

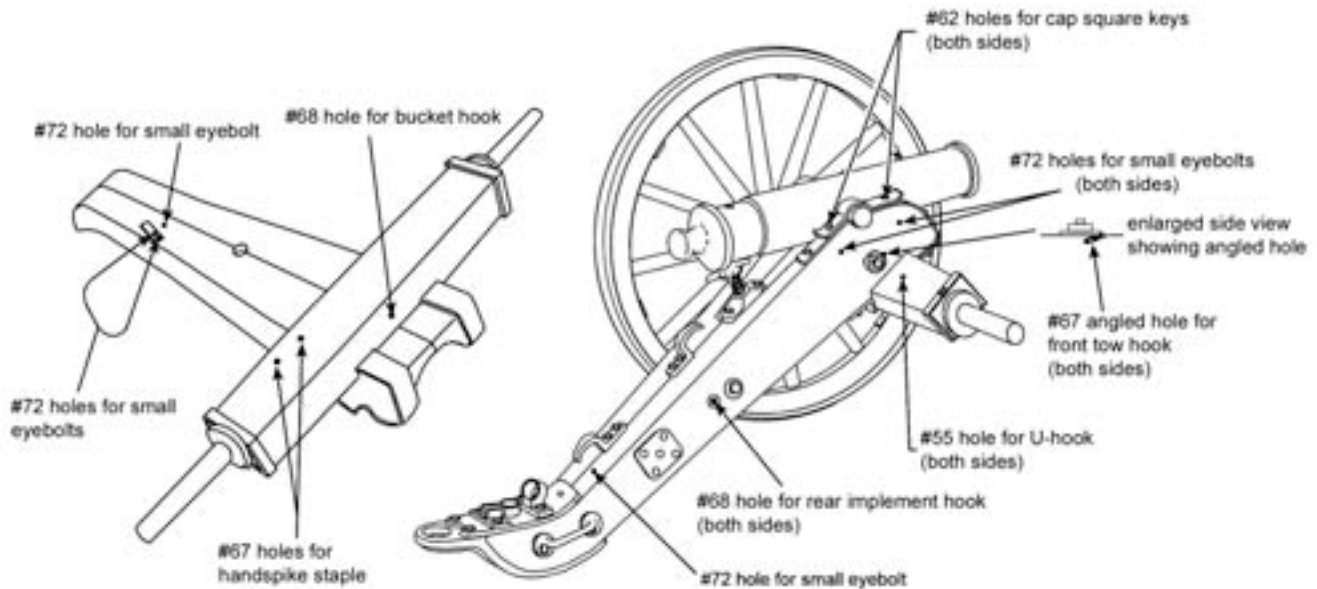
GUNS of HISTORY

AMERICAN CIVIL WAR

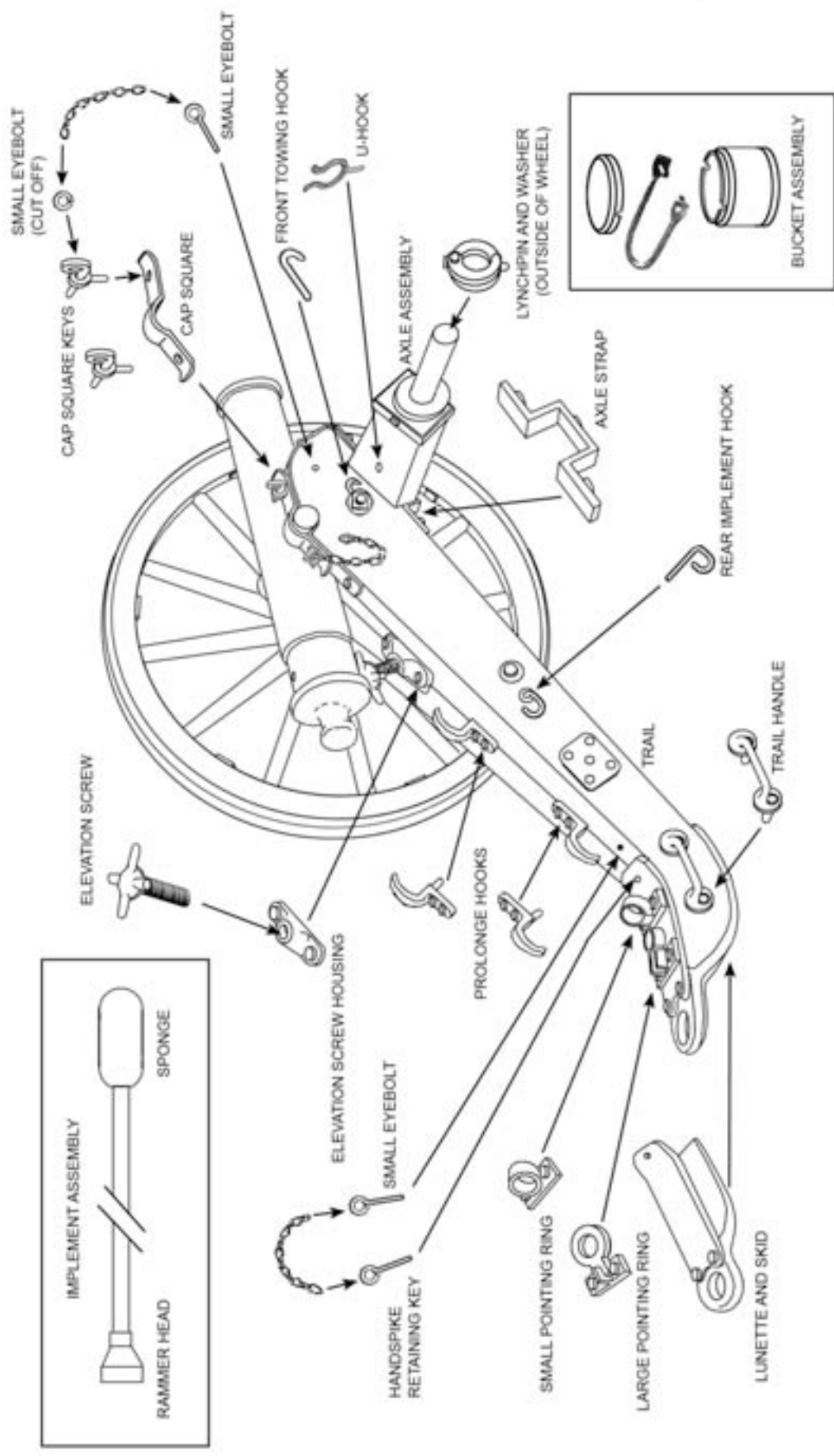
12-PDR. MOUNTAIN HOWITZER 2ND Model Prairie Carriage 1861-1890

