

Model Ship World Data Sheet

Winches and Windlasses

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Introduction

Some of the posts in this compilation on the construction of winches and windlasses from various contributors to MSW have been edited to aid clarity and concision; links to the original posts are provided.

What is the difference between a winch and a windlass? Good question. Winch is a generic term describing any horizontal drum used to assist hoisting and hauling lines. Further, the term winch also carries the notion that the rope is stored on the drum. Windlass is the term commonly used to indicate a winch employed mainly for the anchor rode. However, modern manufactures often refer to the same fitting as either a windlass or an anchor winch. To further blur the picture, modern yachts trim their sails with what are called "sheet winches" but which are mounted on a vertical axis and where the lines are not stored permanently on the drum.

The MSD contains a document entitled [Early American Purchase Type Windlass c. 1840-60](#) by Rex Boocock giving detailed drawings of a windlass.

There is a short discussion, posted in Mar 2007, on the period in which winches and windlasses were introduced on American ships in: Chuck's, Brig Syren - Chuck Passaro's prototype build log in the USS Syren 18 Gun Brig forum, [Link](#)

The use of winches and windlasses on early North European vessels is discussed in Alex Mc Oil's post of Dec 2010, Winch or not winch? in the Discussion for a Ship's Deck Furniture, Guns, boats and other Fittings forum, [Link](#)

There is a thread entitled: Windlass/anchor chain discussion from Leon 1880, of Sep 2008 in the Discussion for a Ship's Deck Furniture, Guns, boats and other Fittings forum, [Link](#)

There is a discussion with several images relating to windlasses in: Anchors on Armed Virginia Sloop in Nov 2008 in the Masting, rigging and sails forum. [Link](#)

The thread: Squaring Holes of Aug 2008 in the General Discussion forum discusses methods of creating square holes in windlasses. [Link](#) This is also mentioned in Example 5 below.

Example 1

KRUGinMI in Aug 2010 posted his windlass build in his log: Static: Lady Anne (aka AL Harvey) in the Build logs for kits [Link](#)

The kit-supplied windlass is a bit 'small' and improbable for dealing with the anchors. Two, even four, people would be unable to handle the weight. Doing a little research on circa 1840's American windlasses I sketched out what I needed in figure 1.

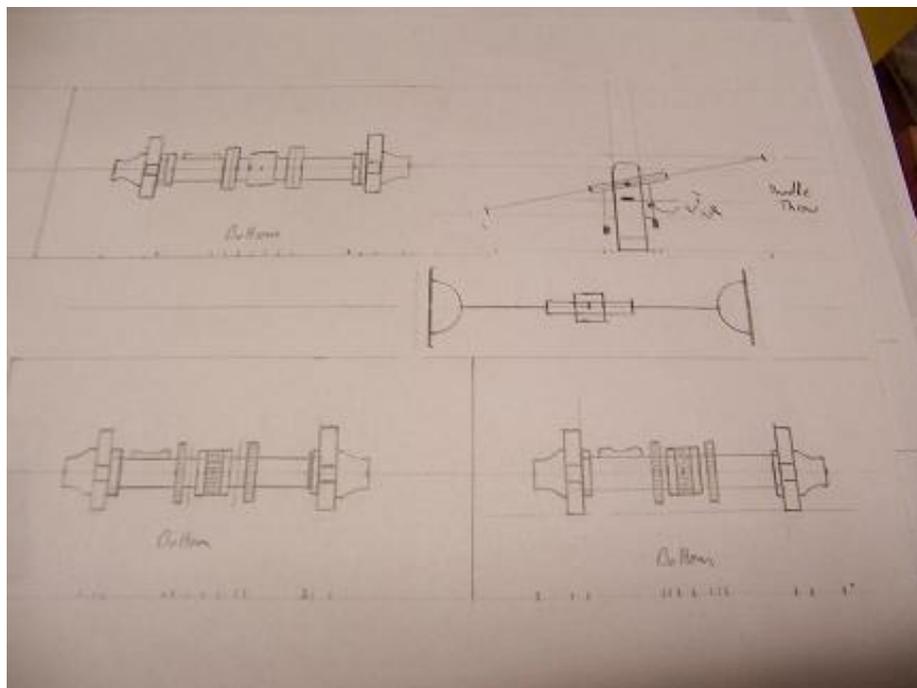


Figure 1 - It took three attempts before I got what I wanted (bottom right).



