The following Article was first published in the **Nautical Research Journal,** Summer 2016. It features the restoration work of a ship in bottle by **Alex Bellinger**

Ship in Bottle Restoration

"Here, you'll know what to do with this", she said as she put the shoe box down. Rob Napier looked up from his table in the coffee shop in surprise. Though he and Meg DeGive knew each other by name, he doubted they had ever actually spoken to each other before. She also seemed to know he was a ship modeler because the shoe box contained a ship model clearly in need of attention. He could tell right away it had been a ship in bottle because, "there were still shards of glass stuck to the hull." He also did know what to do with it. He brought to the next meeting in Boston and turned it over to me.

Ship in bottle restorations are rare, usually because little of value survives circumstances calling for restoration. But they do come up. I have done three or four in the past few years. They can easily be divided into two categories: cases where the bottle survives and those where it doesn't. This was clearly one of the latter.

The model itself had been pretty well done, and was therefore, worth saving. It had been painted with care and had a good level of careful detail. Though clearly not a fine scale miniature, the proportions were good. At 8 ¾" in length, 3 7/8" high, and a ¾" beam, it was too large for a typical 750 ml or 1.5 liter wine bottle. Though the kind of gallon jug usually filled with cider could manage the height easily, it would not have room for that length. Fortunately Gil Charbonneau, the excellent ship in bottler in Maine, generously gave me an antique "long gallon" bottle which suited the model quite well, so well it is hard to imagine the original bottle had not been one of these.

At first glance, the model appeared to be of the classic ship in bottle subject, the four mast bark. Once the square yards on the jigger are noticed, it is clear this is a model of a less common subject, the four mast ship. Harold Underhill in his *Deep Water Sail* discusses the rarity of this rig, noting a study by a Captain E. A. Woods which found only 119 four mast ships listed between 1853 and 1892. Underhill does not clarify whether these were all British, or European, but does admit some of 119 might be four mast barks incorrectly recorded. Underhill then covers a group of the better known examples of four mast ships, iron ships built by Barclay, Curle & Co. between 1876 and 1887 for the R. J. Craig Company of Glasgow. Since all these four-masters were named for counties in Scotland, they were known as "Craig's Counties"

Three of the four main features Underhill notes to distinguish the "Craig Counties" match this model. There is an unusual deck arrangement aft, where the poop extends forward to the jigger mast but like a long coach house, leaving alleyways on the main deck to the jigger shrouds and rigging. These allow the crew working the ship easier access to the aftermost rigging without having to climb the poop to reach it. Though the fore, main and mizzen all carry double topsails, the jigger has a single topsail. This was documented by ship portraits and photographs for the earliest "Counties", though the later, larger ships in this line did set double topsails on the aftermost mast. Thirdly, all these ships maintained the jibboom, resisting the change to the spike bowsprit.

The only discrepancy to Underhill's features is the usual "seaman's house" between the fore and main masts. Underhill remarks on the absence of this deck furniture on these ships and that is confirmed by the paintings and photographs I was able to find. This model does have a small house on the deck here. It is covered by three boats overhead on skids, another regular feature appearing in images of these ships.

Unfortunately, there is no indication which of the "Craig Counties" this model may represent. She is maroon below the gun port stripe. All images of these ships I found were either gray or black here. There is a small figurehead the modeler took some pains to paint in detail, including a blue cut away frock coat, honorary scarlet sash and drop of gold paint on the left breast, presumably representing a medal. Perhaps this will lead to a clearer identification.

Not wanting the lady to go on unnamed, I chose the 1876 County of Caithness, an early "County", because the model closely resembles a plan of that ship published in Edwin Monk's 1951 *Windjammer Modelling*. It is almost exactly the same size as this plan, which is one of eight such plans in the end of Monk's book. In his acknowledgements Monk thanks Harold Underhill for the use of drawings for four of these sets and thanks Basil Lubbock for a fifth drawing. The County of Caithness is not among these five. This book also has the only photograph of this ship I was able to find. In it the ship's hull is solid gray, but Monk notes she probably carried the familiar gun port stripe in her early years. All her sisters appear to have been painted with it as well. This does not assume the modeler worked from Monk's plan. The details of the deck furniture show there had to be at least one other source, and possibly the Monk plan was not involved at all.

