing rigging. Also, four animals are seen around the model; a cat on the keelson (shown on page 28), a rat on the lower deck, a kestrel (or sparrow hawk) on the mainmast truck, and a wood dove on the jibboom.



FLAGS

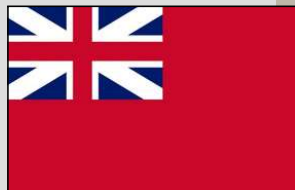
A complete set of flags are set on the model, as on the actual ship. All of the flags are rigged with halyards through the mast trucks. The "Navy Jack" or "Union Jack" is the small flag fitted to the jack staff at the cap of the bowsprit. The "Fouled Anchor" flag of the Admiralty flies at the foremast pole - it is yellow on a field of red. The "Royal Standard" flag flies at the main, showing royalty is aboard. The mizzen pole holds the "Union Jack" flag, a larger version of the Navy Jack. It has the red cross of St. George over the Saltire, the diagonal cross of St Andrew. At the stern is the "Red Duster" - a Union Jack flag in the first canton on a red field. Lloyd made all the flags of neutral pH glassine paper, using flat enamel outlined in black. All flags are fitted by the white vertical tabling, at the inner hem of the flag to lanyards set up in the tops.



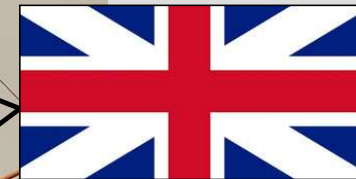
The "Royal Standard" Flag



The "Fouled Anchor" Flag



The "Red Duster" Flag



The "Union Jack" Flag

ANCHORS

HMY *Royal Caroline* put to sea with a number of anchors, used for different purposes and for redundancy. They were, after all, the sailor's last hope. All four anchors are shown on the model, including two stream anchors and two bower, with the starboard one fitted with all gear, anchor buoy, iron stropped cat blocks with hooks, and catted to the starboard cathead.

The anchor buoy with rope coiled and lashed to shrouds leads down to the lashing on the anchor crown (*as seen below*). The "puddening" (lashing) on the anchor rings and the anchor stocks, and flukes are clearly visible (*shown top right and below*).



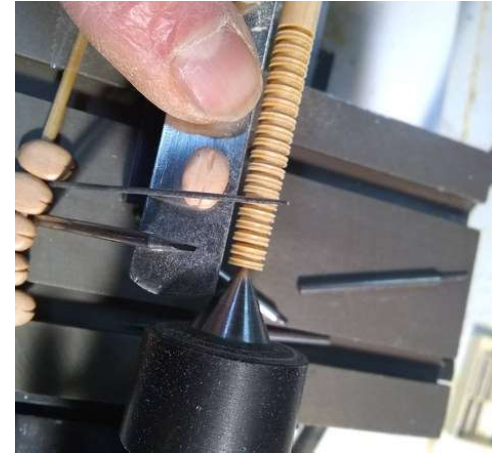
THE CONSTRUCTION



On the lower starboard hull the individual frames of the ship are visible. The center line of one of these bends can be seen at the point of the pencil.



The 5 curving staircases were made in pieces then assembled to fit inside the model.



The deadeyes were first turned by Lloyd on a lathe, then hand carved of Hawthorn wood to the proper scale for their job on the rigging.



The deck planking is sprung in, not just glued down. Minimal deck planking is fitted, to allow unrestricted views below deck.



Twin staircases fit very nicely, though tightly, between the main deck beams and the spur beams.



Lloyd carved 124 miniature deadeyes of various sizes,

OF THE MODEL



Here we see an individual yardarm and pieces of the complex rigging prior to assembly by Lloyd.



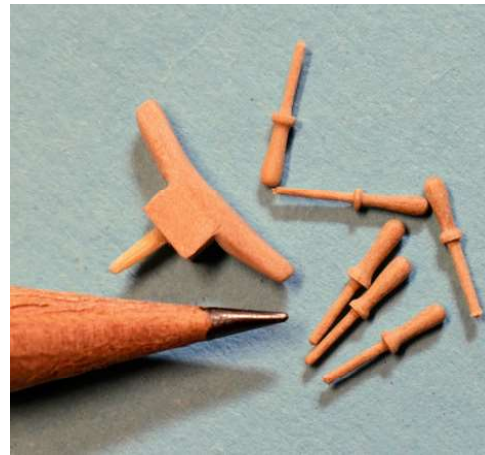
The miniature masts and yards are made of Degama (also known as Lance wood).



