

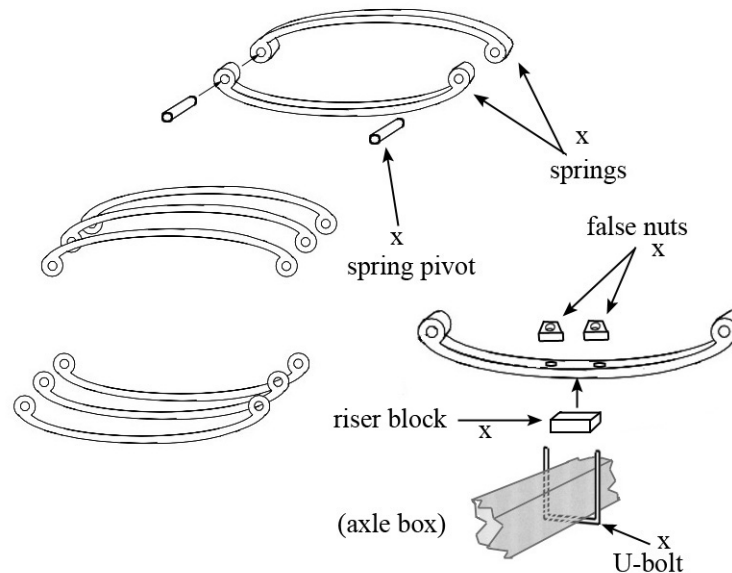
GUNS of HISTORY

AMERICAN CIVIL WAR

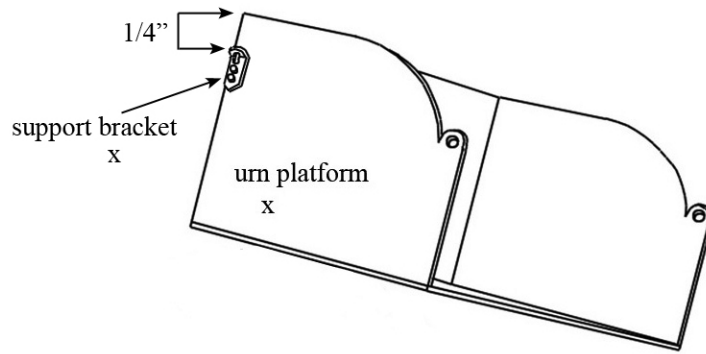
UNITED STATES CHRISTIAN COMMISSION

COFFEE WAGON

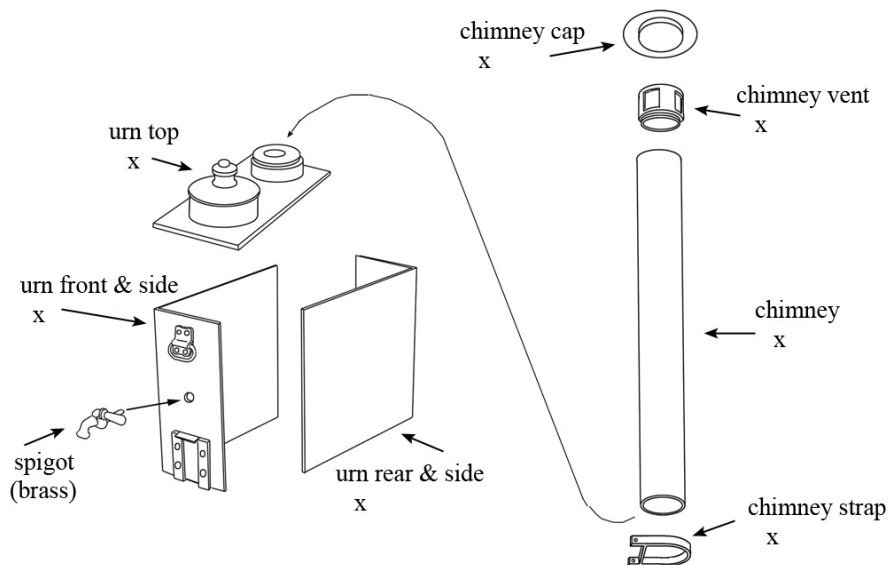
General Notes: Use 5-minute Epoxy or cyanoacrylate (Super Glue) for assembly of metal parts, white glue or carpenter's glue for assembly of wood parts. Dry fit all parts before gluing and painting. Use a #11 hobby knife, needle files and sandpaper to clean mold marks from castings and to adjust the fit where necessary. Holes may need to be drilled out. The coffee wagon was painted a deep red to distinguish it from combatant materiel with metal fittings painted black (designated by an X in the drawings). The urns, chimneys, urn platform and springs were black. If you decide to display the coffee wagon with the limber, which is how it would have been pulled, USE THE SAME COLOR RED FOR THE LIMBER and apply the provided Christian Commission decal to the rear of the ammunition box. The spigots on the urns should be painted brass. If you paint the subassemblies as you go (recommended), scrape off the paint at the contact points during final assembly to ensure a good glue bond between subassemblies. Best painting results will be obtained if you use a primer before the color coat.. Rubbing a little graphite or similar powder over black paint will give a cast iron look.



