
Woodpeckers®

# RedTOOL WOODSHOP PLANS

## Every Woodworker Needs a Mallet!

## What You Will Need

### CUT LIST:

| Component | Material | Length x Width x Thickness | Quantity |
|---|---|---|---|
| Outside Faces | Canary | 5-1/4" x 3" x 3/4" | (2) |
| Center Face | Walnut | 5-1/4" x 3" x 3/4" | (2) |
| Handle | Walnut | 11"to12" x 1-1/16" x 1-1/16" | (1) |

You can use any hardwoods you'd like to make your mallet, be as creative as you'd like! I chose to use Canary Wood for the two outside faces and Walnut for the center of the mallet head. I also used Walnut for the handle.

**VISIT WOODPECKERS WOODSHOP**

## 1 Mallet Head Preparation

1. Mill two boards to roughly 12" long, 3" wide, and 3/4" thick. **FIGURE A**

2. Set your AutoScale Miter Sled fence to 3° and your fence stop at 5-1/4".

3. Flip your fence stop up and cut a 3° angle on the end of your workpiece. Flip the fence stop back down, flip your workpiece end over end and reference the long point of the 3° angle up against the stop. Make another cut to cut the mallet face to final size. Repeat this process until you have two outside faces and one center face cut to size. **FIGURE B**

4. Set your AutsoScale fence back to 0° and set your fence stop to 2-5/8". Position the long point of your center face up against the fence stop. Cut the workpiece.

5. You should now have two larger outside faces, and two smaller center faces. Mark an 'X' on the prettier outside faces to designate these as the show faces of the mallet. The other sides will be facing inwards and will not be seen. **FIGURE C**

FIGURE A

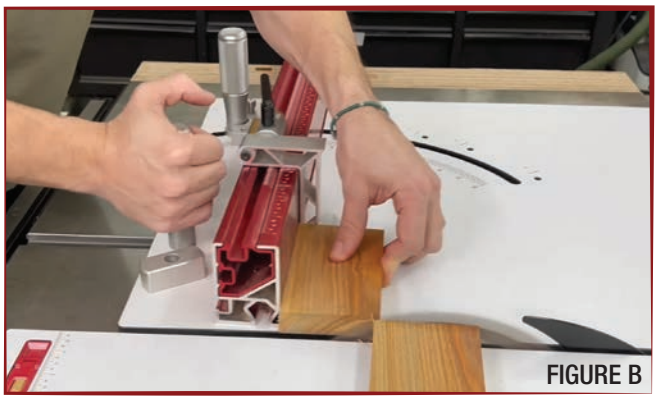


FIGURE B


FIGURE C

**WOODPECKERS TOOLS USED:**

- AutoScale Miter Sled, Left SKU: ASMS-L

# 2A Mallet Head Making

1. Use the center scale on our 6" Woodworking Rule and find the center between the short points on one of the outside faces. Make a mark 7/16" to the left and right of center.

Use a 4" Bevel Gauge to copy the 3° angle on the end of your workpiece and copy that angle to the two marks you just made. The 3° angles should be parallel with each end. **FIGURE A**

2. Orient your two Center Faces so the 3° angles match up with the 3° layout lines you just made.

   This can be confusing so to make it simple, I like to put the two pieces back together as if they haven't been cut. Then I flip them over towards myself, and then inwards towards each other so the 3° angles are up against one another. Then I can place them on my workpiece to see where they'll get glued on. **FIGURES B & C**

3. I like to use a combination of Titebond 3 wood glue and Starbond CA glue to glue the center faces to the outside face. The wood glue is for strength and the CA glue provides an instant bond to act as a temporary clamp so the pieces don't slide out of alignment while adding clamping pressure.