Figure 2 - I grabbed a piece of boxwood, chucked it into my lathe and off I went.

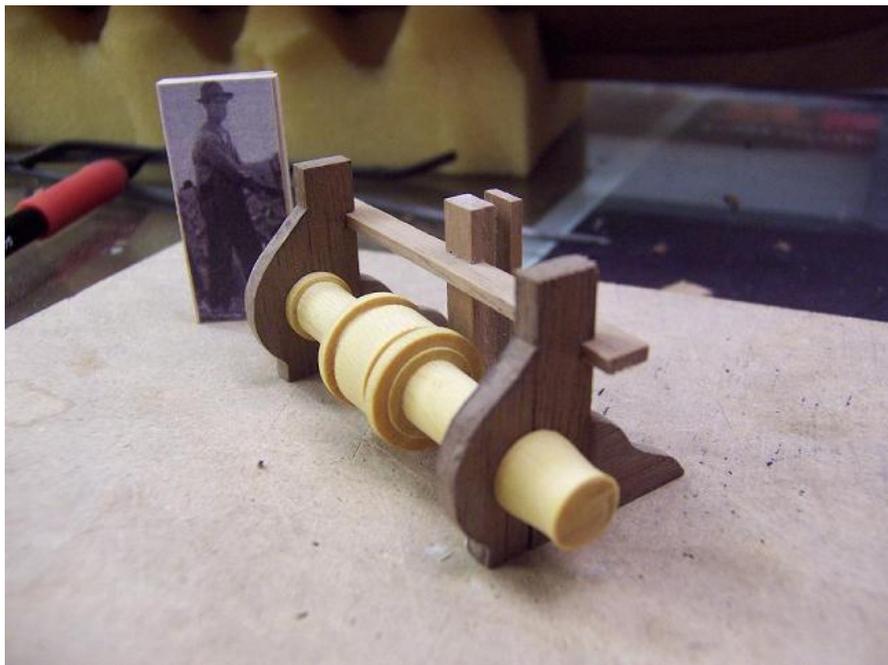


Figure 3 - The initial fitting of the barrel into the carrick bitts.

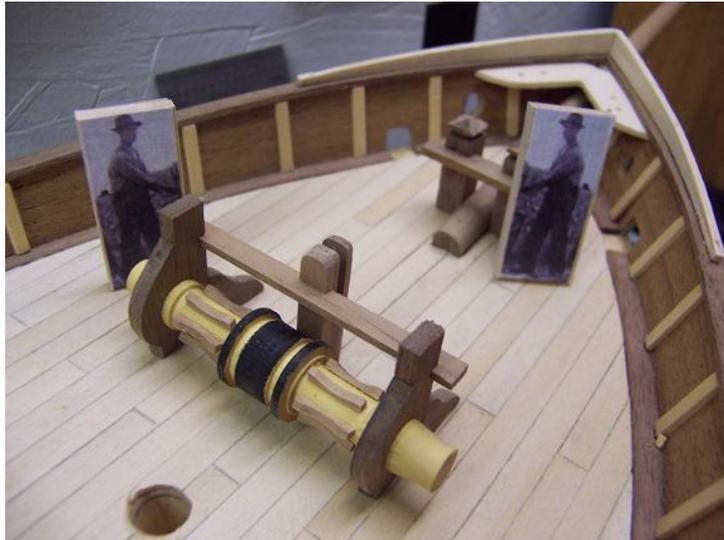


Figure 4 - The barrel with some walnut whelps added and the pawl rims painted black. Still some cleaning-up to do and the portable hand levers to be created. Over all I am pretty happy with the result. Much better than the windlass supplied with the kit.

Example 2

In Feb 2010, in: Morse's AL Endeavour build. (And Cook's Launch). Finished in the Build log for kits forum Morse showed his modification of the AL Kit's windlass. [Link](#)

Since I'm not over enamoured with AL's two windlass jolly boys, who look like refugees from a tanning salon I decided to make one of my own in walnut. The diameter of the AL windlass they're supposed to support is turned miles bigger than the hole in the metal copper boys, so making my own will ease that problem too. I made them with glued-together 4mm square walnut strip and a small craft knife, using the copper-boys as a rough template.