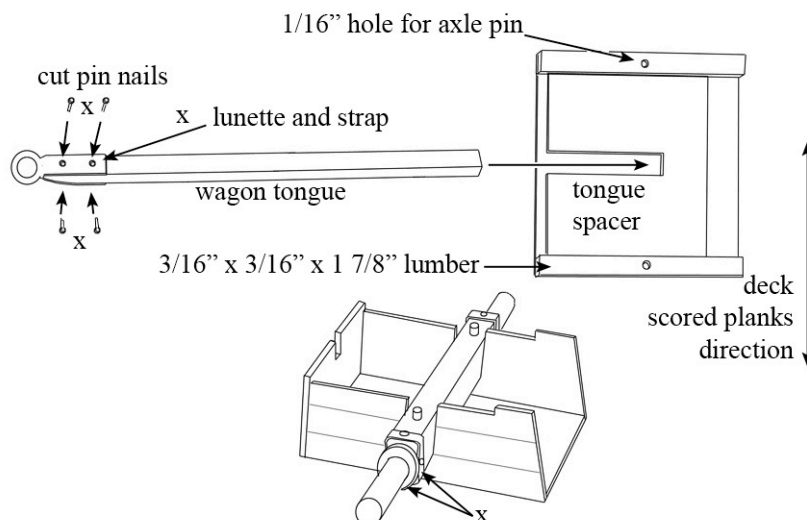
Platform springs and U-bolts: Each of the four spring sections is made of three laser-cut wood parts laminated together. The four spring pivots are made from 1/4" lengths of 3/64" brass rod. These may be used to help align the lamination layers. After the glue has dried, clean up the springs as needed. Bend two 1 1/4" lengths of 1/32" brass rod around the center of the axle casting to make the U-bolts. Use these to centrally locate paired holes on each of the four springs. Drill one set on each of the paired springs to accommodate the U-bolts and the other set to accommodate cut down pin nails. (The easiest way to lay out the holes is to cut a strip of paper that fits tightly to the inside curvature of the springs, fold it in half to find the center, then use a U-bolt to evenly space where the holes should go to either side of center. Lay this back in each spring section and make a pinprick through the marks on this template.) From the scrap wood in the slots of the chassis sides cut two riser blocks the same depth as the springs to fit between the holes of the lower springs sections and glue in place. Finally, pin the upper and lower pairs together with the pivots.



