

# WOODWORKER'S JOURNAL

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## In this plan you will be getting:

- Step by Step construction instruction.
- A complete bill of materials.
- Exploded view and elevation drawings.
- How-to photos with instructive captions.
- Tips to help you complete the project and become a better woodworker.



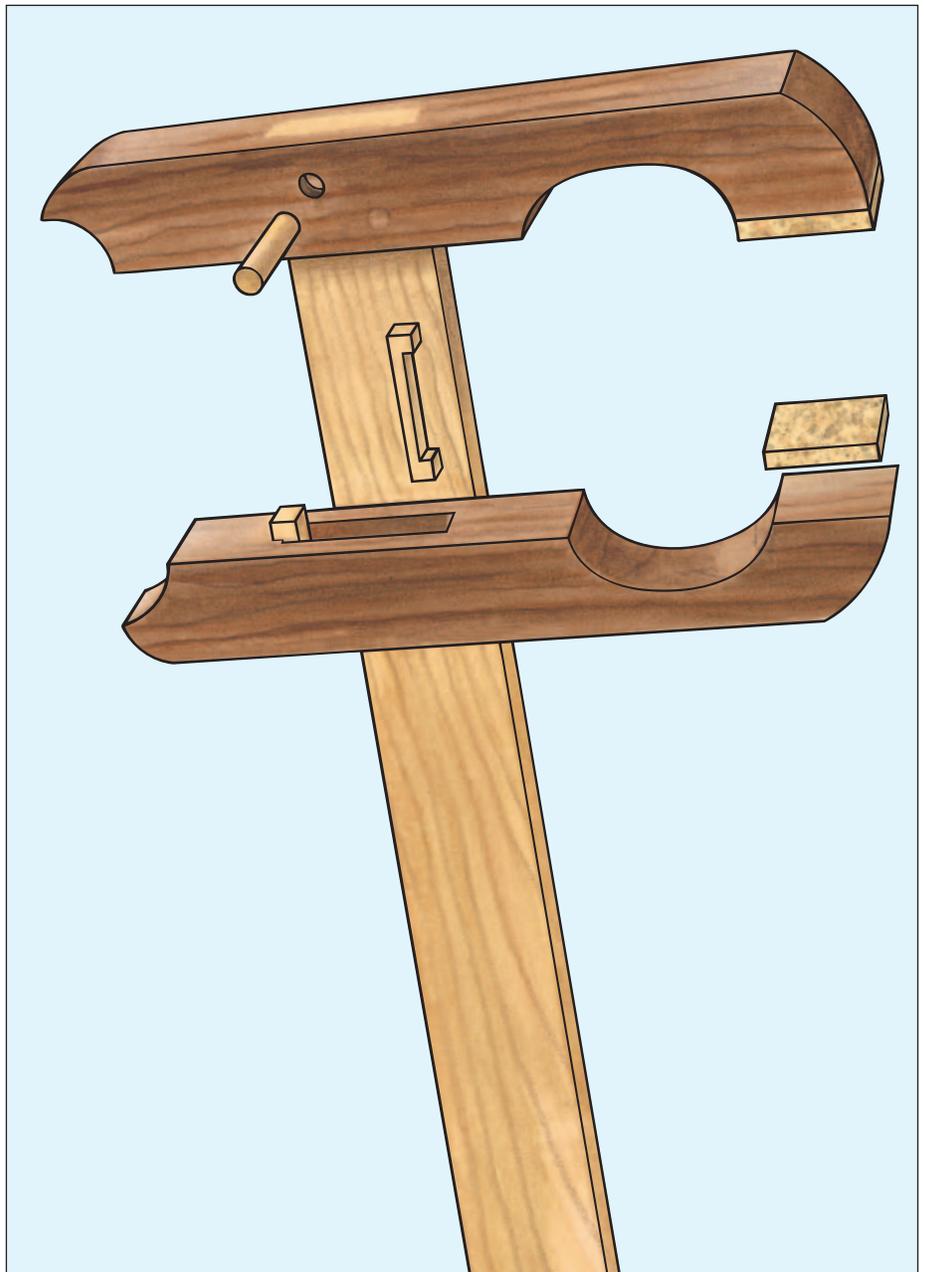
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## Dry Assembly Clamp