4. First spread some wood glue on your outside face. Then apply a couple dabs of CA glue on top of the wood glue.

5. Next, spray some accelerator on the center face, line it up with your layout marks and hold it in place for a couple of seconds while the CA glue dries. **FIGURE D**

6. With your two center faces now held in position on your outside face, clamp it up for roughly 20-30 minutes. I like to use my Semble Parallel Jaw Clamps for this. **FIGURE F**

## WOODPECKERS TOOLS USED:

- 6" Woodworking Rule SKU: WWR6
- Sliding Bevel Gauge SKU: SBG-4-23
- Semble™ Parallel Jaw Clamps SKU: PJH30PF-2


FIGURE A

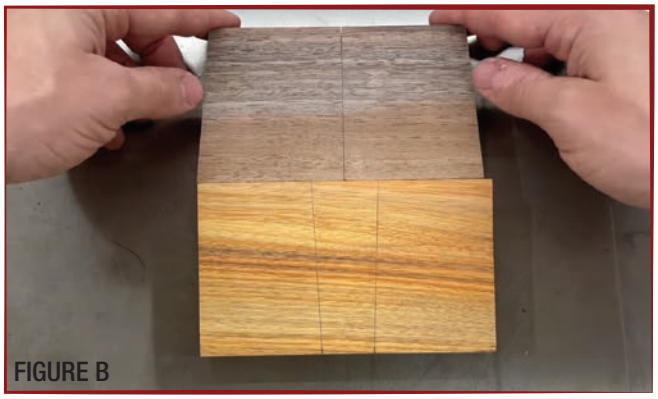


FIGURE B

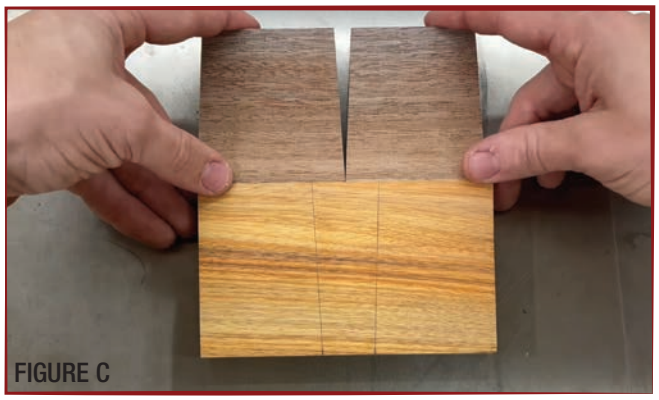


FIGURE C


FIGURE D

FIGURE F

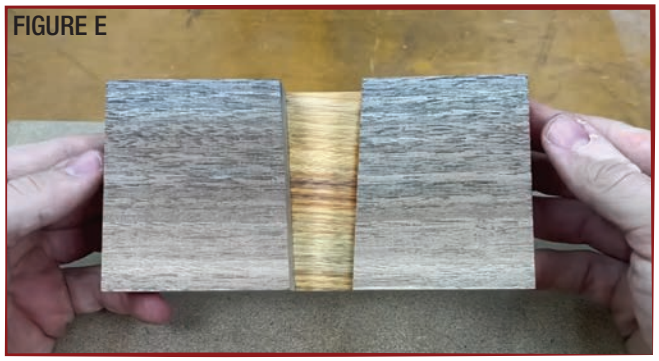


FIGURE E

# 2B Mallet Head Making ...continued

7. Remove the mallet head from clamps and grab a 3-1/2" DelVe Square SS for some layout work. Mark 1" in from the short point of the center face, and 1-1/2" up from the bottom. Do this on both center faces. **FIGURE G**

8. Use an awl to make an indent where those two lines intersect. **FIGURE H**

9. Install a 1" Forstner Bit in your drill press and set the drilling depth so you only drill completely through the center faces. **FIGURE I** Drill a hole in each center face where you marked out in the previous step. **FIGURE J**

10. Use a 3-1/2" Alumnimum DelVe Square to transfer the endpoint of the outside face to the top of the center faces. These layout marks will be used to help with aligning the second outside face during the final glue-up for the mallet head. **FIGURE K**