Restoration

In spite of obvious damage, the model was in good shape. It had been well-painted and the deck arrangement was complete and undamaged. The masts, bowsprit and jibboom were intact and had all of the spars except one. The sails and rigging were not as fortunate. The rigging had deteriorated to the point where it seemed the model had not been rigged with any shrouds or backstays. However, on cleaning the tiny telltale holes in the bulwarks appeared, and there were faint remnants of these lines in holes in the masts. I had hoped I might be able to match and replace only the damaged sails, but it was soon apparent none of the originals would survive the re-rigging and certainly not another trip down a bottle neck. Most crumbled at a touch. All this leads me to suspect the original modeler used coffee or tea to color rigging line and sails and the tannic acid hastened their disintegration. Surprisingly, the spars are of soft metal. It seems like a good idea, insuring the most delicate and fragile part of the rigging would be quite unlikely to break during the difficult journey ahead. The scope of the work required was clearly a complete re-rigging, setting new sails and rebottling.

Rob Napier put it very well in granting the model "the final say" over any decisions in a restoration. Whatever was originally there should be faithfully preserved and nothing which wasn't should be added.

Furthermore, all actions should be reversible, though the final acts of ship in bottling may be something of a challenge to undo. Ideally, the restorer should recover and enhance the modeler's original work and leave little trace of his or her own. In some cases the temptation to correct and improve did occur and in most I resisted, but in a few, I did not.

The first step was to prepare the bottle and stand. This is important because the material used for the sea, made of glazing putty and artist's oils, needs plenty of time to cure before you can successfully settle a ship into it. The stand is needed to keep the bottle level during this process. The stand is made of pine and a simple design, which seemed suitable for this subject.

On clearing off the remaining residue of sea and glass from the lower hull, I discovered two holes 3 /32" in diameter underneath the hull. At first I thought these might be for running stays coming down to the deck out through the hull, but they were empty and much too large for this purpose. Apparently they were the means for holding the hull on whatever kind of rigging stand had been used for completing the model outside the bottle. It was easy enough to adapt my own rigging stand to manage two 3/32" dowels and this worked quite well for the re-rigging.

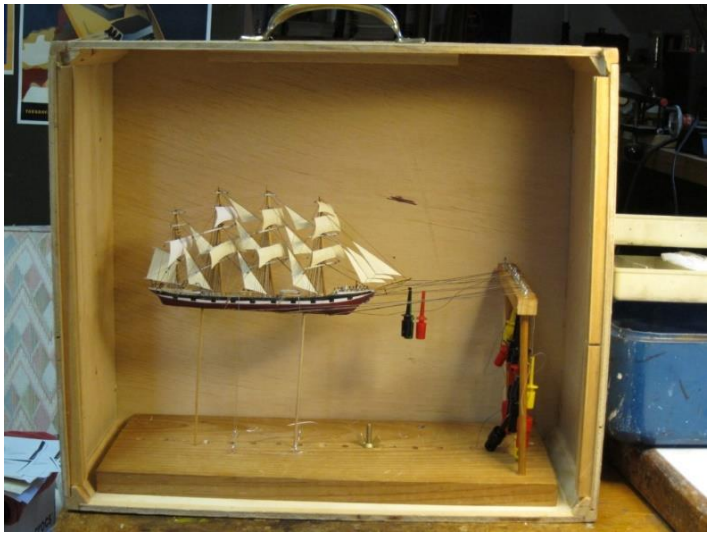
After a limited cleaning with dry tissues and tweezers, the re-rigging started from forward and moved aft, gradually removing any remaining line and sail material before tying in new lines. The original lines were all brown, regardless of whether they were running or standing, and were of at least two weights. The lightest weight was only used in the uppermost parts of the rig and for jibboom stays. All stays were of the heavier weight thread. Small drops of black paint were on the braces to suggest blocks. Here I wandered from the purer restoration principles by replacing standing rigging with two weights of black thread and doubling up the lower fore, main and mizzen stays. I used lighter weight black thread for the upper stays and backstays, all lifts above the courses and the bowsprit and jibboom stays. All running rigging was replaced with a light weight lingerie thread stained with Minwax Golden Oak. I also took the liberty of adding running lines to support the staysails. These had been just glued to the stays before. I am not sure what glue had been used, but aloft, it was messy. All new line was waxed with beeswax.

