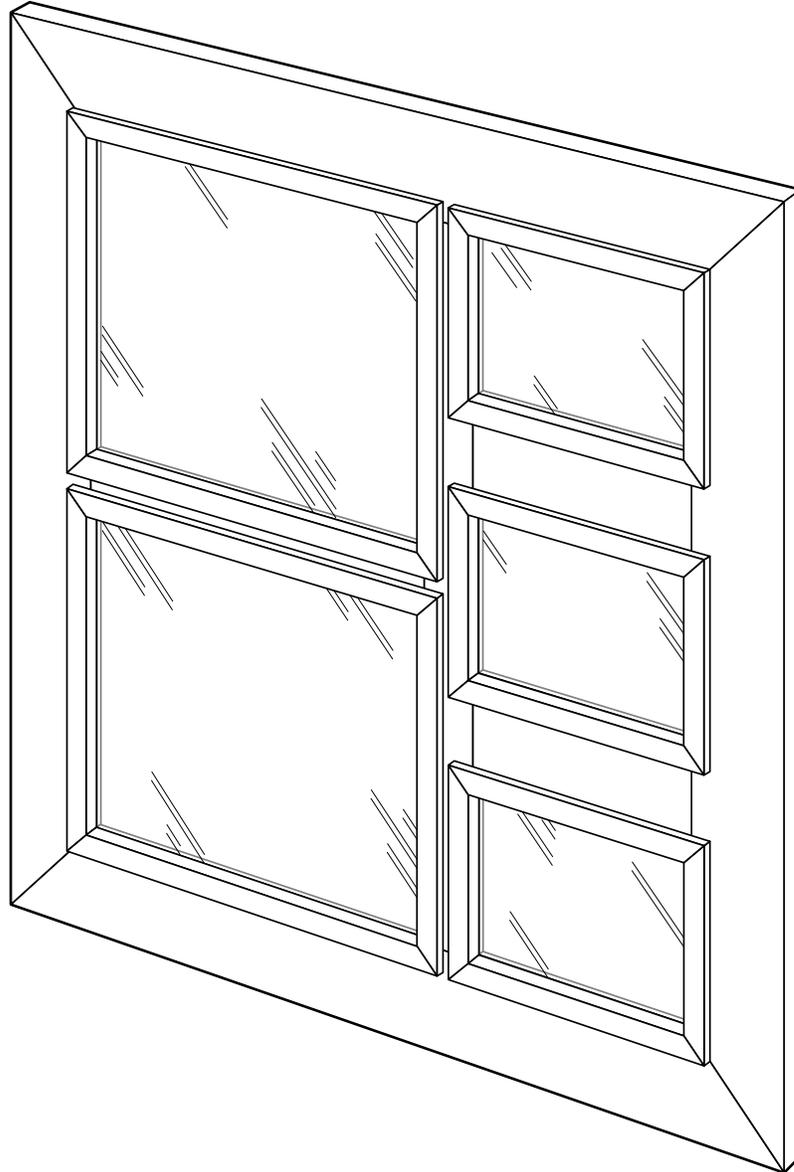


WOODWORKS: BEGINNER PROJECT 2011-2012
PICTURE FRAME



Photographs are a great way to preserve memories. Organizing several images into a unique collection is not only practical, but can easily become the focal point of any room. A quick way to arrange prized pictures is with a simple wood picture collage. This project is designed to hold two 8"x 10" photos and three 4"x 6" photos, but can be customized to fit your needs. For beginning woodworkers, you'll come away with solid experience in cutting and assembling mitered corners and in working with pocket screws. And after you build it, you will learn more about applying and using finishes to protect the wood and keep it looking beautiful.