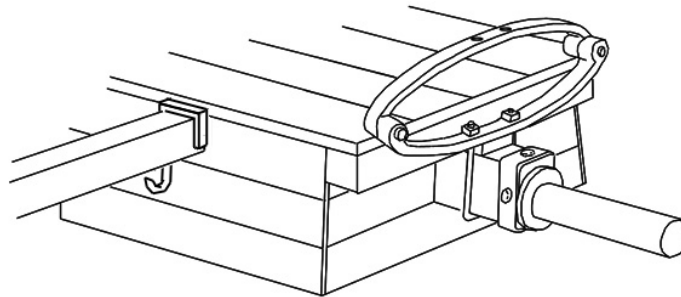
Urn platform: Glue together the laser-cut plywood parts of the urn platform. The sides and back sit atop the bottom, and the back butt joints between the sides. Glue on the two support brackets along the rear edge of the urn platform, down 1/4" from the top edge. The tapered end points down.



Urn and chimney: Assemble the three urns and the chimney caps and vents. DO NOT yet glue the chimneys themselves to the urns or the chimney straps to the chimneys.



Chassis: On the underside of the deck, attach two 1 7/8" lengths of kit lumber, glued flush to the outside edges. Measure back 1" from the front edge and drill 1/16" holes to accept the pins, which stick up from the axle casting. Be careful not to drill through the deck. Glue in the tongue spacer back 1/16" (thickness of the box front) back from the front edge. Make the wagon tongue from 4" of kit lumber and shape one end to fit inside the lunette and strap casting. Glue those two parts together and finish off by inserting cut down pin nails in the holes. Assemble the wagon box per the illustration, leaving off the rear lid. Glue the axle to the deck subassembly. Glue in the wagon tongue, noting that the flat side of the lunette and strap faces down. Glue this assembly to the box subassembly, then glue on the rear lid. The slightly wider plank is the top one. Take the bucket hook and gently twist the hook part so that it is at a right angle to the square bracket part. Hang it over the tongue and snug it up to the chassis box.



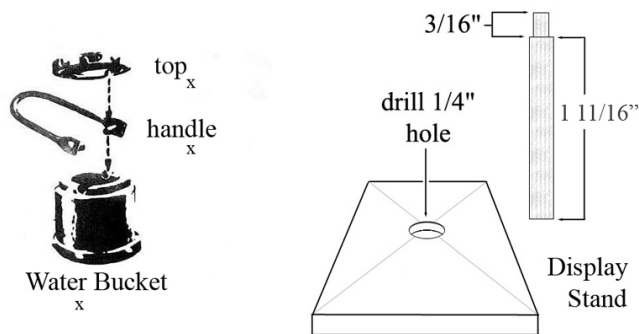
Attach the springs: Slide the U-bolts up from under the axle box then slip an assembled spring onto the U-bolt, with the riser block against the axle box, so upper half is over the deck. Repeat for the other side, holding the springs in place with a piece of tape if necessary. Glue a false nut onto each protruding end of the U-bolts. Cut down four pin nails so the shaft ends are flush with the springs tops and glue these into the drilled holes to simulate rivets.



Complete the urns subassembly: Glue the three assembled urns onto the urn platform. This is best accomplished by laying down a film of epoxy starting back about 1/2" from the open edge, so it cannot be seen. The top edges should just touch each other, and the urns should be pushed back as far as they will go.

To make the chimney support, bend a right angle leg in the 3/64" rod so the inside length of that leg measures 1 3/4". Slip the three chimney straps onto the longer leg and then make a second bend so that leg measures 2 1/4" inside the original bend and the long leg, which should then be cut down to equal the length of the first leg. The result should be a squared U shape with the chimney straps loose in the middle. Before making the 2 1/4" bend check that it corresponds to the outside back measurement of the urn platform. Adjust the bend length to match if necessary. The chimney support should be square and level when socketed into the support brackets on the outside of the urn platform. Slip the chimneys through their support straps and socket them home on the urn tops. Check the alignment, then glue everything in place. Finish up by gluing the caps and vents onto the chimneys.