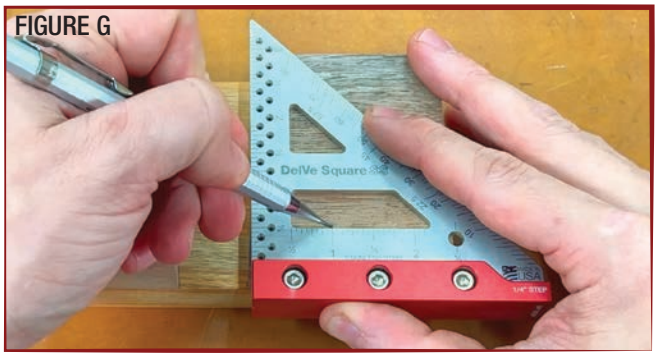


FIGURE G

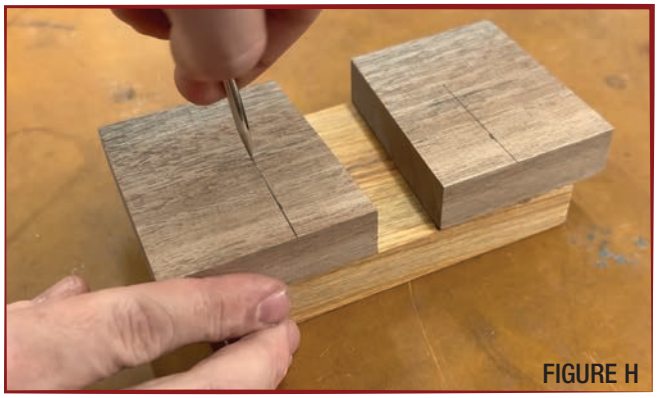


FIGURE H


FIGURE I

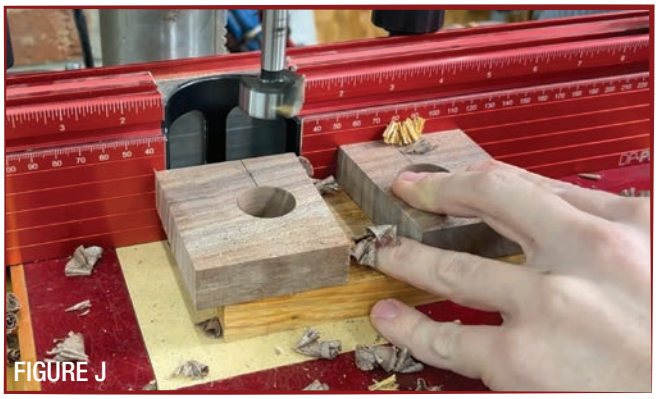


FIGURE J

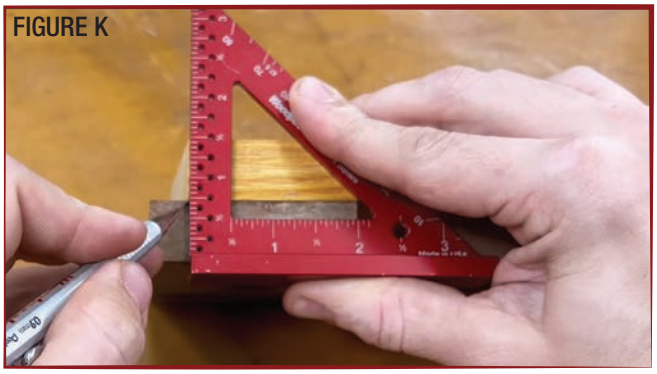


FIGURE K

## WOODPECKERS TOOLS USED:

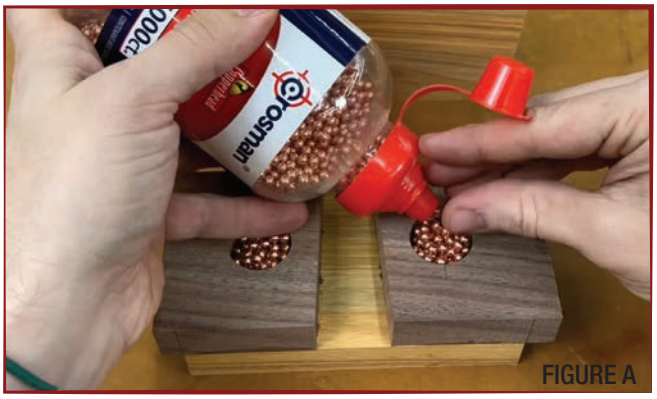
- 3-1/2" DelVe Sqaure SS SKU: DELVSS3-20
- Fisch Shark Forstner Bits SKU: FSA-367208
- 3-1/2" DelVe Sqaure SS SKU: DELVESQAL3

