

WOODWORKER'S JOURNAL

downloadable plans:

"America's leading woodworking authority"™

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.



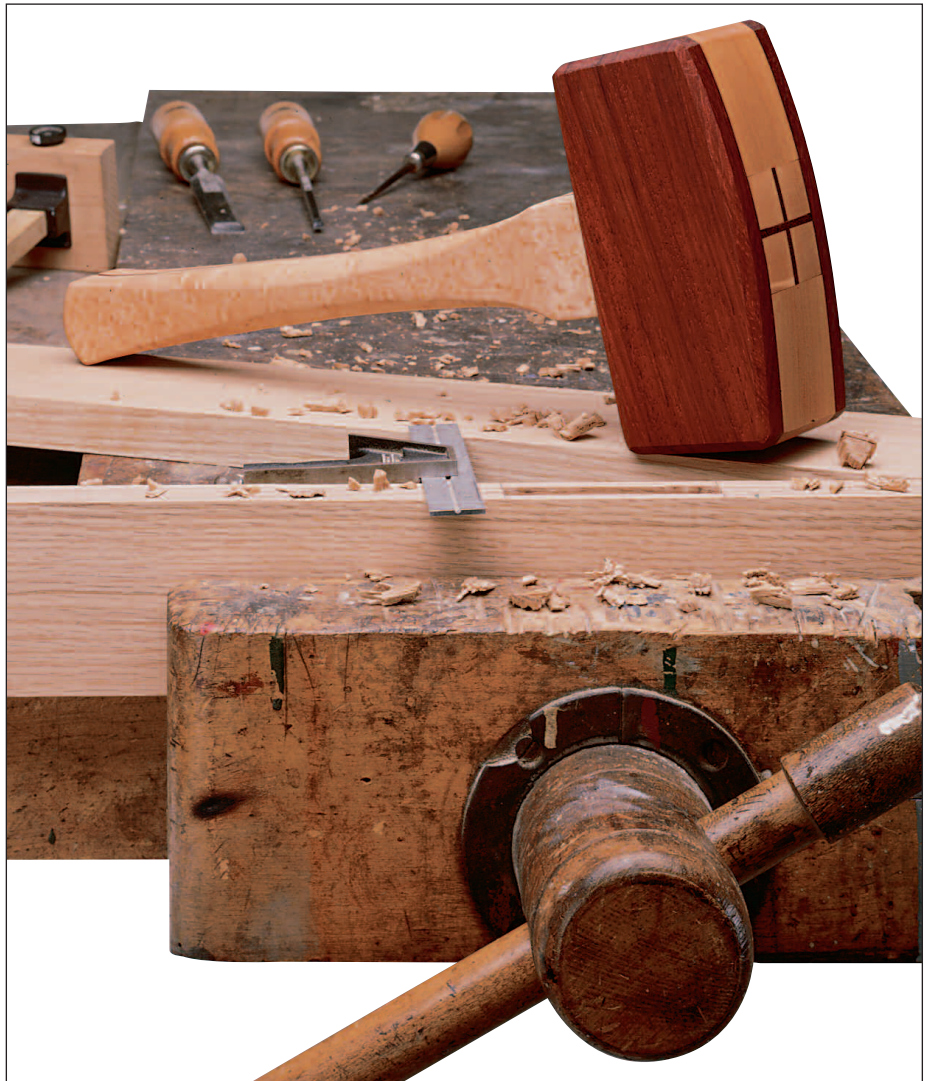
To download these plans, you will need **Adobe Reader** installed on your computer. If you want to get a free copy, you can get it at: **Adobe Reader**.

Having trouble downloading the plans?

- If you're using Microsoft Internet Explorer, right click on the download link and select "Save Target As" to download to your local drive.
- If you're using Netscape, right click on the download link and select "Save Link As" to download to your local drive.

WOODWORKER'S JOURNAL
©2007 ALL RIGHTS RESERVED

Handcrafting a Joiner's Mallet



Published in Woodworker's Journal "Practical Woodworking: Proven Projects, Tips and Tricks from Fellow Woodworkers"

\$7.95

WJ141

Handcrafting a Joiner's Mallet

Every woodworker should have a personalized mallet for carving and chiseling tasks. Build your own so the handle fits your palm like a glove. It's a joy to make and to use.

A woodworker's mallet is a very personal tool. We learn their subtleties of weight and balance so that the slightest tap can accomplish just what we need from a chisel or carving gouge. After many years of service, with a handle darkened by sweat and glue and the scars of time, your mallet will begin to feel like an extension of your hand.

Mallets purchased from a store do everything you expect of them in a practical way, but they lack an undefinable quality that's so evident in a hand-made tool. Given the years of service that a mallet provides, the time it takes to make one is well worth the effort.