Figure 5 – AL's Windlass Jolly Boy and Morse's wooden one



Figure 6 – Morse's Windlass



Figure 7 – Morse's Windlass on Deck



Figure 8 – Getting the brass pawl ratchet in position was a pure pain - it's so tiny.

Example 3

A section of the Model Shipways Sultana practicum by Chuck Passaro in the Practicums, Tutorials, Instructionals and Building Guides, forum posted in May 2006 deals with replacing the kit's cast metal windlass with a wooden one [Link](#)

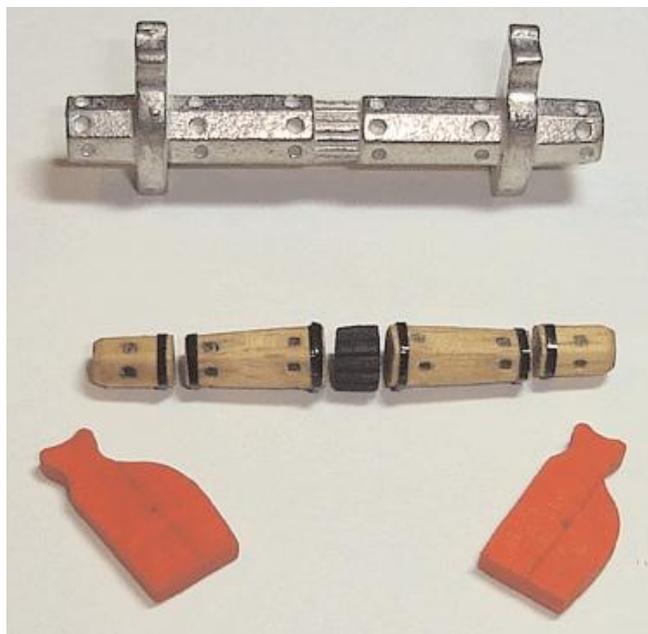


Figure 9 – Sultana's Windlass

Example 4

Richardbailie posted this picture in Jun 2010 in his log: Static 1847 AL Harvey Baltimore Clipper in the Build log for kits [Link](#)

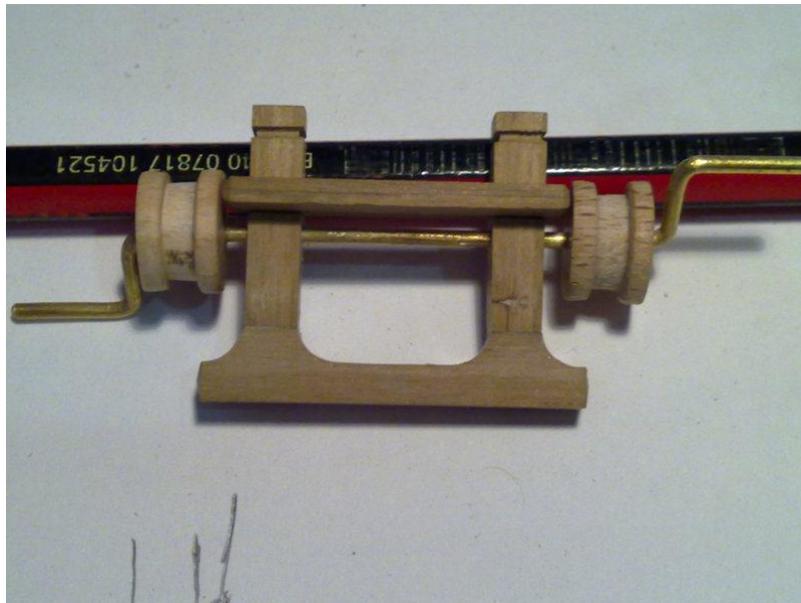


Figure 10 – Richardbailie's Winch

Example 5

In reply to Baggeywrinkle, in his thread: Windlass Manufacturing technique in May 2008 in the Modelling a Ship's Hull, Boats, and Deck Furniture forum, Kerry-in-NZ posted details of his technique for constructing a windlass for the Bounty. [Link](#)

I turned the barrel from a good, close-grained piece of wood. Then I sanded the flats onto it using a small mounted disk sander, these were just eye-balled-up to start with, then finished shaping with a flat file, continually revolving and eyeing up the flats to get as even as possible. Finally finishing with smooth sand paper.