The anchors on the actual ship were made of iron, on the model Lloyd made each one of wood and painted them.



The four lanterns on the model were each assembled individually and then glazed with a sheet of mica to simulate glass.



The belaying pins and cleats were turned from Lilac wood.



The shells of all blocks have properly rounded sides, matching the actual size on the ship, ranging in size from 1/16" to 5/10" on the model.

RESEARCH AND SOURCES USED FOR THIS MODEL

Appearance of the Ship:

Lloyd studied three portraits showing the HMY *Royal Caroline* in full sail and flying the red and blue ensigns and the common pennant, by John Cleveley, the Elder (1712-1777) - these paintings are shown on pages 4 and 6. The plans, drawings, and paintings by Cleveley and those of other Royal Yachts helped confirm details of the appearance of the *Royal Caroline*. A model of the yacht *Royal Sovereign* of 1804, (which succeeded the *Royal Caroline*) in the Mariner's Museum, Newport News, Virginia, showed how the interior of a Royal Yacht was outfitted, providing details for the *Royal Caroline* model.

Ship Design and Construction:

There are at least five drafts (draughts) surviving of this ship in the National Maritime Museum, Greenwich, England. A number of other yacht plans of the period are also there. There is the well-known plan, with decorations, in *Architectura Navalis Mercatoria* by First Naval Architect, Fredrik Henrik Chapman (1721-1808). This is augmented by the recently discovered drawing at the Swedish museum which is a pen drawing of the *Royal Caroline*, believed to have been done by Chapman himself.

The Canadian author J. R. Stevens put together a compilation of the scantlings for many ships of this period, and among them is the *Royal Charlotte*, which is what the *Royal Caroline* was renamed in 1761. This was very helpful for determining the sizes of the timbers throughout the hull.

French Engineer and Master Shipwright Blaise Ollivier's (1701-1746) *Spy Report* on British shipbuilding processes of 1737, was a very valuable source, providing actual eyewitness account of how these ships were built. Lloyd also consulted the writings of the modern French Naval Historian and author Jean Boudriot (1921-2015). John D. Fincham's book "*The Practice of Shipbuilding*," originally published in 1825, contained much relevant information, especially on the construction of the square tuck of the stern. Many other period sources were also consulted.

For Ordnance, Adrian Caruana's book "*History of English Sea Ordnance*," (1523-1875) gives specific details on the guns of the *Royal Caroline*.

Rigging:

Lloyd's research uncovered that the only rigging which has survived intact on 18th century dockyard models was made of silk thread, so he chose that for his model. Artifacts from the wreck of the 74-Gun *Invincible* (built in 1744 and wrecked in 1758), were an important source for him - because he could see exactly how the rigging of that time period was made, including proper shaping of blocks and tackle. To replicate the original materials used, and the manner the masts and rigging were configured, Lloyd followed descriptions in an article describing them by D. J. Andrews in the *Mariner's Mirror*, Vol. 776, #3, 1990, pp. 222-225.

Rigging (continued from previous page):

Publications/Books Consulted:

Arming and Fitting of English Ships of War, 1600-1815, by Brian Lavery, Naval Institute Press, 1988

Construction and Fitting of the English Man of War, 1650-1850, by Peter Goodwin, Naval Institute Press, 1987

The Masting and Rigging of English Ships of War (1625 - 1860), by James Lees, Naval Institute Press, 1979, 1984

Mariners Mirror, Vol. 76, #3, 1990, by D. J. Andrews which contains the precise mast and yard dimensions of the *Royal Caroline*

17th and 18th Century Ship Models Examined:

St. George, 1701, at United States Naval Academy, Annapolis, Maryland

20-Gun Ship, 1710, National Maritime Museum, Greenwich, England

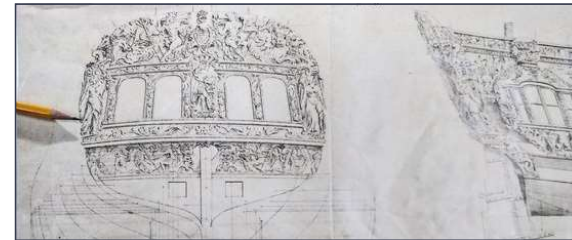
Fourth Rate 50-Gun Ship, 1714, National Maritime Museum, Greenwich, England

Two-Deck Third Rate *Essex*, 1768, Wilton House, Wiltshire, England

70-Gun Ship, *Burford*, 1722, Mystic Seaport Museum, Mystic, Connecticut

The Carvings:

A remarkable, original 18th century pen drawing by Fredrik Henrik Chapman (1721-1808), showing all the decorations on the *Royal Caroline* (shown to the right). This is reproduced in *Architectura Navalis Mercatoria* of 1768.