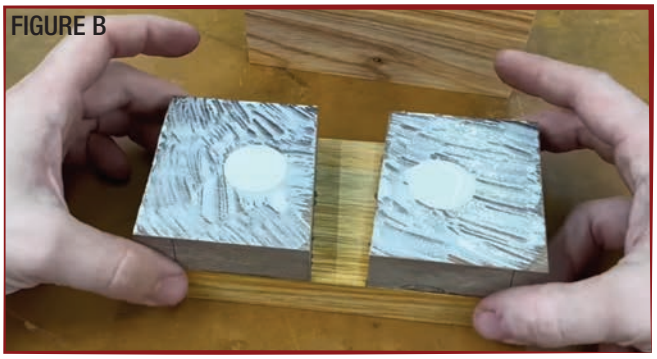
## 3 Mallet Head Adding Weight

1 To add some weight to the mallet, I like to add some brass BB's. You can also use some washers or any other scrap metal you have laying around your shop that can fit in the 1" hole. **FIGURE A**

2. I like to add glue to the BB's as well during the glue up process to prevent them from rattling around when everything is all done. **FIGURE B** *If you're going for a 'dead-blow' effect though, don't add any glue to the BB's.*

3. Once you have everything all glued up, align your second outside face with those layout marks and clamp it up for at least 30 minutes.



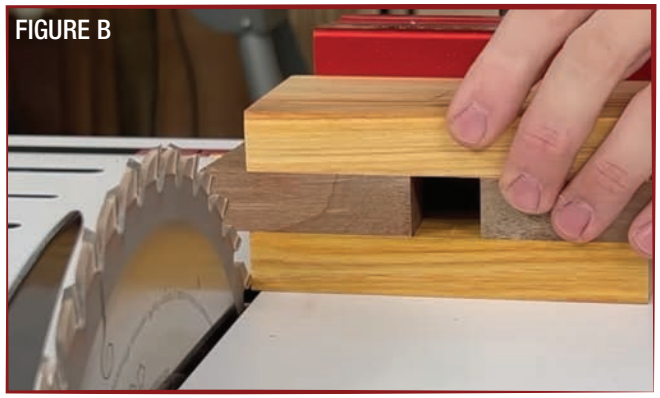

## 4 Mallet Head Finishing Touches

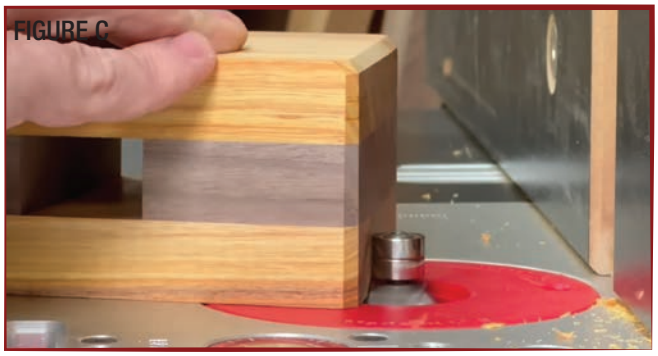
1. Once the mallet head is done trying, remove it from clamps and use a belt sander or a handplane to flatten the top and bottom of the mallet head. **FIGURE A**

2. Return to the table saw to cut the mallet head to final size. Set the angle on the AutoScale Miter Sled to 3°. Cut roughly 1/32" off of either end. **FIGURE B**

3. I like to use my 6" hook rule to check that I've taken an even amount off of each side and that the mortise is still centered.