TOOLS REQUIRED

Hand Tools

- Band clamp
- Pocket screw jig
- Sanding block
- Adjustable square
- Flat screwdriver
- Vise Clamp

Power Tools

- Table saw
- Miter saw
- Power drill
- Orbital or finish sander
- Pin Nailer

Miscellaneous

- Tape measure
- Masking tape
- Wood glue
- Pencil
- Safety glasses
- 120-grit sanding belt
- Clean, lint-free cloths or rags
- Gloves for finishing

SHOPPING LIST

Recommended Wood: Red or white oak

Alternate Wood: Ash

| Part | Material | Quantity |
|-----------------------|---------------------------------|-----------------------------|
| A, B, C | 1 x 6 oak | 6' |
| D | 1/2" x 1/2" corner molding | 15' |
| E | 1/4" hardboard | 12" x 36" |
| Woodscrews | 1-1/4" fine thread pocket screw | 16 |
| Single-strength glass | | Cut to size at a glass shop |
| Glazing points | | 20 |

CUTTING LIST

| Overall Dimensions: 22-1/2" H x 22-1/2" W x 3/4" D | | | |
|----------------------------------------------------|----------------------------|------|--------------------------------------------|
| Part | Name | Qty. | Th. x W x L |
| A | Frame Piece | 4 | 3/4" x 2-1/2" x 22-1/2" along outside edge |
| B | Vertical Divider | 1 | 3/4" x 1-7/16" x 17-1/2" |
| C | Narrow Horizontal Dividers | 2 | 3/4" x 1-7/16" x 10-1/16" |
| D | Wide Horizontal Dividers | 2 | 3/4" x 2-11/16" x 6" |
| E | Corner Molding | 20 | miter cut to fit openings |
| F | Back | 5 | cut to fit openings made by A, B and C |

WOOD FINISHING PRODUCTS

Recommended Finish

Stain/Finish: Minwax® Express Color Walnut

Alternate Finish

Stain/Finish: Minwax® Water-Based WoodSheen Windsor Oak

BEFORE YOU BEGIN

Good craftsmanship begins and ends with good work habits, so make the following steps part of your routine workshop practice. If you have any doubts or questions about how to proceed with a project, always discuss them with your shop instructor.

- Carefully and fully review plans and instructions before putting a tool to the project lumber.
- Work sensibly and safely. Wear safety goggles when doing work that creates flying chips and sawdust; wear the appropriate respirator whenever making sawdust or working with thinners or other solvents.
- At the end of every work session, clean up your shop area and put away all portable tools.

CUTTING AND ASSEMBLY PROCEDURE

1. Rip the frame pieces, A, to width.
2. Rip the vertical and horizontal dividers, B and C, to width.
3. Cut the miters for the frame pieces, A. See Fig. 2.

***Woodworker's Tip:** Note in Fig. 2 that masking tape holds the two pieces together. This helps create two perfectly identical pairs of frame pieces. The masking tape should not be on the edge going up against the fence. Mark each pair of cut pieces so you can keep them together.*

4. Glue up the frame. There are a variety of ways mitered frames can be clamped, but it's hard to beat the ease of use of a band clamp for this application. Make sure the frame stays square as you tighten the clamp.
5. While glue is drying, rip the corner molding, E, to size. It must be ripped so the inside leg of the corner measures 3/16" from inside to edge of leg. Because the pieces are small the band saw provides a safer way to make this cut rather than using a table saw. See Fig. 3.
6. Cut the 1-7/16"-wide horizontal divider, C, to 10-1/16" long.
7. Use the piece from step 6 to mark the location of the vertical divider. Position the vertical divider on the two layout lines and mark its length.
8. Carefully cut the vertical divider to length. Using a pocket screw jig, drill the ends of the vertical divider. See Fig. 4. Using the 10-1/16"-long horizontal divider as a spacer, clamp the vertical divider on the layout lines. Fasten the divider with two 1-1/4" fine thread pocket hole screws. Locate and fasten the opposite end in the same way. See Fig. 5.
9. Drill two pocket holes in each end of the narrow horizontal divider, C. Center, clamp, and fasten with screws.
10. Mark the lengths of the two wide horizontal dividers, D, by laying them on the frame and marking their cut locations. Cut these pieces to length. Drill two pocket holes in each end of both pieces.
11. Locate the wide horizontal dividers by creating three equal spaces. They'll be about 4" wide. Clamp and screw these pieces in place.