Affectionately known during the Civil War as the “bull pup,” the mountain howitzer is a short barrel, large caliber gun designed to be as portable as possible. The complete gun and carriage weighed less than the barrel alone of a 12-pounder field gun. The gun, with its original pack carriage and two ammunition chests, could be disassembled quickly and carried by three pack mules. Fitting the howitzer to a scaled down field, or “prairie” carriage, improved the gun's stability during firing without sacrificing much of its maneuverability. Their light weight and relatively short range kept them from being classified as field artillery, but the mountain howitzers' easy portability made them well suited for inclusion in fast striking cavalry units, and the ease by which they could be manhandled into the line by a few foot soldiers made them ideally suited for close-in fire support during infantry engagements. After the Civil War, CSA General Basil Duke said, “No gun is so well suited in all respects to the wants of cavalry, as these little guns.”

General Notes: Wash all cast parts. Use 5-minute Epoxy or cyanoacrylate (Super Glue) for assembly. Dry fit all parts before gluing and painting. Use a #10 or #11 hobby knife, needle files and sandpaper to clean mold marks from castings and to adjust the fit and alignment where necessary. Union gun carriages were painted olive drab with metal fittings painted black. The bronze gun tube can be painted bronze, black or verdigris. Use of a good primer on all surfaces is recommended. If you pre-paint subassemblies, scrape away any paint at contact points before gluing to ensure a good bond.



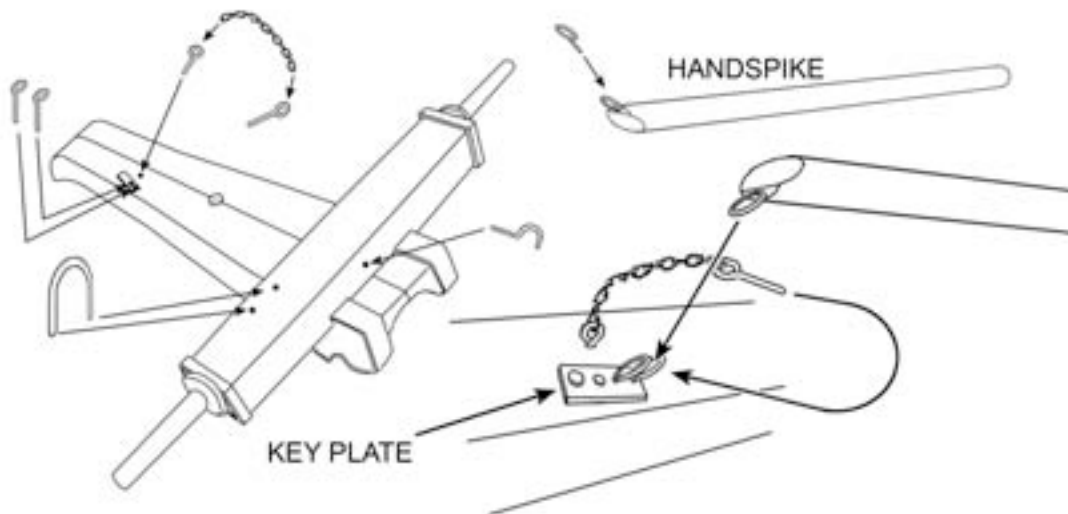
Drilling for miscellaneous parts: Glue together the two trail halves. Use an appropriate drill to clear any of the assembly holes that become fouled with glue. Notice that there are several dimples cast into the trail halves. These need to be drilled deeper to receive various parts later on. Refer to the above drawing for locations and drill sizes. To position the holes under the cap squares, lay the gun tube in place, position the cap squares over the gun trunions and mark through the holes in the cap squares. (The sharper bend in the cap square is toward the front)