4. The final step to making the mallet head is to add a chamfer. I like to use this Ultra-Shear Carbide Insert Chamfering Bit at my router table. By now you'll probably notice how many different machine setups it takes to make a simple mallet. That's why I highly recommend you make at least one or two extra at the same time to make your machinery setup worthwhile. **FIGURE C**


### WOODPECKERS TOOLS USED:

- 6" Hook Rule SKU: HR06-20
- Ultra-Shear™ Indexable Chamfer Bit SKU: US5112-45ICH
- Premium Router Table Package 2 SKU: PRP-2-QL350SP

# 5A Mallet Handle Making

1. Prepare your handle stock to be anywhere from 11"-12" long and 1-1/16" square. **FIGURE A**

2. Use a 4" Saddle-T Square to make a mark 3-1/4" down from the top of the handle. This will be the shoulder for our tenon. The tenon extends about a 1/4" past the mallet head and will be cut flush with the head once it's installed. **FIGURE B**

3. Install a 3/4" Dado Stack in your table saw and set the height of the blade to about 1/16". If you have a SawStop, I highly recommend you use our Dado Nut for added safety. **FIGURE C**

4. Line up the 3-1/4" layout mark with your dado stack and set the stop on your Exact-90 Miter Gauge. Flip the stop up and make a test cut on the last 1/8" of your workpiece. Make a pass on two opposing faces and test the fit in your mallet head. Take your time to dial in the height of your saw blade. Once you have a good fit, lower your stop and cut the rest of the tenon to match. **FIGURE D**

5. Adjust the height of your dado stack to about 5/32". Make a test cut on the end of the two uncut faces of your workpiece and test the fit in your mallet head. Make any necessary adjustments to your blade height until you achieve a nice fit. Once it fits nice, lower your stop and cut the rest of the tenon to size. **FIGURE E**

6. You'll know you achieved a nice fit when the mallet head can slip onto the handle nice and snug and has a clean shoulder with zero gaps.


FIGURE A

FIGURE B

FIGURE C

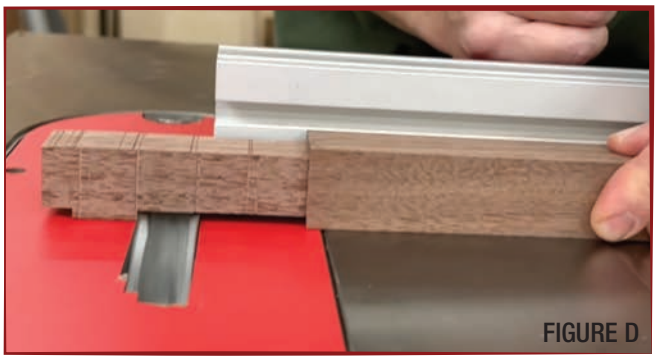


FIGURE D


FIGURE E

## WOODPECKERS TOOLS USED:

- 4" Saddle T-Square SKU: SDLT0419
- Dado Nut Bit SKU: DADONUT-SS

# 5B Mallet Handle Making ...continued

7. Use the 1/4" leg on the 3-1/2" Aluminum DelVe Square to layout two marks a 1/4" in from both sides of the tenon. Then layout a line 1/2" up from the shoulder. Use an awl to mark out where those two lines intersect. **FIGURE F**

8. Drill an 1/8" hole all the way through your tenon in the two locations you just marked out. **FIGURE G**

9. Use a bandsaw or handsaw to make two relief cuts on the 1/4" layout marks. Make sure to stop your cut once you reach the 1/8" holes. **FIGURE H**

10. You should still have your chamfer bit installed in your router table. Set the height of the bit to roughly 1/8". Mark a layout line on the handle 1" down from the shoulder and 1" up from the bottom. Line up the layout marks with the center of your bit and set your router fence stops to limit that travel of the workpiece between the two layout marks. **FIGURE I**

11. Rout a decorative chamfer on all four sides of the handle. Lastly, use a scrap piece of wood to help support the cut and make a chamfer on all four sides on the end of the handle. **FIGURE J**