Among domestic wood species, maple is the best choice for a mallet. It's both hard and dense, so it withstands repeated blows against chisel handles. Many exotic species are even harder than maple, so they also work well for this application. Padauk, for example, is hard and stable and, because of its

beauty, makes an excellent accent wood.

The mallet's head (pieces 3 and 4) is built around the end of the handle (pieces 1 and 2). Laminating the mallet in this way is much easier than trying to mortise a hole completely through the head, and it still results in a strong assembly.

To make the handle, glue the pieces of maple (pieces 1) to each side of the padauk strip (piece 2). If you have a little bird's eye maple around, use it to really make this a special piece. Padauk, as



A comfortable handle is the key to a successful mallet. To reduce tearout while spokeshaving (above) work from the high points to the low.

with many exotics, is an oily wood and sometimes doesn't bond well with yellow glue or hide glue. Therefore, just to be on the safe side, use epoxy to prevent any possibility of delamination due to oil in the padauk. Another advantage of epoxy is that it remains somewhat flexible after it dries, giving the mallet more resiliency when delivering a heavy blow (glues that are brittle will crack with this kind of shock).

Once the glue dries, rip the handle to a width of 1 3/4", then lay out the handle pattern shown on the next page. Next, cut a shoulder 2 3/4" from the top end of the handle to positively position the two core pieces (pieces 3) of the head during the final glue up. To do this, raise your tablesaw blade to 1/8", clamp a setup block to the rip fence and position it 2 3/4" from the far side of the blade. Pass the handle over the blade a number of times to cut the shoulder and complete the tenon. Clean up the saw marks on the tenon with a sharp 1" chisel, then use a band-saw to cut the wedge kerf and shape the handle. Take a few strokes with a spokeshave to chamfer the grip until it fits comfortably in your hand.

Now, from maple stock that's

the same thickness

as the handle,

cut two 2 3/4"-

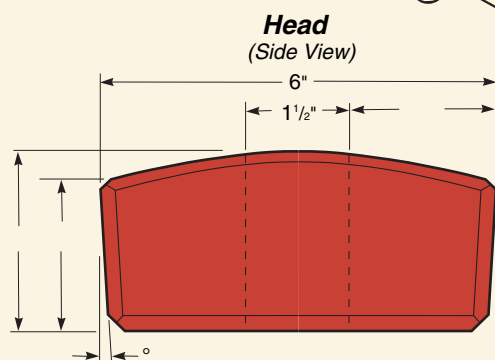
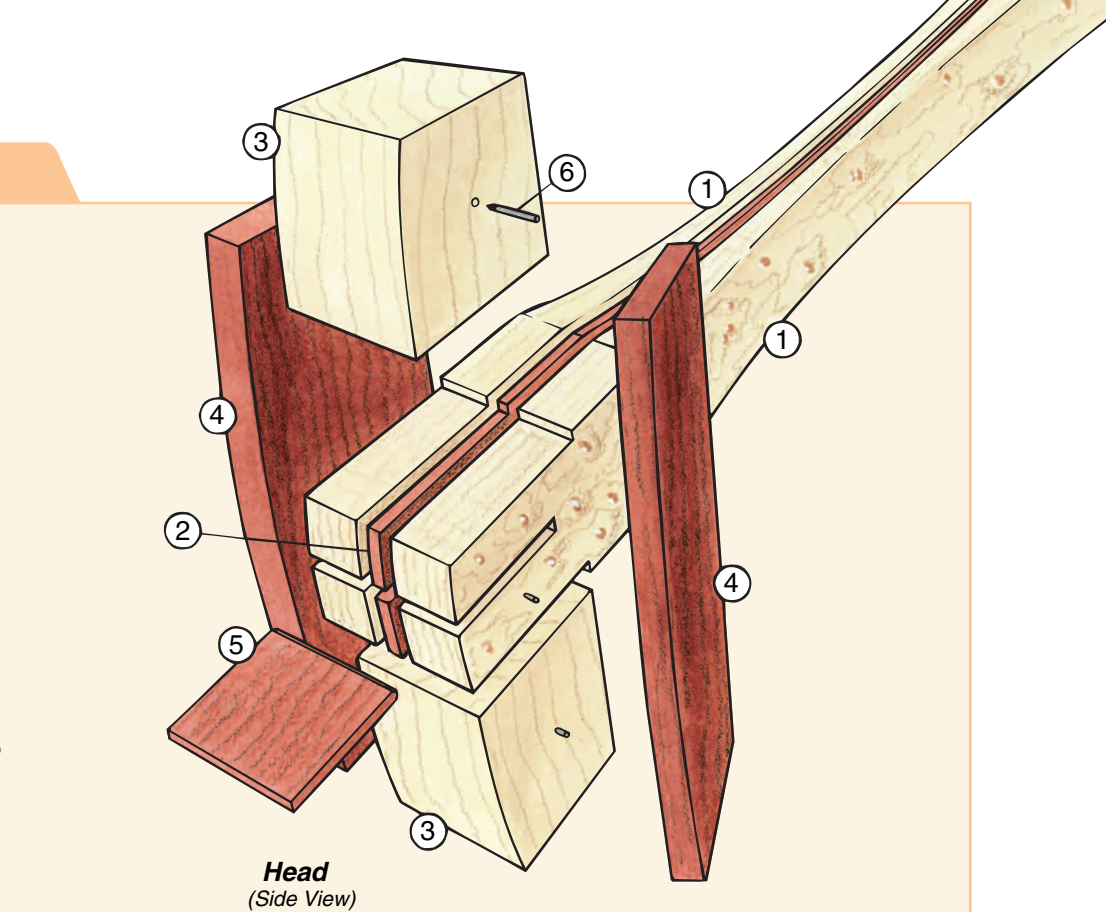
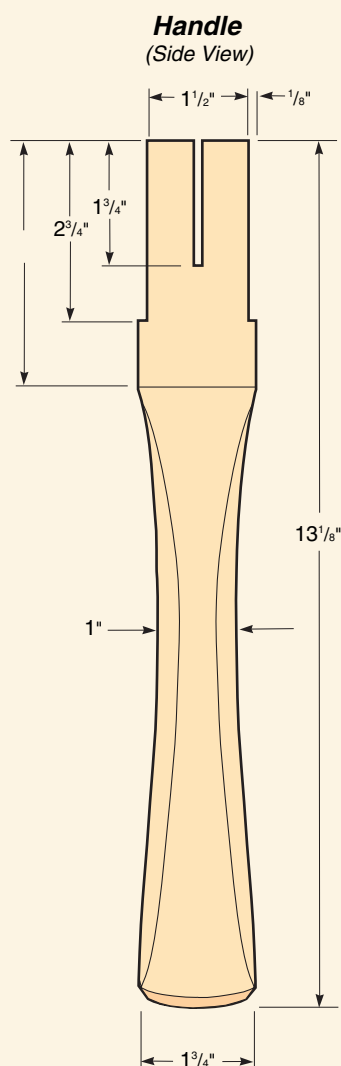
wide by 2 1/4"-

