Dispatch from the Saw Shack – Under-Bucking Tool

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All experienced Wilderness crosscut sawyers know that often, too often, you must under buck the log down to clear the trail. Top bind can be so bad that you cannot set a wedge before the kerf closes on the saw. For these logs you must under buck, which is physically difficult and exhausting unless you have an under-bucking tool. The under-bucking tool is driven into the log parallel to the planned saw cut using the pole of a single bit axe or other driving tool. When securely set in the log, the position of the wheel on the under-bucking tool is adjusted to hold the saw in the kerf with leverage so that the sawyer can single under buck the log almost as easily as a top cut. Examples are below.

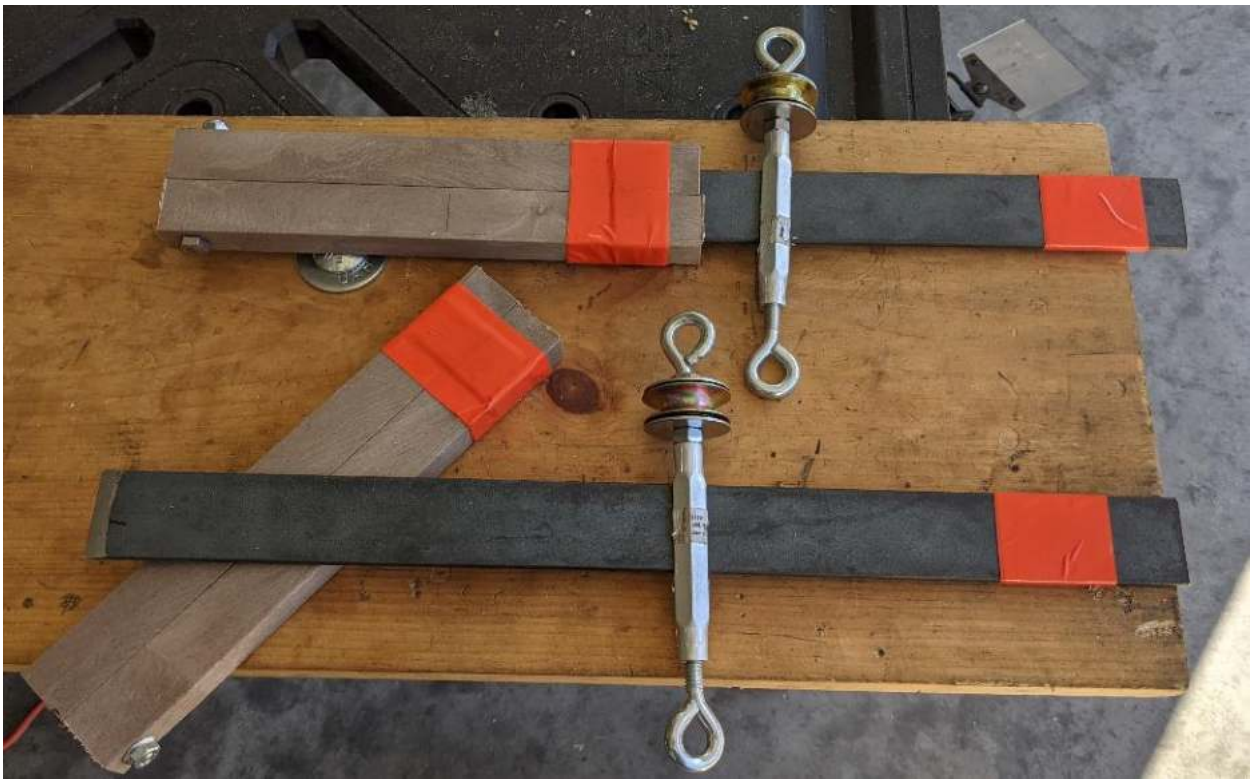
Caption below ↓ – Under bucking top bound hemlock down with under-bucking tool in Ramsey's Draft Wilderness, Virginia

Caption below ↓ – Under-bucking tool set in top bound leaning white oak down, private land, Virginia

Caption Below ↓ – Under bucking a heavy top bound smaller diameter oak log in Three Ridges Wilderness, Virginia, an under-bucking tool is only way to clear logs like these with a crosscut saw, without an under-bucking tool the only way to clear smaller top bound logs is to chop them out with an axe, the log stub to right was under bucked until the undercut bound near the top of cut, the remaining top compression was then chopped out with axe.

All trail crews using crosscut saws should carry an under-bucking tool. This important crosscut saw tool can be fabricated from readily available materials. The following is a design that works well and is of reasonable weight.

Caption below ↓ – Under-bucking tool and guard example, the orange tape is for visibility to find the tool and guard in the field when laid on the ground



Each tool is 18 inches long. They are fabricated from 1.5-inch-wide by 3/16-inch-thick piece of steel bar stock. This bar stock width and thickness are the best balance between stiffness and weight for the under-bucking tool. A grinder is used to rough shape the chisel point on each tool, which is then hand filed to an edge like sharpening an axe. The turnbuckles are 5/16-inch thread, and the wheels are pully wheels with 5/16-inch shafts. The slot for the bar in the turnbuckles is drilled and filed to just clear the bar. The pully wheel is held in place with 5/16-inch nuts to spin freely. The left-threaded eye bolt of the turnbuckle is used to tighten the wheel against the bar in the position desired. The plastic guards for the bar point are fabricated from left over crosscut saw guard material. Some fabrication pictures follow to illustrate how to make the tool. In this example, a 36-inch-long x 1.5-inch-wide x 3/16-inch-thick steel bar stock was used to make two 18-inch under-bucking tools.

Caption below ↓ – First Step, cut the 3/16-inch-thick x 1.5-inch-wide steel bar stock to 18-inch length and rough shape the chisel point ends with a grinder

Caption below ↓ – Second step, file the chisel point ends of the steel bar stock to a sharp edge like sharpening an axe

Caption below ↓ – The sharpened edge steel bar stock and materials for the under bucking tool wheel made from 5/16-inch turnbuckles, flat washers, nuts, and pulley wheels

Caption below ↓ – Step 3, drill, cut and file slots in the turnbuckles for the steel bar stock and assemble the pulley wheels using nuts to lock the right-threaded turnbuckle bolt in place so that the wheel spins freely. The left-threaded turnbuckle bolt is loosened to move the wheel along the steel bar and then tightened to hold the wheel in the desired position. The plastic guard for the bar stock point is fabricated from saw guard plastic channel material.