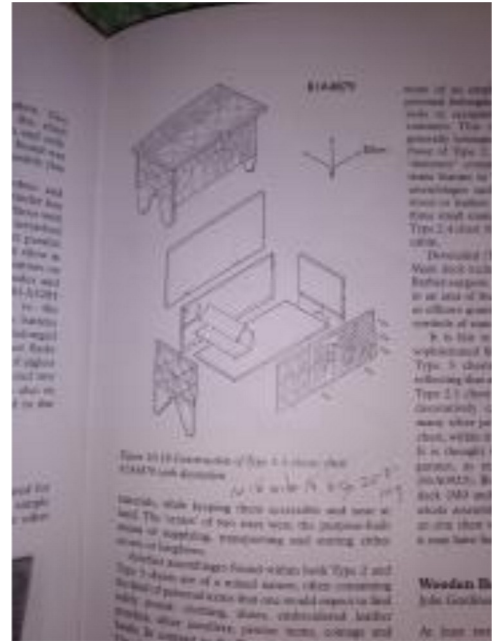


# Gluing Up the Parts for a Little Mary Rose Chest



The picture at right from *Before the Mast; Life and Death Aboard the Mary Rose*, is an exploded drawing of a chest very similar to the one we are making, to give you an idea where we are going.

The Honorable Laird Coinneach mac an Leigh wrote an article in 2017 on making a Little Mary Rose (sank in 1545) chest, taking advantage of a nominal 16" wide glued up board. This avoided the problem of gluing up boards, but it was unfortunately discovered when one of the chests was left in the rain that the glue on the panels is not waterproof. This is an addendum to explain gluing up panels with a bonus how to make brackets to hold rope grommet (ring) handles as observed on several of the chests. The class is split in two halves, this one is making all the parts to size, the other half is cutting the joinery and assembly.

The first issue is you must have waterproof glue. Titebond III is an inexpensive, generally available glue found in hardware stores and home centers. Avoid Gorilla Glue, which foams and leaves a mess that you then have to figure out how to clean off of your glued up board. Read the labels on anything else; you are looking for outdoor use and easy to clean up.

The second issue is that glues clog the pores of unfinished wood so if you use a clear or stain finish you have strange marks where the glue was unless you sand or plane thoroughly. If you are painting this is not a problem, the surface just has to be smooth.

The third problem is that the surfaces to be glued have to fit together very tightly. If you have a 1x12 with undamaged edges this is probably not a problem if the board is reasonably straight and unbowed, it becomes a serious problem for anything else which is one reason for originally avoiding a glue-up.

Materials for one chest:

Two 1"x12" x 8ft (actually something like 3/4" by 11 1/4") long planks from a home center. At least one should not have knots around the 2', 4', and 6' distance from one end (much harder to cut). The other wants at least 25" at one end with clear grain, minimal small but preferably no knots for the top. Try to choose board that are flat, not bowed, and not twisty when you sight down the long edges. Knots are much harder than normal wood and make any shaping much more difficult.

Nails 1 1/4" -1 1/2" cut nails (available from Lee Valley, Tools For Working Wood, and probably other places

4 preferably stainless steel to not rust cotter pins 1/8" by 2 1/2" long (look just like period snipes bill hinges at a much nicer price). You can use fancy leaf hinges but snipes bills are cheaper and period.

Optionally paint and a brush, a sample of exterior from a home center (1 cup or so) will do one chest.

Parts and dimensions (all boards the thickness of a nominal 1x12, generally about 3/4" and the nominal 12" wide is more like 11 1/4"). Be aware that some 8' (96") boards are actually more like 96 5/8", getting the cut centered on the board for the front and back is more important than the exact dimension

From first board: front and back, 2 14.25x24 pieces, plus a cut off piece to make the lid wider  
From the second board: 2 17.25" long sides, bottom 23 3/8" long (to fit in grooves in the sides), and a lid 25" which you will glue to the offcut from the front/back to make it wider than the finished body.

Assuming a chest about 24" long, cut one of your 1x12's as described above (where knots hopefully aren't) in half to make two 4 foot long boards.