12. Sand face of the entire frame. Start with 120-grit sandpaper and finish with 220-grit.

13. Miter one end of the corner molding, E. Position the molding in one of the frame openings and mark opposite end. Cut the molding to length. Continue this process to cut all four pieces for each opening. As you cut, test the fit of each piece. Adjust or recut as needed.

14. Using a pin nailer, fasten the corner molding pieces in place around each opening. See Fig. 6. Fill the nail holes as needed and sand the moldings.

15. Cut the hardboard backs, F, to size so they fit easily into the back of the frame openings. Cut or purchase single-strength glass to the same sizes as the hardboard backs. The frame is now ready for finishing.

16. After the frame is finished, lay the glass, artwork and hardboard into the frame opening. Secure these pieces by pushing in the glazing points with a flat screwdriver, four for each opening. Fasten a hanger to the back, and your frame is ready for display.

STAINING AND FINISHING

***Woodworker's Tip:** Though you may be tempted to cut short your sanding, preparation and application time, don't do it. These tasks are very important steps in obtaining a high-quality finish. Remember, it is the finish, just as much as the fit and smoothness of the parts that will have great bearing on how people judge your craftsmanship. To ensure an excellent result, follow the steps listed in this section and also the instructions the finish manufacturer puts on its products.*

FINISHING TIPS

- Test the stains and finishes you are planning to use on scraps of wood. On the back of the scrap, mark the stain/finish combination and the type of wood.
- Allow all samples to dry thoroughly before making your final finish selection. Save your samples for quick reference on future projects.
- All stains and finishes must be allowed to dry thoroughly between coats. Remember that drying times can vary due to humidity and other climatic conditions.

17. Finish-sand all surfaces starting with 120-grit sandpaper and finishing with 220-grit paper. Dust off the piece and wipe it with a dampened, clean, lint-free cloth.

Recommended Finish

18. To apply Minwax® Express Color, first shake the tube slightly. Point the tube toward the wood surface and squeeze gently. Apply with a clean, lint-free cloth. Remove any excess by wiping lightly, in the direction of the wood grain, with a clean cloth. For a deeper color and sheen, wait 1 hour then apply a second coat. Wait overnight before subjecting the wood to normal use.

19. For extra durability without added color, wait 3 hours and then apply a coat of Minwax® Polycrylic® Protective Finish, Minwax® Water-Based Oil-Modified Polyurethane, or Minwax® Water Based Wipe-on Poly following the product directions.

Alternate Finish

20. Apply Minwax® Water-Based WoodSheen® following the directions on the bottle. Shake the bottle. Apply liberally with a clean, lint-free cloth. Remove any excess by wiping lightly, in the direction of the wood grain, with a clean cloth. Allow the first coat to dry. For a deeper color and sheen, wait 1 hour then apply a second coat. Wait overnight before subjecting the picture frame to normal use.

21. For extra durability without added color, wait 3 hours and then apply a coat of Minwax® Polycrylic® Finish, Minwax® Water-Based Oil - Modified Polyurethane, or Minwax Water Based Wipe-on following the product directions.

PRODUCT SAFETY

For your safety and the safety of those you work with, always read the safety warnings, which manufacturers print on their labels, and follow them to the letter.

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in U.S.) or contact your local health authority.

DANGER: Rags, steel wool, other waste soaked with oil-based stains and clear finishes, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled metal container. Dispose of in accordance with local fire regulations.

When using water-based wood finishing products:

CAUTIONS: Use Only With Adequate Ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (NIOSH approved), or leave the area. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage.

FIRST AID: In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, get medical attention immediately.

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. CONFORMS TO ASTM D-4326. Contact a physician for more health information.

FIG 1.