All braces led aft and down to the deck, including those of the jigger. This is common for ships in bottles, simplifying the collapse of the entire rig to allow it to fit through the bottle neck. The jigger royal and topgallant braces may have led forward, but there was too little left of them to be sure. In first re-rigging I followed this practice, but circumstances required me to make another re-rigging, and I decided against doing this. These braces leading to the very end of the poop deck just didn't look right.

I accepted the "side saddle" arrangement of the spanker gaff and boom, which were mounted to starboard of the jigger mast. It was one way of managing the collapse and correcting this would have required making new spars for this sail. However, I could not bring myself to replace the spanker gaff topsail. I am aware of no evidence any such sail may ever have been set. Oddly enough, none of the square sail clews had been set and the courses and staysails were without sheets. I added these.

The sails were a light paper with a slightly uneven texture, like what we used to call "Corrasable Bond" typing paper. The "clothes" or seams, of the sails were represented with light pencil lines. I used a light weight printer paper. Normally I tone the brightness down by coloring the entire page with a warm gray magic marker, but I could not find a marker color than that fairly matched the original sail color. Instead I used an acrylic wash of Burnt Umber, Cobalt Blue, a touch of Yellow Oxide, all paled with plenty of Unbleached Titanium. The lines in the sails were drawn with a #9 hard pencil. I usually rig all fore and aft sails first, since they will only become harder to reach as the rest of the suit of sails is set.

During this rigging I was working at the USS Constitution Museum, doing demonstrations on Mondays while the annual ship model exhibit was up, and I work with a group of ship modelers in Peabody on Wednesdays. Therefore, the lady travelled quite a few times as she was getting back into shape. The rigging stand is secured in a box made for this purpose and is protected by a sliding panel covering the front of the box. In the picture of the model in this contraption the mizzen topgallant and jigger topsail are much paler than the other sails because these two are only templates, cut out to confirm the accuracy of the fit. It's better to make mistakes on scrap paper before using up the carefully prepared sail material trying to get them right.



The rebottling was a little more involved than expected, requiring two tries. Having to bottle a model more than once is not unusual, but not to be recommended to the faint of heart. The failure of the first attempt was due to the limitation of the glue in holding the sails to the yards. I had hoped Elmer's would do, adhering at least to the paint on the metal yards well enough. It did not, and when the spanker came unglued at the first attempt, I knew this was something better fixed outside the bottle rather than in. As careful as you might be, removing a model from a bottle is always a less controlled event than gently easing it in. The new damage called for some re-rigging and I took advantage of it to change the lead of the jigger braces. In replacing the sails I used Pliobond from a very old bottle with some misgivings, but it held perfectly well. And the second bottling was more successful.