FIGURE F


FIGURE G

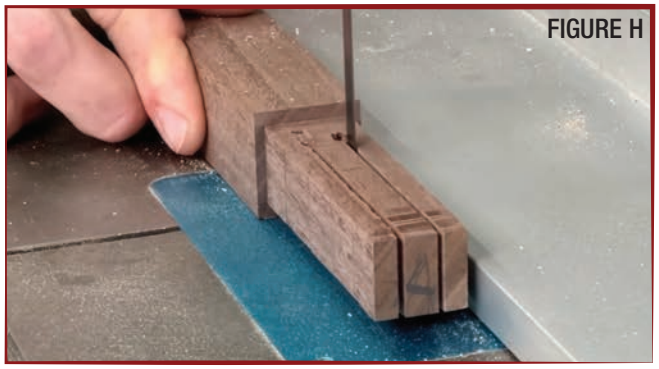


FIGURE H

FIGURE I


FIGURE J

## WOODPECKERS TOOLS USED:

- DP-PRO SKU: DPPRO-FN-24

## 6 Securing the Handle with the Mallet Head

1. I recommend that you make a jig like this to cut shims which will be used to attach the mallet head to the handle. The material you use must be the same thickness as your Center Face. It's easiest to just use an offcut of the mallet head so you don't have to mill extra wood to the exact thickness. You're going to need four shims to secure the handle to the mallet head. **FIGURES A, B & C**

2. Clamp your handle in a vise. Add some wood glue to the bottom of the mortise and slide the head onto the tenon. Make sure the head is firmly seated against the shoulder of the tenon and is square to the handle. **FIGURE D**

3. Add some glue to the top of the tenon. Use a Blue Spruce Mallet to pound in two shims in the relief cuts. I like to pound them in until there is a little over a 1/32" gap left on either side of the tenon. Check for square once more before pounding in the remaining two shims. **FIGURES E & F**