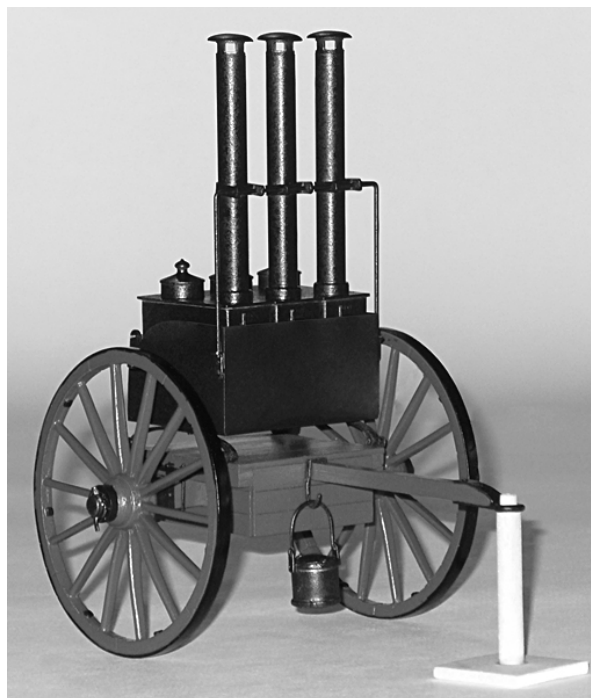
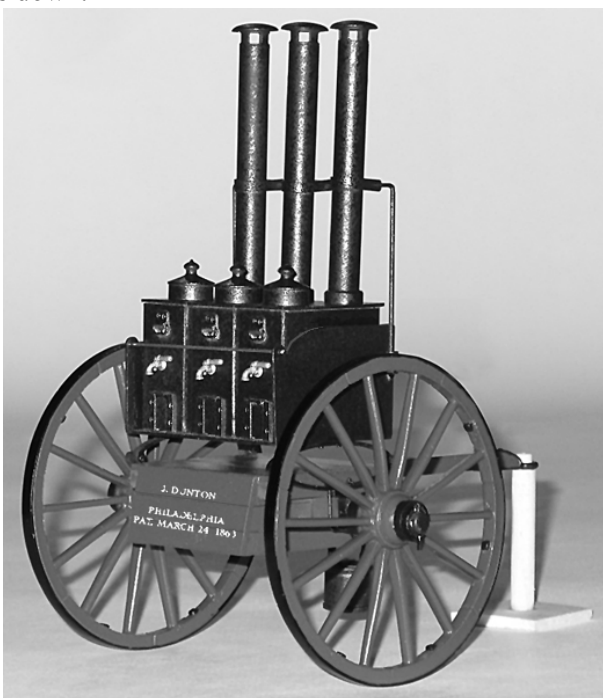
Final assembly: Cut a 2 3/8" length of 1/32" brass rod, bend 1/8" at a right angle at one end and insert through the holes in the urn platform sides to make the retaining rod. Secure with glue. USING 5-MINUTE EPOXY, glue the urns subassembly atop the springs on the chassis subassembly so the spigots face to the rear (away from the wagon tongue). DO NOT MOVE THIS ASSEMBLY UNTIL THE EPOXY HAS HAD TIME TO CURE, NOT JUST HARDEN.



Line up the notches on the bucket and lid and glue them together. Spread the bucket handle, insert the pins into the resulting holes and gently squeeze the handle tight to the bucket. Do not glue the handle in place.

Drill a 1/4" diameter hole in the center of the provided I' square piece of basswood. Shave down 3/16" of the provided 2" dowel so it will fit inside the lunette at the end of wagon tongue. Trim the rest of the dowel to 1 11/16" (1 7/8" overall) and glue the dowel into the wood block to make a display support. Skip this step if you plan to display your coffee wagon hooked up to a limber.

Apply the "J. Dunton" decal to the rear lid of the chassis. The "Christian Commission" decal goes on the rear of the limber ammunition box (facing the hook) if you display your coffee wagon with a limber. Glue the wheels onto the axle so the cupped sides (side with small hub diameter) face outboard. Gluing is recommended for a more stable display of your finished model. Glue the caps and fids over the axle ends so the long part of the pin hangs down.



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