I then centre-marked my bar holes from the plan, drilled them with a pin vice - starting softly so as not to rip the surface of the wood since I wanted clean holes. I ground the tang on a file to the square size of the hole and kept it slightly tapered for easy removal from the holes. I then just pressed the file tang firmly into each round hole giving it a bit of a wriggle and was left with nice clean square holes.

To make the ratchet effect in the centre of the barrel I ground a screw driver to the appropriate size and pressed it firmly into the wood, revolving the barrel a little each time.

It took me about two days to build and a lot of the time, with my Opti-visor on, I felt like a jeweller. If things look okay through the Opti-visor while you are making them, then they sure look good when you take it off!

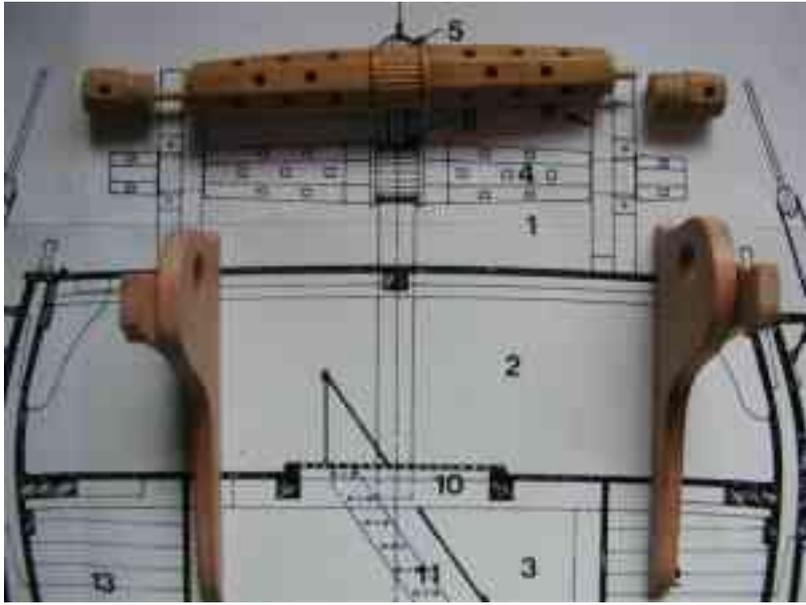


Figure 11 – Kerry-in-NZ’s windlass 1

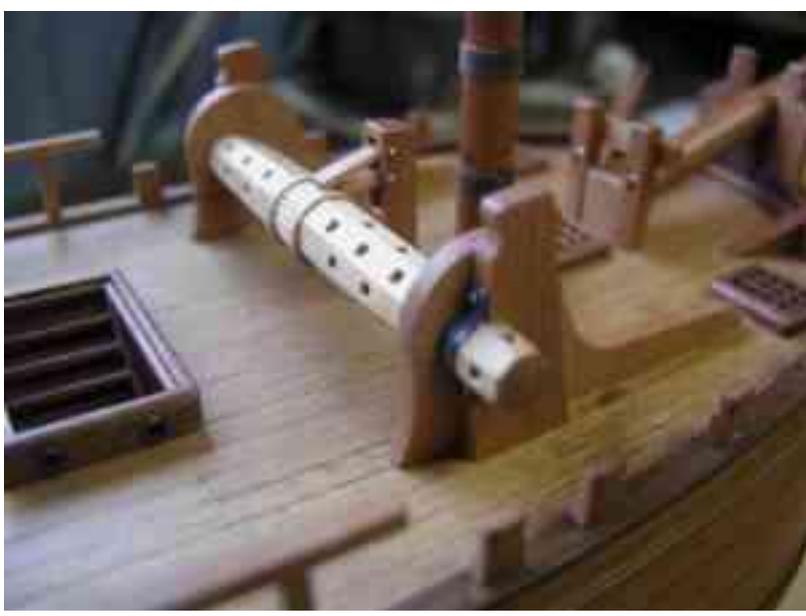


Figure 12 – Kerry-in-NZ’s windlass 2

Example 6

Pillete's windlass shown in his log: Static: Nao Santa Maria. In the Build log for kits [Link](#)



Figure 13 – Windlass for Santa Maria

Example 7

Cosmic discusses the installation of a winch (in Jun 2010) in his log, Helene Euphane 1902 Fishing Trawler 1/38 scratch, maybe R/C in the Scratch build logs forum. This [Link](#) gives links to pages in his log.



