

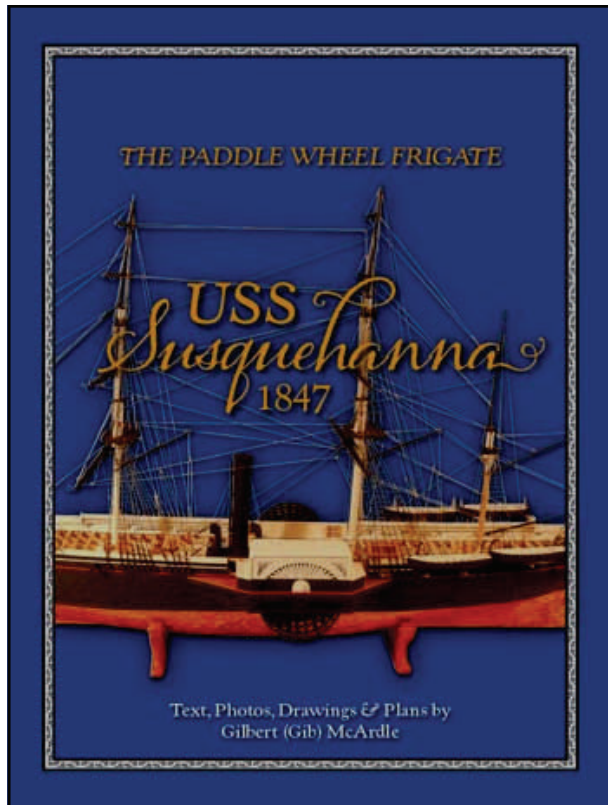
The Paddle Wheel Frigate
USS Susquehanna
1847

By Gibert McArdle

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For those of you who own some, if not all, of Gilbert McArdle's books, it has probably become increasingly apparent that this gentleman likes to think outside the box when it comes to model ship building. This can pertain to his innovative techniques, as well as the subjects he chooses to build. Mr. McArdle's latest offering, *USS Susquehanna 1847*, certainly exemplifies both characteristics.

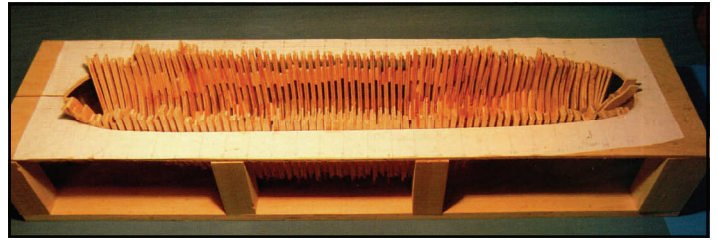
There are very few books, if any, that deal with the mid



nineteenth century period when vessel design was transitioning from sail to steam. The rotating screw propeller would eventually become the preferred means of ship propulsion. Nevertheless, the paddle wheel, in spite of its shortcomings, would also be employed to a considerable extent during the Nineteenth Century. The *USS Susquehanna* was a large, and powerful, steam frigate that employed this latter design, and would have a long and successful career.

The first chapter provides a brief history of this vessel based on Charles B. Stuart's 1853 book, *The Naval and Mail Steamers of the United States*. It also contains tables that provide dimensions for the hull, engines, boilers

and paddle wheels. Weight, cost and armament information is also provided.



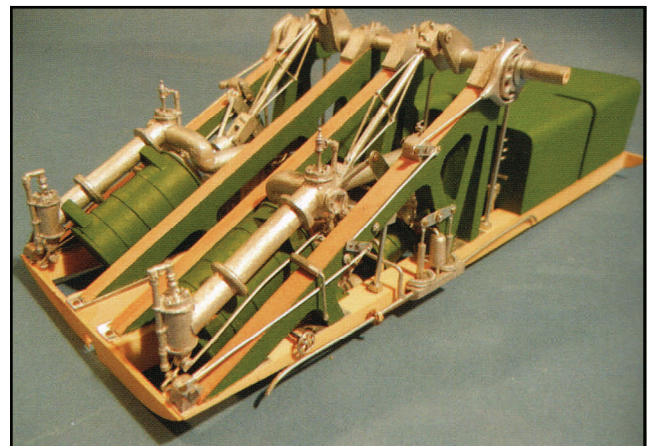
Chapter II discusses hull construction, and here in lies one of the more unique aspects of this treatise. The author provides three different options for building the hull. They include solid hull, simple bulkhead plank on frame construction, and full frame construction. Being the most complex method, the majority of this chapter is devoted to the final option.

For this model, McArdle uses a frame jig, and an innovative method that employs frames that have oversize inboard and outboard dimensions. This process requires less initial accuracy, and still produces excellent results!

The next three chapters address the station, orlop, berth and main decks. The author begins by installing all the clamps for these various structures. Excellent hints and tips are provided as he outlines the construction of each deck. One of the more innovative touches is the use of a scratch-built miniature contour jig, which helped determine the shape of the narrow inboard confines of the model.



Without a doubt, one of the more intriguing segments of this book involves the *USS Susquehanna's* steam engine.