The Figurehead:

The most important figurehead drawing is from the Dickerson Archive, in "*Figureheads of the Royal Navy*" by David Pulvertaft, RADM, published by the Naval Institute Press, 2011, which showed a double figurehead in both profile and from the bow, which matches exactly the paintings by Cleveley and the Chapman pen drawing. This confirms that there were two figures of the Queen, along with cherub supporters, on port and starboard. Amazingly, there is an actual 18th century 2" carving of the figurehead in the renowned *Kriegstein Collection* of 17th and 18th century ship models.

REFERENCES

Books/Periodicals/Television featuring Lloyd McCaffery:

Naval History, Miniature Figureheads of the U.S. Navy by Eric Mills, August, 2020
Lloyd McCaffery: Master of Miniatures, Private Publication, J. Russell Jinishian Gallery, Inc., 2014
Waterline Dioramas by Justin Camarata, Sea Watch Books, 2009
The William H Combs Miniature Model Collection at the International Yacht Restoration School, by R. Michael Wall, International Yacht Restoration School, 2007
International Yacht Restoration School Quarterly: "The William H. Combs Miniature Model Collection" by John Mecray, Spring, 2006
Bound For Blue Water by J. Russell Jinishian, Greenwich Workshop Press, 2003
The Osgood Files: "The Small Ships" by Charles Osgood, CBS Television, December, 1990
The New York Times Magazine: "The Small Ships" by Bruce Webber, November, 1990
The Exchange: "Miniature Ships" by David Smith, Cablevision Corporation, December, 1990

Books Written By Lloyd McCaffery:

Ships in Miniature: A New Manual for Modelmakers, by Lloyd McCaffery, Conway Maritime Press Ltd., 1988, 2002

Articles Written By Lloyd McCaffery:

The Strad, March, 2020, Volume 131, # 1559, "A Head for Figures," Pages 68 - 69
Shipwright, 2013, "Modeling the Flying Cloud," Pages 96-109
Sea History, Summer, 2012, #139, "History in the Palm of Your Hand: Recreating the Figureheads of the U.S. Navy in Miniature," Pages 22-25
Fine Woodworking, October, 2011, #221, Model of Norwegian Stave Church, Page 79
Miniature Collector, April, 2011, Volume 33, #12, "Lloyd McCaffery: Master Modeler," Pages 48- 53
Shipwright, 2010, Volume 32, "Miniature Marine Carving: Creating Intricate Figureheads and Frieze work," Pages 146-160
Wood Carving Magazine, March/April, 2010, #113, "Carving Miniature Figureheads," Pages 64-66
Mainsail Haul. San Diego Maritime Museum, Volume 45, #3-4, Summer/Fall/2009, "Masterpieces in Miniature"
Nautical Research Journal, Winter, 2008, Volume 3, #4, "Wooden Ship Construction Notes and Observations: Deck Planking," Pages 214-223
Nautical Research Journal, Summer, 2008, Volume 53, #2, "*Coronet*: Last Surviving Yacht of the Gilded Age," Pages 101-104
Nautical Research Journal, Winter, 2008, Vol. 54, #1, "Wooden Ship Construction Notes and Observations: Cant Frames," Pages 31-36
Miniature Collector, February, 2008, Volume 30, #10, "Room Boxes Go To Sea," Pages 22-25
Nautical Research Journal, Winter, 2007, Volume 52, #4, "*Britannia*," Pages 205-212,
Wood Carving Illustrated, Spring, 2006, "Miniature Carving on a Grand Scale," Pages 78-79
Restoration Quarterly, International Yacht Restoration School, Summer, 2005, "*Coronet* in Miniature, the Making of a Ship Model," pages 4-5
Nautical Research Journal, Summer, 2005, Volume 50, #2, "Carving Ship Ornamentation (Barge of *Napoleon I*)," Pages 78-85
Sea History, Spring/Summer, 2003, #104, "Romance of the Sea in Miniature," pages 18-21
Miniature Collector, January/February, 1999, "Miniatures Over Time," Pages 28-30
Wildfowl Carving and Collecting, Spring, 1994, Volume No.1, "Wildlife Carving in Miniature," Pages 17-25
Model Shipwright, 1986, "Prince Frederick's Barge," Pages 1-13