How to saw (for *all* cuts):

Measure to make sure your cut is exactly in the middle (or wherever it should be in other cases).

Run a knife against a straightedge along the line to make a clear cut.

Use the corner/edge of a chisel to make a tiny excavation along the cut to make a small trench to guide the saw.

Saw along the cut. (This kind of prep is for a "first class cut," the most precise, and the process can be searched. Notice that the little trench is always on the *waste* side of the cutting line.)

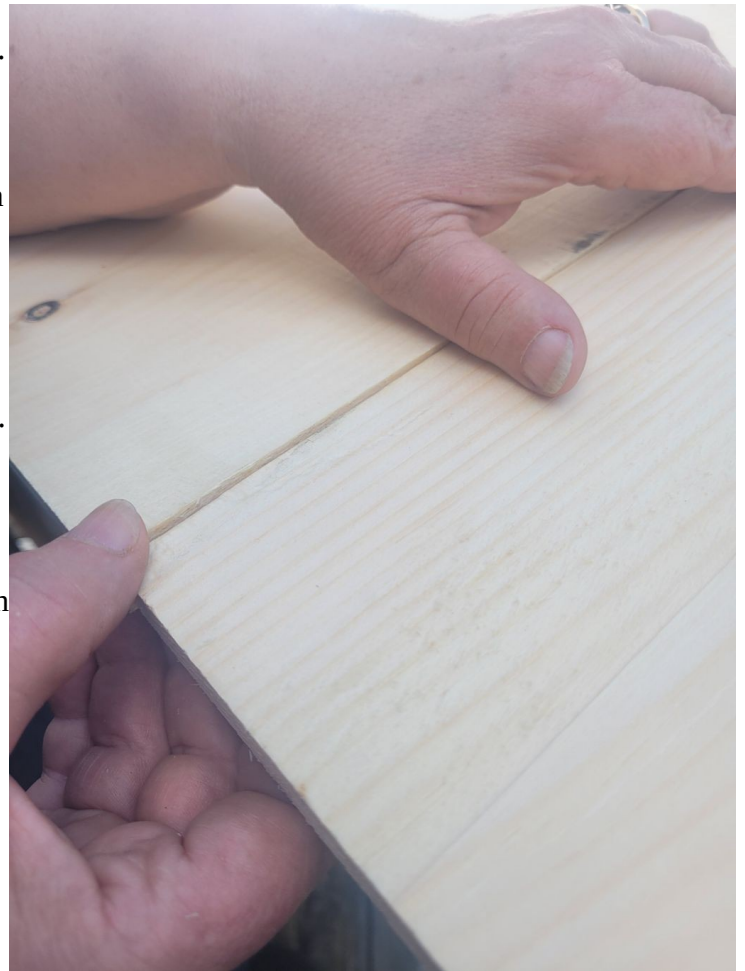
Find, buy, or borrow at least three clamps that open at least 2 feet wide and practice how they work before you get the glue out. You will stand up the two pieces, smear glue to totally cover one of the matching edges with glue, and clamp that edge to the second edge. One clamp in the middle on one side of the completed panel and two near the ends on the other side. A helper makes things a lot easier.

Notice the edges in the picture are not quite aligned, you want the join to be totally even along the length.

When the clamps are almost tight make sure the edges are even, one side not higher than the other, then tighten the clamps. I strongly suggest a dry run **without** glue before you open the glue bottle!

When the glue is dry (overnight) you will measure and mark the width you want (14 1/4") and cut the extra width off the 4' glued up panel, then cut the 4' in half to get two 2' long panels (the front and back). Saw the entire length off before cutting in half because you will use the cut off section to make your lid (which is longer) wider. Now that you know how to glue up a panel, do it again with the lid. You can use the end of the lid to mark the length of the lid extension or just glue up the whole thing and cut off later.

If you will paint the chest, have a damp cloth to wipe up the squeezed out glue; try to not smear it around too much. For a clear finish, either clean up like painting and sand the area later, or let the squeeze-out dry to rubbery and scrape it off. If you let it totally dry you can scrape (carefully!) with a sharp chisel and then sand, but it will be a lot more work.