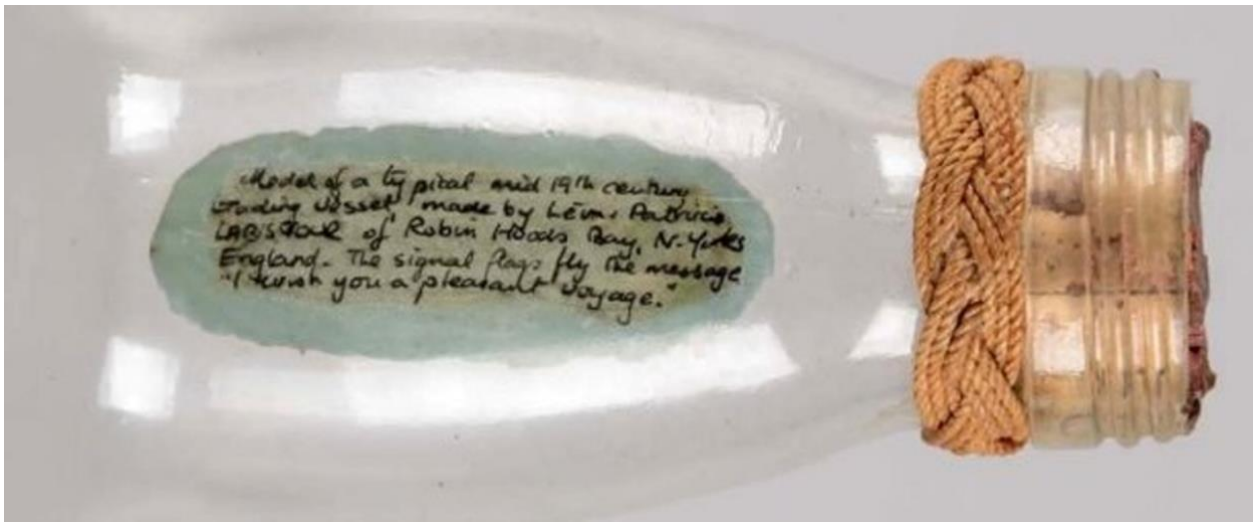
Frequently people will say, "You put it in and pull the thread and it comes right up". In principle this is entirely correct, In this case there were 35 lines coming out the neck and the process after bottling stretched out over a couple of weeks. Most of the delay was due to the difficulty in securing the hull to the sea without interfering with the movement of threads underneath the hull. It was a careful balancing act between the two priorities. People wishing to watch the bottling process will find it a very slow show.

My attitude towards restorations has changed quite a bit over the years. At first I was flattered to be asked to do these jobs, liked the income they provided, and for a while, felt I was learning from working on other modelers' works. Later I began to believe there not as much more to be learned from this work, especially if the initial job had been limited to begin with. I also decided to get away from restorations in general because they were requiring too much time away from work I really wished to do.

One major question arising from all this is, of course, "Why do this?" It isn't as if I don't have plenty of my own work to do, and there never really was a customer for this. As attractive as the model is, I would not like to think it might be mistaken for my own work. However, it did produce pleasant results without as much effort as starting a new model and did put a good bottle to use. But I believe the main

thing is that the model was just good enough to keep Meg and Rob, and eventually me, from throwing it out. Once that decision was clear, well there really wasn't any other choice.

Epilogue: Not long after completing this restoration and the text above, I sent a copy to Rob Napier for his review since he is mentioned a couple of times. He noted my difficulty in finding photographs of the County of Caithness and sent me a couple of links with a few images I had not seen. Later he sent me another link, with the note, "this may also be of interest". This connection led to images of not one, but two ships in bottles of this four mast ship and both were so remarkably similar to the model I had just repaired it would be unconceivable they had been made by any other hand. Even the color of the water beneath the ships' hulls matched. Under the sea of each of these intact models are labels with the builders' names, Leon and Pat Labistour.



Back in the 1980s, when editor of the Bottle Shipwright, I corresponded with Leon, who was running an active ship in bottle operation in Robin's Hood Bay, near Whitby, in Yorkshire. He passed away either in the late 1980s or early 1990s. He had started a video on ship in bottle building which he did not survive to complete, and this was finished by his wife Pat.
It was a dismay to learn what I had restored was the product of some mass production. It would be hard to believe these three were the only ones, but it might be possible. I was also disappointed to note as pure as my restoration intentions had been, my results had strayed considerably from the original concept. The new bottle is larger and vessel's rig looks more involved. The "trace" of my own touch seems rather heavy handed by comparison. I wonder how it would have turned out if this information had been with the project from the first. Still, it was gratifying to note I really did get the vessel name right.

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