Figure 14 – A powered windlass

Example 8

Seefahrer in his build log, Coaster Gowerian - model-up-grade on details, [Link](#) posted in Apr 2008 in the RC Kits & Scratch building forum, details of the ship's derricks' steam winch.

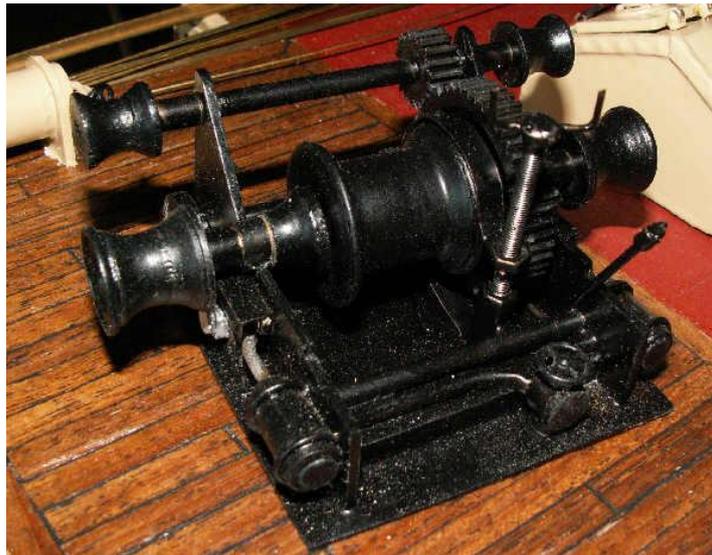


Figure 15 – Steam winch

Example 9

Frank Smart posted this picture of his replica of a modern yacht's self-tailing winch in, Alberg 37 Half Hull Scratch Build in the Completed Ship Model Gallery forum in Oct 2010



Figure 16 – The Arlberg's winch

Example 10

Scottacus made some mini hand and cargo winches from brass and posted images in Jul 2006 in Cargo Winch Experiment in the Ships plans and Scratch research. General Scratch building forum, [Link](#)

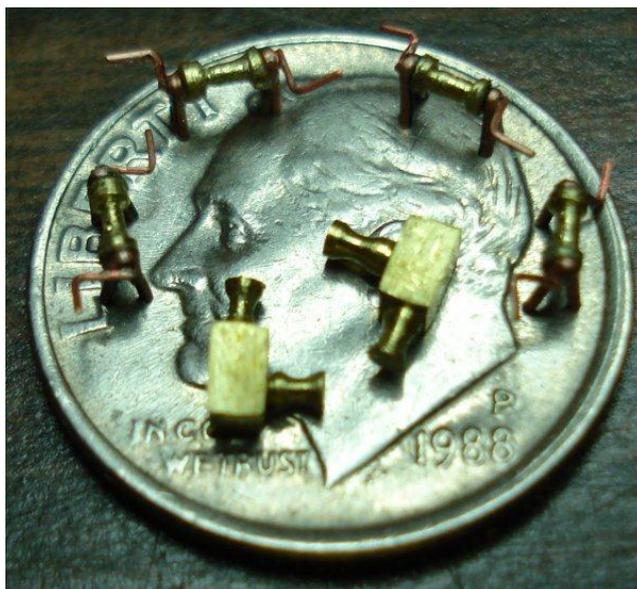


Figure 17 – Scottacus' winches

Example 11

In Sept 2007 an interesting discussion on windlasses and anchor cables was begun by Peterpeter in his post Windlass/anchor chain discussion from Leon 1880 in the Discussion for a Ship's Deck Furniture, Guns, boats and other Fittings forum [Link](#) Several useful photos are posted there including this one of a replica of the Edwin Fox's original windlass



Figure 18 – Edwin Fox's original windlass

Example 12

Last but not least, Banyan in his thread in the Scratch making a Windlass Discussion for a Ship's Deck Furniture, Guns, boats and other Fittings, in May 2008 [Link](#) described how he made a windlass.