Let the glue dry overnight. At this point mark a cutting line 14 1/4" or slightly less, (see width in THL Coinneach's directions) and cut down the 4' length the wide plank. The wider piece is cut in half to become the front and back of the chest and the offcut is glued to a length of the second 1x12 to become the lid (it will be too long, cut it now or wait until you have done the lid glueup). The second glueup is the lid. Glue the clean edge of the cutoff from cutting the front and back to width to the lid length cut from the second board. When the glue cures cut off the overhang. Rip the lid to 12 1/2" in width.

If you have any scrap 1x anything around, practice on it first, especially final lineup before really tightening the clamps, and dealing with glue squeeze-out. Better to decide you didn't like your first choice on scrap!

Cutting out legs and bottom.

While the glue dries (preferably overnight) you can cut up the second plank (lid and sides). From one 8' plank you need one lid 25" long, one bottom 23 1/4" long; that is the best place to arrange any knots in the plank (but try *not* to have to cut through one), and two ends each 17 1/4" long. 25 + 23 1/4", plus 2 x 17 1/4" totals 83" (accounting for the width of the saw kerfs) and the board is 96" so you can shuffle around knots a bit. Keep in mind minimal knots on lid (better in rain) and avoid having to cut through any of them. Remember that you will be cutting out a triangle on the bottom of the sides to make legs, and making a groove just above the legs to hold the bottom, and you don't want knots in any of the places you will be cutting. All of these cuts are "crosscuts" (across the lengthwise grain),

cutting the extra width off the glued up front and back is “ripping” (parallel the lengthwise grain). Most handsaws are designed to crosscut, but they will rip; some power saws have universal blades.

There are three different brackets to hold a rope ring on the ends of some Mary Rose chests. To make a rope ring you need a length of rope slightly more than three times the circumference of the ring, directions at [https://www.gutenberg.org/files/13510/13510-h/13510-h.htm#CHAPTER\\_V](https://www.gutenberg.org/files/13510/13510-h/13510-h.htm#CHAPTER_V), and there’s a video at <https://www.youtube.com/watch?v=blPIOaUMOMQ> for your enjoyment.

All the brackets are about 1 1/2" wide, one set is 3 1/2" long, one around 5" and the third about 7". This is a good use of some clear scrap 2x material. The center of the bracket has a square cutout about the diameter of the rope ring. The small one is nearly a right angle from the center to the ends, the middle is rounded on the outside, the long one is angles. Any shape that approximates a short wide isosceles triangle with a flat on top will do.

If you know how to make a grommet (rope ring), it is possible to drill 2 holes the size of the finished grommet (size of original rope) through each side of the chest and make the grommet run through both holes, to the amazement of your friends.

Paint traces appear on some of the Mary Rose chests and you can find various pictures of painted chests, usually somewhat more fancy. A device on the front (painted or carved) is extremely period. If you don’t go for a solid of your heraldic color, consider barn red or a slightly brownish tinged yellow (like yellow mustard) with optional device in whatever colors. Barn red and mustard yellow are what you get from red and yellow ochre, which comes in multiple variations of those two colors, dates back to Neolithic times, and is both cheap and readily available in most if not all times and places (basically special clay). A sample size of exterior paint in your choice of color should be more than enough.

If you want to be fancy/pricy/more period, there are 3 brands of generally available real linseed oil paint, Allback, Otteson, and Viking. A small container (250 ml, about a cup) of any is more than enough for a chest and the red and yellow are both ochre pigment. Notice the price changes depending on pigment, it is a major percentage of the total. Theophilus knew about it but mentioned it takes forever to dry, Cennini told artists how to boil linseed so it dries faster, the 3 above brands use special linseed oil but not “heavy metal” driers which are poisonous. There are also recommendations that if you need a very small amount of a color (like for a device on the front) that a small tube of artist oil (NOT acrylic!) paint can be useful, mix a tiny squeeze of paint with a few drops of linseed oil. Winsor & Newton is a brand I remember being mentioned as a possibility by Jogge Sundqvist in his Sloyd or Karvsnitt (Carving) books from Lost Art Press.