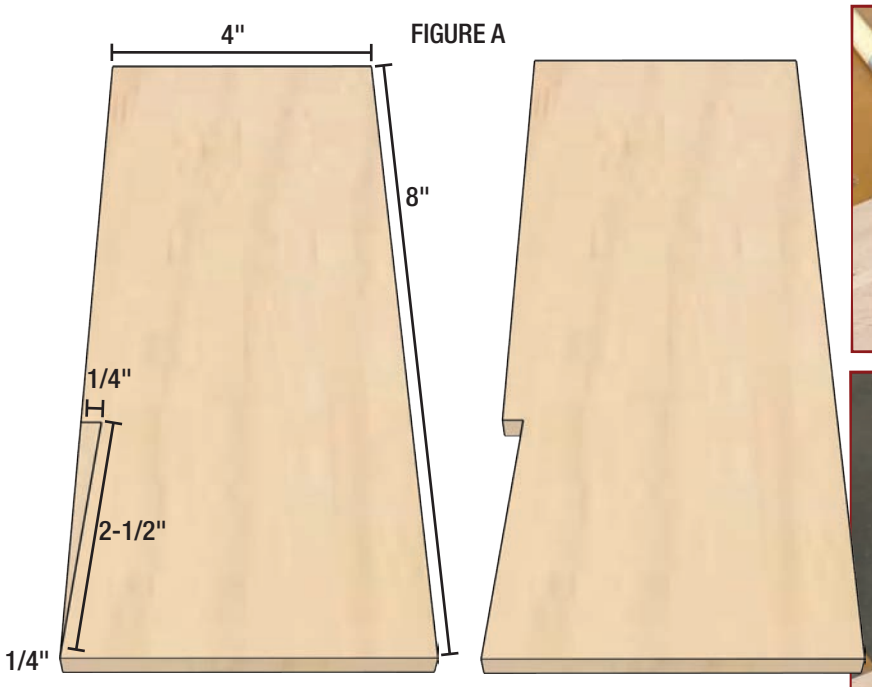


FIGURE A


FIGURE B

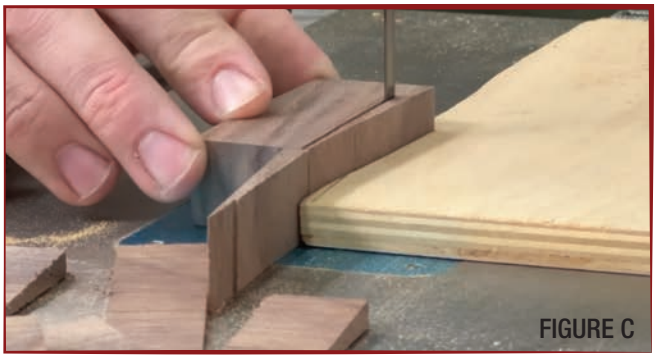


FIGURE C


FIGURE D

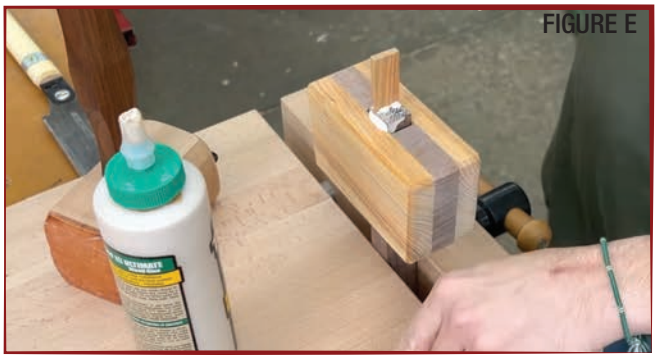


FIGURE E


FIGURE F

### WOODPECKERS TOOLS USED:

- Blue Spruce Toolworks Mallet

## 6A Securing the Handle with the Mallet Head ...continued

4. Use a flush cut saw to cut the shims flush with the mallet head. **FIGURE G**

5. Clean up the remaining material at the belt sander. **FIGURE H**

6. To prep the mallet for finish, sand the head and handle to 180 grit.

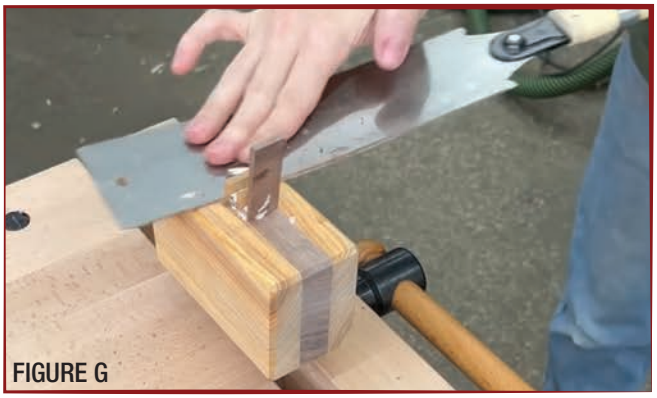


FIGURE G


FIGURE H

### WOODPECKERS TOOLS USED:

- Z-Saw Ryoba Japanese Saw SKU: JP-KIT

## 7 Finishing Touches

I like to finish my mallets using a homemade mixture of beeswax and mineral oil.

**Jay's Cutting Board Wax Finish**

**Ingredients:**
1/2 gallon of mineral oil (4 - 16oz bottles)
1lb bag of yellow beeswax pellets

**Make It:**
First cover your work surface with old plywood to protect your work surface.
Pour the mineral oil into the crock pot then add the beeswax.
Turn the crock pot to the highest setting.
Stir periodically.
The wax should fully melt in about 30 minutes.
Transfer the melted wax mixture into container(s). Shallow containers or tins with a lid work best.
Use caution this is very hot. It is useful to use a turkey baster or a measuring cup to transfer the mixture to avoid spilling.
Let it cool and solidify.

**Use It:** Apply a liberal amount of the Cutting Board Wax Finish to all surfaces of the board. Allow it to sit 20-30 minutes. Use a clean cotton cloth to buff. Apply 1-2 coats and your board is ready to use. To revitalize used cutting boards, add a thin coat of the wax then buff after a few hours.

**Store It:** Store containers covered in a cool dry location.

If you've gotten this far and have completed your mallet project, please share your finished project with us on Instagram @woodpeckers_tools .

***We'd love to see your work!***



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