long pieces for the mallet head's core (pieces 3).

Cut the outside edge of each piece (the striking faces of



Mallet Exploded View



MATERIAL LIST – Mallet

		T x W x L
1	Maple Handle (2)	3/4" x 2" x 13 1/8"
2	Padauk Strip (1)	1/8" x 2" x 13 1/8"
3	Maple Cores (2)	1 1/2" x 2 3/4" x 2 1/4"
4	Padauk Faces (2)	1/2" x 3" x 6"
5	Padauk Wedge (1)	1/8" x 1 1/2" x 2"
6	Brads (6)	#17 - 1/2"

the mallet) at a 3° angle.

The padauk faces (pieces 4) measure 2 3/4" wide by 6" long and have ends cut at a 3° angle to match the core. From padauk scrap, also cut a 2"-long by 1 1/2"-wide by 1/8"-thick piece for the wedge (piece 5). Belt-sand one end of the wedge to a blunt point so it will enter the kerf easily.

Assembling the mallet is a sloppy task given all the glue that's involved, especially when the pieces begin sliding around. But you can prevent the sliding by driving three small brads just slightly into each padauk face and then, using a wire cutter, cutting off the brad 1/8" above the

surface. Press the core pieces and the handle into position on top of one padauk face, then press the second face on the other side of the head. The nails will indent the wood, preventing the pieces from slipping around when the glue is added.

Now disassemble the mallet, spread epoxy on all the joining surfaces, and clamp the pieces back together. Be sure to adjust one clamp to lightly hold the maple core sections against the handle, but be careful not to clamp too tightly or you won't be able to insert the wedge. Put a little epoxy on the pointed end of the wedge and drive it into the top of the handle. You'll have plenty of

squeeze-out, so have a few rags ready for cleaning up the excess glue.

The next day, belt-sand the pieces in the head lamination flush and scrape off any glue residue. Band-saw the curved top on the head and sand this cut smooth. Now use a block plane to chamfer all the long grain edges of the head and a chisel to chamfer the cross grain edges. Chamfer the end of the handle too. Use a palm sander with 100-grit paper to remove belt sander marks and ease all the corners. Once you're satisfied with the feel of the tool, apply two coats of a penetrating oil finish and you're ready to go to work.