Selected Collections:

Robert P. Galvin, Chairman Emeritus, Motorola Corporation
Thomas Harrington, Commodore, New York Yacht Club, New York, New York
The Honorable Governor of Bermuda
Alan Goldstein Collection, Winter Harbor, Maine
International Yacht Restoration School, Newport, Rhode Island
Columbia Maritime Museum, Astoria, Oregon
Pan-American Japanese-American Amity Hall, Kushimoto, Japan
Toy and Miniature Museum, Kansas City, Missouri
Mystic Seaport Museum, Mystic, Connecticut
Museum of Yachting, Newport, Rhode Island
Newport Art Museum, Newport, Rhode Island

Exhibitions:

Mini Time Machine Museum of Miniatures, Tucson, Arizona, "*Sentinels of the Sea: Miniature Merchant Clipper Ship Figureheads*" January 27, 2022 - May 1, 2022
New Bedford Whaling Museum, New Bedford, Massachusetts, "*The Art of the Ship Model: Collecting Past, Present and Future*" March, 1, 2013 - February 23, 2014
Victoria & Albert Museum, London, England "*William Kent, Designing Georgian Britain*," March 22, 2014 - July 13, 2014
Erie Maritime Museum, Erie, Pennsylvania, "*Miniature U.S. Navy Ship Figurehead Woodcarvings*," September 1, 2013 - 2014
Bard Graduate Center, New York, New York, "*William Kent, Designing Georgian Britain*," September 20, 2013 - February 16, 2014
U.S. Naval Academy Museum, Annapolis, Maryland, "*Miniature U.S. Navy Ship Figurehead Woodcarvings*," July 15, 2012 - July 15, 2013
USS Constitution Museum, Boston, Massachusetts, "*Figureheads from the USS Constitution*," October, 2007 - November, 2011
USS Constitution Museum, Boston, Massachusetts, "*Model Shipwright Guild Annual Ship Model Show*," January, 2011
Maritime Museum of San Diego, California, "*Masterpieces in Miniature: Figurehead Woodcarvings and Model of Britannia*," September 5, 2009 - May 31, 2010
Bancroft Library, University of California at Berkeley, California, "*Darwin and the Evolution of a Theory*," September 1, 2009 - December 23, 2009
Newport Art Museum, Newport, Rhode Island, "*The History of the Yacht Coronet*," International Yacht Restoration School, 1999
Seaman's Church Institute, New York, New York, "*Aubrey's World - The Maritime World of Patrick O'Brian*," April, 1998 - May, 1999
Big Hom Gallery, Fairfield, Connecticut, "*Lloyd McCaffery - Master of Miniatures*," 1995
Mystic Seaport Museum Gallery, Mystic, Connecticut, "*Lloyd McCaffery Miniatures*," 1987

Awards:

First in Class III - Small Craft, Prince Frederick's Barge; 1986 International Ship Model Competition, National Maritime Museum, Greenwich, England
First Place - Scratch-Built Sailing Ships, HMS *Bounty*; 1985 Ship Model Competition, Mariner's Museum, Newport News, Virginia

THE BOOK

In order for Lloyd McCaffery to achieve the level of historical accuracy and elaborate detail in an extreme miniature scale, he had to literally invent his own totally new techniques and methods. These were so revolutionary that in 1998 the British publishing house Conway Maritime Press, Ltd. commissioned McCaffery to write a book about his philosophy and processes.

The result was *Ships in Miniature: A New Manual for Modelmakers*. Throughout the 140 page book - illustrated with photographs, McCaffery speaks to ship modelers and connoisseurs of the art form. He discusses in detail the qualities he believes a good ship model must contain, from proper research and aesthetics to proper construction and materials, including the design of the final display presentation. He tells how he had to make his own miniature tools to work at such a small scale, explaining how if a deck plank needed to be 1/16" wide, he first made a miniature plane which he then used to fabricate that miniature plank.

Reprinted by Conway Maritime Press in 2002, it has become the classic manual in the world of miniature ship modeling.

Here's a brief excerpt from the book's introduction:

"The last few decades have seen a major revival of interest in marine history and a growth in the creation and collection of marine art. The psychological and sociological reasons for this have been explored elsewhere. One of the subjects of particular fascination is the miniature ship model, and an increasing number of people want to make these miniatures. There is, therefore, a growing demand for the practical information on construction. I have written this book to provide the instruction, and set standards for the research, construction and display of miniatures."