Basic carriage assembly: Glue the cast axle assembly to the trail, checking that these parts will be square and level. Setting the gun tube in place will facilitate alignment. Make sure the hole for the bucket hook faces front. Glue the lunette and skid in place. Deepen the pinhole on the top with a #72 drill. Temporarily slide the wheels onto the axles. Insert the elevation screw into the screw housing (note that the housing top angles forward), set this in place on the trail and put the gun back in place. Determine the display angle you want for the gun and back out the elevation screw so the gun tube rests on the handle at the desired display angle. Glue the screw and housing together, then to the trail. Set the wheels and gun tube aside.

Brass fittings: Note that all small eyebolts are to be mounted flush to the ring unless otherwise specified. Cut a $\frac{1}{2}$ " to $\frac{3}{4}$ " length of the provided brass rod and bend this around the shank of a $\frac{9}{64}$ " drill to make the implement staple. Cut the legs to fit this into the paired holes under the axle box, so that the provided dowel will easily slide through, then glue the staple in place. Make the tow hooks by bending the brass rod around the same $\frac{9}{64}$ " drill, then, referring to the drawing, cut the length to fit the holes you drilled in the front trail washers and glue in place. Open three large eyebolts into hooks. Trim to fit and glue one of these into the front hole in the axle box to make the bucket hook. Bend the remaining two hooks so that the hook is at a right angle to the shaft, one to the left and one to the right. Referring to the large drawing, glue them into the trail sides.

Make the handspike from a $2\frac{1}{4}$ " length from the provided dowel. Round over one end and shave a 45 degree angle on the other end, leaving enough of the original flat in which to drill a #72 hole. Glue in a small eyebolt, then bend the ring to parallel the angle cut. Bend two small eyebolts down 45 degrees and glue these into the holes in the key plate under the left trail side, with the holes aligned with the key plate and angled forward. Check that the ring on the handspike will fit between them. Paint or stain the dowel brown.



Chains: Cut seven ten-link lengths from the provided chain. Slightly enlarge/round the end links using an awl or similar. Fit one end of each chain to a small eyebolt. Cut the tails from four eyebolts to make small rings. Use these rings to attach the other end of four chains to the cap square keys. Attach a second small eyebolt to the other end of the remaining three chains, then cut the tails off both eyebolts on one chain. This last will serve as a tool strap. Set aside the prepared chains.

Final assembly: Glue on the rest of the cast carriage parts except the gun tube, cap squares and cap square keys. Note that the short vertical leg on the axle straps go forward. The small pointing ring aligns with the bend in the skid top. The lynchpins point down. Glue the small eyebolt ends of the cap square key chains into their holes (see large drawing). Glue one end of a double-eyebolted chain into the hole atop the trail near the skid/lunette. The other end of this can either be glued into the hole in the skid/lunette, or you can cut the tail to $\frac{1}{8}$ " and leave it hanging. (This would be used to lock the handspike in place by its ring end.)

On the underside, glue one eyebolt of the second of these chains into the hole beside the key plate. Cut the bolt tail at the other end to 3/16". Feed the handspike through the implement staple and position the ring between the rings on the key plate. Lock this in place with the eyebolt, emplaced from the rear. The actual retaining pin was held in by its key shape. You will either have to bend the end of the eyebolt or simply glue it in place.

To make the prolonge use the provided thread to seize a small loop in one end of the provided large diameter twine. Bend another loop so that the prolonge measures roughly 6 3/4" from end to end, then test wrap this around the prolonge hooks. Adjust the length as needed, seize the loop in the other end, cut off the excess and warp the prolonge in place.

Cut a 2 1/2" length of the dowel and mount the sponge and rammer on the ends. Paint the rammer black, the sponge tan, the shaft brown. Hook one ring of the tool strap on the left side rear implement hook, lay the implement in the left side U-hook, rammer to the front, and secure the sponge end by bringing the tool strap up around the shaft and hooking the remaining ring on the rear implement hook. Assemble the bucket, leaving the handle loose, and hang it from the bucket hook.



Designed by Ken Goldman for Model Shipways Inc.