**\$7.95**

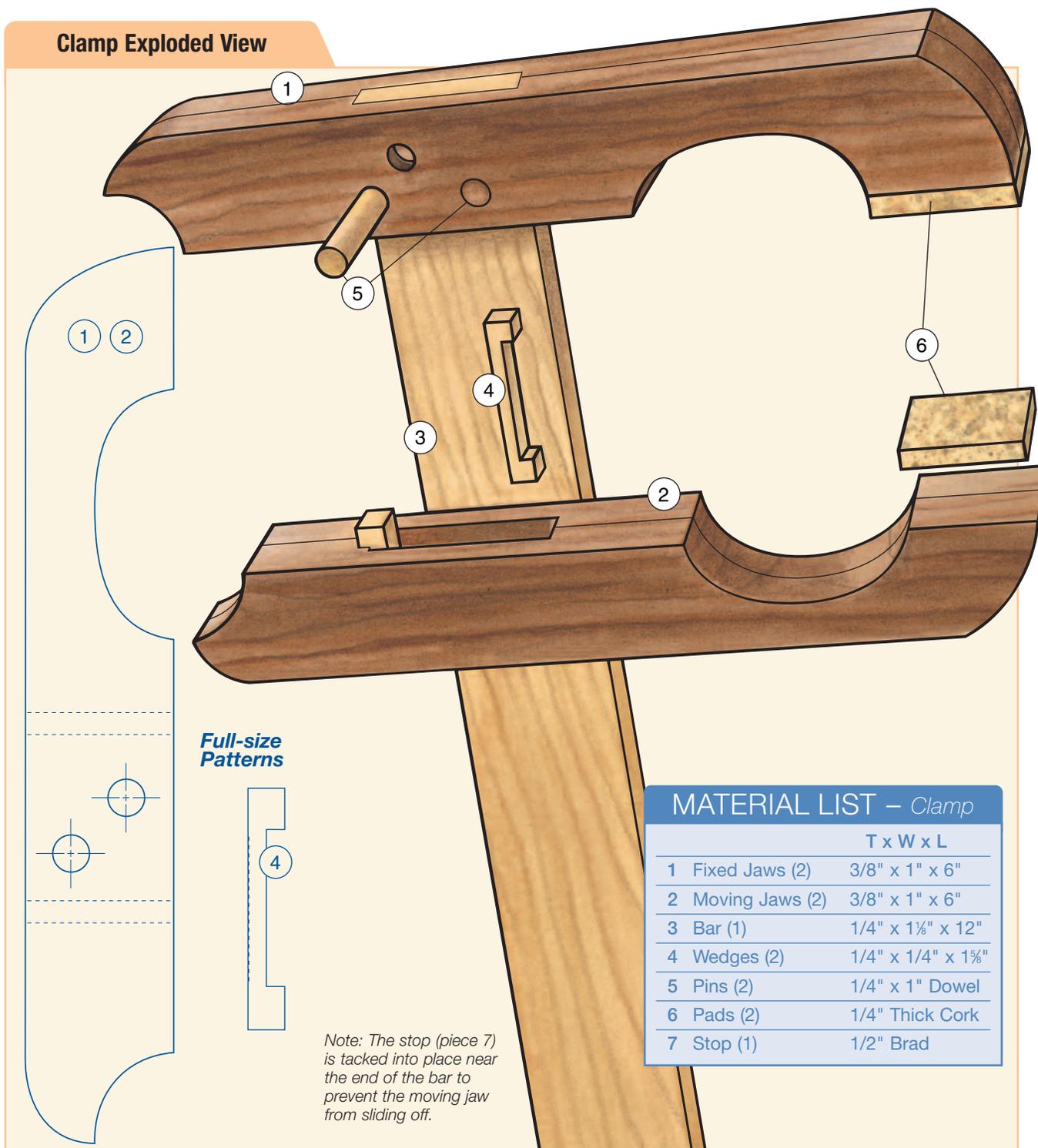
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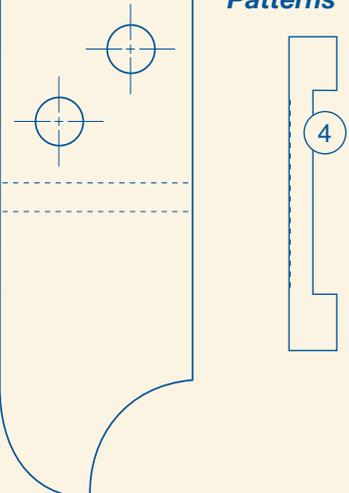
# Dry Assembly Clamp

Oh to have another set of hands around the shop! If you work alone, you'll appreciate having a few of these light-duty clamps at the ready when assembly time comes. A little hardwood scrap is all that's required.

