How to Make a Richmond Arsenal Musket Ammunition Crate

By Austin Williams, 5th Virginia Co. A

There are many sources from which one can purchase a Federal arsenal musket ammunition crate and there are readily available guides in print and online to make your own. Confederate arsenals, however, are more difficult to locate and I am not aware of any sources for a reasonably authentic Richmond Arsenal crate. This guide will allow anyone with basic carpentry skills to make a Richmond Arsenal musket ammunition crate that is as authentic as available research allows.

Required Materials and Tools

At least four feet of 1x2 common board[1]
At least three feet of 1x12 common board
At least four feet of 1x10 common board
At least eight cut nails – I used eight I already had to finish the handles, but you can order a pound of cut nails online for less than ten dollars from a company like Tremont Nail Company (http://www.tremontnail.com)
Thirty-eight 1 ¼" wire brads – for a more authentic construction, you can use entirely cut nails, but once the nails are painted over, you have to look closely to see that the nail heads are incorrect
4 flat head standard screws – I used brass ones from a local hardware store, which will usually sell them in smaller quantities than big box home improvement stores

[1] Because of the lengths of wood available at most stores, it may be more efficient to make two crates at the same time instead of one. If making two crates, purchase a six foot long 1x12, an eight foot long 1x10, and an eight foot long 1x2.

Flat olive green latex paint – to ensure the color is correct, go to Sherwin Williams and ask them for a pint of exterior flat paint in a color called "NPS Cannon Green". It's the same color the National Park Service uses to paint their cannon carriages. If you local store can't find it in the computer (mine did not), have them call the Gettysburg Sherwin Williams and they can send your store the formula. [2]

White paint – I used an 8 fl. oz. tester of Weathered White available from Home Depot

Cardstock paper
Circular saw
Table saw (optional)
Chop Saw (optional)
Tape Measure
Pencil
Carpenter's Square
Sandpaper
Hammer
Wood glue
Wood filler (optional)
Putty knife (optional)
Paintbrush
Masking tape
Stencil brush (optional)
Drill and drill bits (size will depend on the size of the cut nails and screws)
Countersink bit
X-Acto knife

The Richmond Arsenal Ammunition Crate

Before beginning construction, study the following examples of surviving Richmond Depot crates, one for musket ammunition and one for the Sharps carbine.[3] Unfortunately the only examples I could find were from 1864 (unsurprising given the disposable nature of these crates), so we can't rule out a change in the Arsenal's design at some point in the war. The Richmond Arsenal crate is taller than the standard dimensions used by Federal arsenals. It is built with simple butt joints rather than the more complex dovetail joints seen on the crates of many Federal arsenals. The handles also lack the beveled edges or carved out handholds seen on Federal crates.

The crates are painted green, but due to the age of the artifacts, it is difficult to make out the exact color. Presumably, they used the standard ordinance olive green, but this is an assumption on my part. None of the crates have surviving lids, so we have

---

[2] I am grateful to Charlie Mitchell of Charlies Boatworks for this tip. Charlie no longer makes ammunition crates as of this writing.

[3] Photos from Old South Antiques; http://www.oldsouthantiques.com/os427p1.htm and http://www.oldsouthantiques.com/os1540p1.htm.

some guesswork there as well. The labels are stenciled on both ends with white paint (not black or yellow as seen at some commercially available crates).


SHARPS RIFLE
CART. CAL. 52

Construction

1. Using a circular saw or table saw, rip the 1x12 so that it is 10 ¼" wide and the 1x10 so that it is 8 ¼" wide.
2. Cut two 15" lengths from your 1x10 ¼ for your lid and bottom using a circular saw or a chop saw. Cut two 8 ¾" lengths and two 15" lengths from your 1x8 ¼ for the sides of the crate. Take the 1x2 and cut two 10 ¼" lengths for your handles and two 8 ¾" lengths for your lid stops.
3. Sand all your cut edges.
4. Using wood glue and either wire brad nails or cut nails, assemble the sides of your crate so that the short sides are sandwiched between the long sides.
5. Attach the bottom to your sides using wood glue and nails.
6. Glue and nail your handles to the short sides of the crate ½" from the top of the crate. I estimated this distance based off proportional measurements from the photos, so I cannot attest to it's exact accuracy, but you can clearly see that the handle is not flush with the top of the crate.
7. Glue and nail your lid stops to the bottom of your lid. I found the best way to do this was to measure out where my lid stop ought to sit, tack the stops in place and then test it on the crate before adding the rest of the nails. This will likely take a few tries before you align them so your lid sits square on top of the crate and doesn't slip around or fall off. You may need to sand down the end of your lid stops to ensure the fit is not too snug and you can easily remove the lid of your crate.

8. I did all my cuts with a circular saw, so some of my joints weren't perfect and I had some gaps in places. To ensure a watertight crate (this is designed to hold ammunition after all), I used a putty knife to work wood filler into all the gaps. Give the crate a final sanding to smooth out any errors.

Painting

1. Paint the entire outside of crate with your olive green paint, but leave the insides unpainted. After it dries, paint a second coat.

2. Using a piece of cardstock, print out your stencil. I made my stencil using a period font called Elephant.[4] It is available for free download online. I made my stencil in PowerPoint using this font. For the decorative flourishes at the top of the text, I used images of original crates to approximate the shape and then drew them freehand with a pencil after I printed out the stencil. I chose to date my crates April 1862, but if you make your own stencil, you can choose whatever date you like. My stencil is attached at the end of this article for your use.
3. Using an X-Acto knife carefully cut out all the letters on your stencil. If you use my stencil, be aware I was unable to find an Elephant stencil font. I simply took a pen and marked the sections to leave uncut by looking at the original crates' font.

4. Align your stencil on the short end of your crate and attach with masking tape. Carefully paint over your stencil with white paint. After some trial and error, I found the best technique was to dip a stencil brush in the paint, blot it a bit on cardboard to even it out, and then wipe the excess away on a paper towel. You need to ensure you don't have too much paint on the brush, otherwise it will bleed under your stencil. Use a tiny amount of paint on a mostly dry brush and slowly go back over each letter until it is fully filled in.
5. Remove your stencil. When the paint is dry, flip your crate over and repeat the stencil on the other side.

Finishing Touches

1. As you can see on the originals, the handles were attached using four nails, two on each end. I chose to add these after painting was complete, as several designs of Federal arsenals include unpainted nails on the handles. You can omit this step or paint over your nails. Use a drill bit to drill pilot holes, as the wedge shape of cut nails can split the wood.

[4] Thanks again go to Charlie Mitchell for helping me identify this font.

2. Federal crates were screwed shut to ensure a watertight seal and to make it more difficult to open the crates without the proper tools. I choose to copy this for my Richmond Arsenal crates. Use the countersink bit to make holes for each of your four screws on the top of the lid. I used machine screws that were only ½" long, so I drilled a short pilot hole and screwed in the screws so that they did not stick out the back of the lid. If you have longer screws, you can cut the extra off with a hacksaw, or remove the screws entirely to simulate a crate that has already been opened in the field.

Ammunition crates would have been a frequent sight in camp and, as this article shows, building them is not challenging and is inexpensive. The paint is enough for several crates and the lumber for two crates cost me around $30. I hope you found this article helpful and you decide to try your hand at manufacturing some crates of your own.

1000

CAR.T CA.L 57-58

ELONGATED BALL

RICHMOND ARSENAL

APR 1862

96 *lbs.*