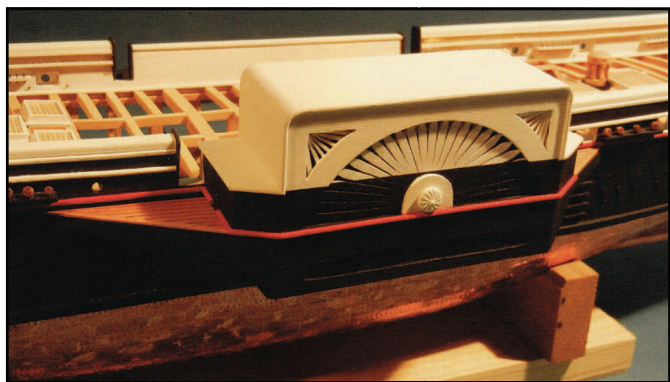
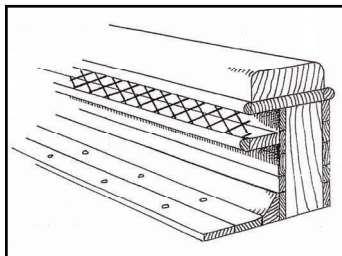
Early in the chapter, the author describes his extensive efforts to obtain reliable information concerning this vessel's propulsion system, and the unexpected sources that are eventually discovered. Nevertheless, key information is lacking, and McArdle is forced to use drawings based on slightly different contemporary designs. The author

goes on to list these references in his bibliography.

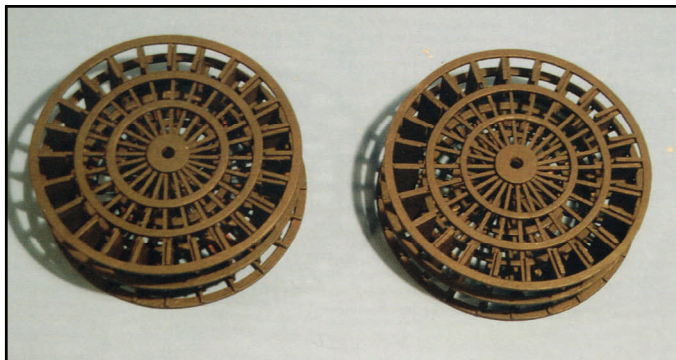
Novice and intermediate modelers will especially appreciate McArdle's modeling philosophy. Although he makes every effort to produce an accurate and well-researched model, his practical side manifests itself in terms of materials used, and level of detail. The reader will find the steam engine to be a prime example of this. The author makes extensive use of boxwood, linear doubled rivet decals, aluminum rods, and brass wire. All these materials are readily available.

With the steam engine complete and mounted, the author returned to hull construction in the next chapter. Numerous procedures are addressed including deck beams over the steam engine compartment, exterior hull trim, copper plating, paddle wheel cover supports, and hammock rails. McArdle's approach for this last item is especially noteworthy.

Next to the segment on the steam engine, Chapter VIII may be the most intriguing. Numerous items are ad-



ressed including the smoke stack, skylights, funnels, ship's wheel, figurehead, paddle wheels, and paddle wheel box. These last two items are, arguably, two of the most prominent features on this mid-nineteenth century warship, and McArdle gives them considerable attention.

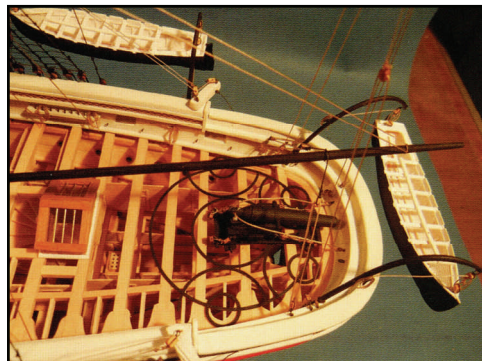


Chapter IX is primarily devoted to masts, spars and rigging. It is at this point that the less experienced modeler may encounter some difficulties with this treatise. The author states that the rigging diagram, Plate X in the plans packet, contains rigging size information, but it is

not provided. However, rope sizes for some lines are mentioned in the text, which will allow the modeler to interpolate the rest of the rigging.

Belaying points may also be a concern since a diagram is not provided. Fortunately, this chapter, like the book as a whole, is profusely illustrated, and will help in that respect.

Also described in this chapter are the ship's boats, and the *Susquehanna's* armament, which consisted of 12 nine-inch Dahlgren smooth bore guns, and two 150 pounder Parrott rifles. These latter two pieces are mounted at the bow and stern on concentric photo-etched brass tracks, and are another unique aspect of warship design during this period.



The final chapter provides a brief description of the case designed for this model. Also included, are nine large, full color, photos of the completed model. It will be noted that the author left the starboard paddle wheel box, and some hull planking off, so that one could better appreciate the intricacies of the paddle wheel and steam engine.



This book comes with a packet of ten plans. Three sheets provide the necessary information for constructing a solid hull, plank on bulkhead or fully framed model, while two plans featuring the orlop and berth decks are printed in two colors. Plate X, at a scale of $1/16'' = 1'$, deals with masts, spars and rigging. All the other sheets are drawn at $1/8''$ scale. As a result, the finished model will measure an impressive 43" in length!

USS *Susquehanna* 1847 provides a unique opportunity to build a model representing a period that, for the most part, has been given little attention. This book would be a welcome addition to any ship modeler's library.

Reviewed by BobF