## Clamp Exploded View



### Full-size Patterns



### MATERIAL LIST – Clamp

	T x W x L
1 Fixed Jaws (2)	3/8" x 1" x 6"
2 Moving Jaws (2)	3/8" x 1" x 6"
3 Bar (1)	1/4" x 1 1/8" x 12"
4 Wedges (2)	1/4" x 1/4" x 1 5/8"
5 Pins (2)	1/4" x 1" Dowel
6 Pads (2)	1/4" Thick Cork
7 Stop (1)	1/2" Brad

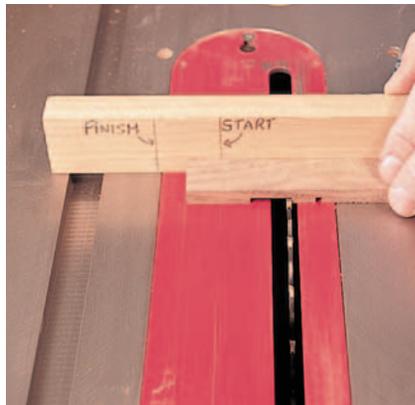
*Note: The stop (piece 7) is tacked into place near the end of the bar to prevent the moving jaw from sliding off.*

Flea markets are great places to waste a lazy Saturday morning, and on occasion they pay big dividends. We found the dry clamp shown at right (appropriately being used to build our replica), buried in a pile of broken planes at a local flea market. It has quickly established itself as one of the more popular tools in the shop. This simple clamp is like having an extra set of hands when it comes to dry-fitting those larger projects!

On the original, each jaw was made from a single piece of hardwood and a through mortise was cut to accept the bar. Here we'll use the easier split mortise, making the jaws in two halves and cutting dadoes into each before assembly. Dowel pins have also been added to strengthen the joint between the fixed jaw and the bar. We're suggesting a 48" bar length here, but you really could make it whatever length is convenient for you.



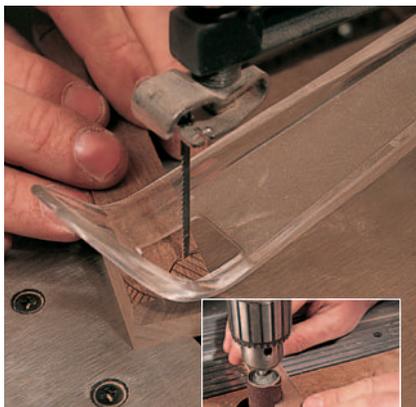
**Step 1:** Rip hardwood scraps to 3/8" thickness to make the jaw halves (pieces 1 and 2). Tight-grained hardwoods such as maple and walnut work best, but any strong, straight stock will do. For safety reasons, rip halfway through a wider piece for your first cut (as shown above), and then lay the piece flat to cut it to width.



**Step 2:** Draw a starting line 1/8" to the right of the blade on your miter gauge fence and add a finish line 1/8" to its right. With the end of a fixed jaw at the starting line, cut out the mortise to a depth of 1/8", as shown above. For the larger mortise in the moving jaw, draw two more lines, each 3/16" further out, to accommodate the wedges.



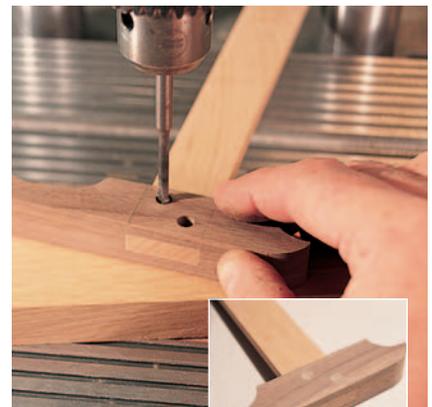
**Step 3:** Glue the two halves of each jaw together before cutting them to shape. Spring clamps supply enough pressure to snug the halves without excessive squeeze out. To keep glue out of the mortise, insert a piece of scrap exactly the size of your bar into the opening and slide it out before the glue dries.



**Step 4:** Use a photocopy of the Full-size Pattern at left to lay out the profiles of the fixed and movable jaws, making an awl mark at the two pin locations. After cutting the jaws to shape on your scroll saw, try a 1" drum sander in the drill press to refine the curves, and a belt sander to true up the straight edges.



**Step 5:** The moving jaw is locked in its travel along the bar (piece 3) by a pair of maple wedges (pieces 4). Scroll saw these wedges to rough shape, (see pattern at left) and use a small belt sander or a file to refine the cut. Be sure you don't over-sand the wedges or they'll lose their locking action. This has to be a tight fit.



**Step 6:** Glue the bar into the fixed jaw, checking for squareness. Drill the holes for the pins (pieces 5), glue them in place and sand flush when the glue dries. Glue the cork (pieces 6) to the jaw faces and apply your finish. Slip the movable jaw and wedges onto the bar and tap a stop (piece 7) in place near the end of the bar.