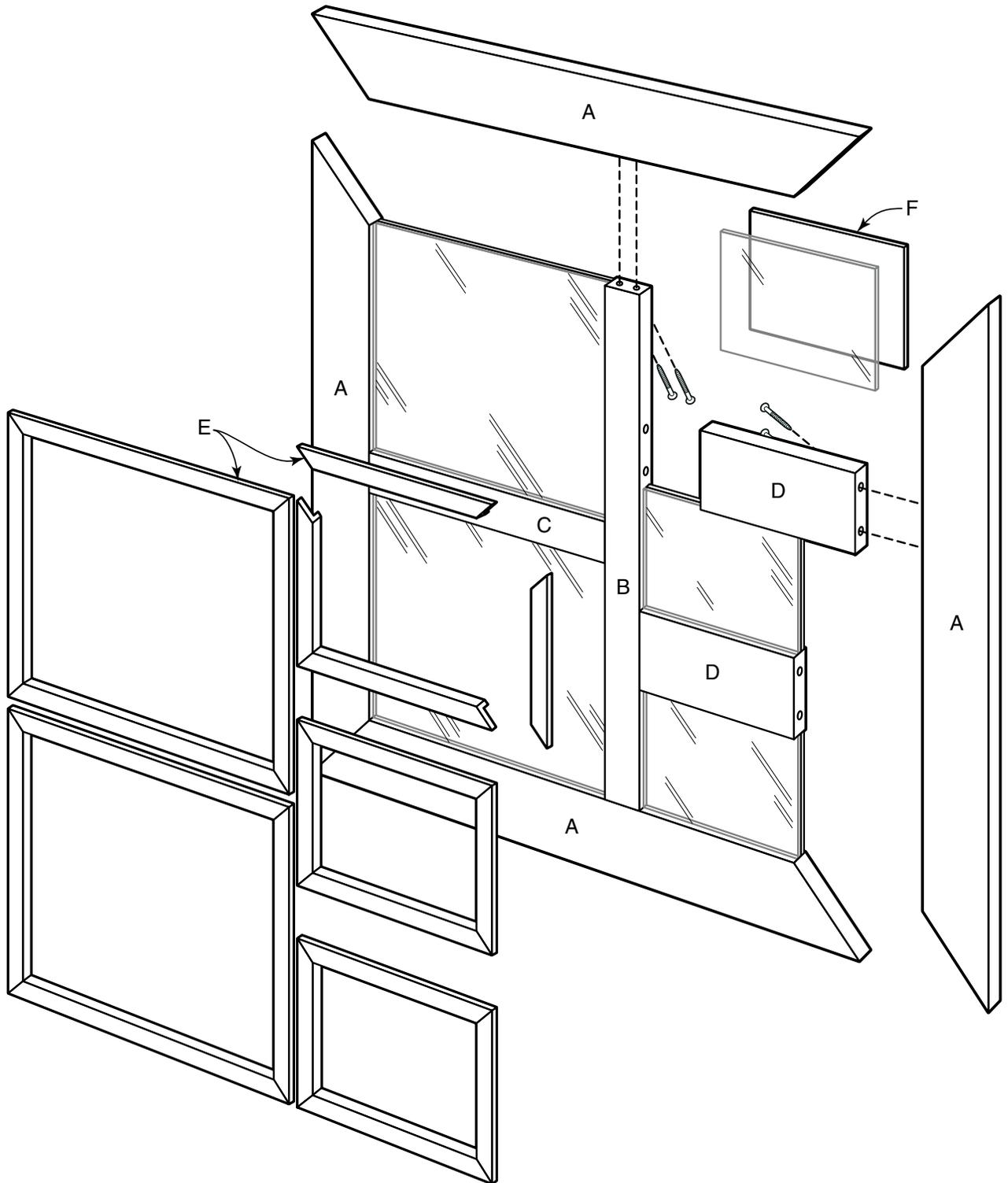


FIG 2.

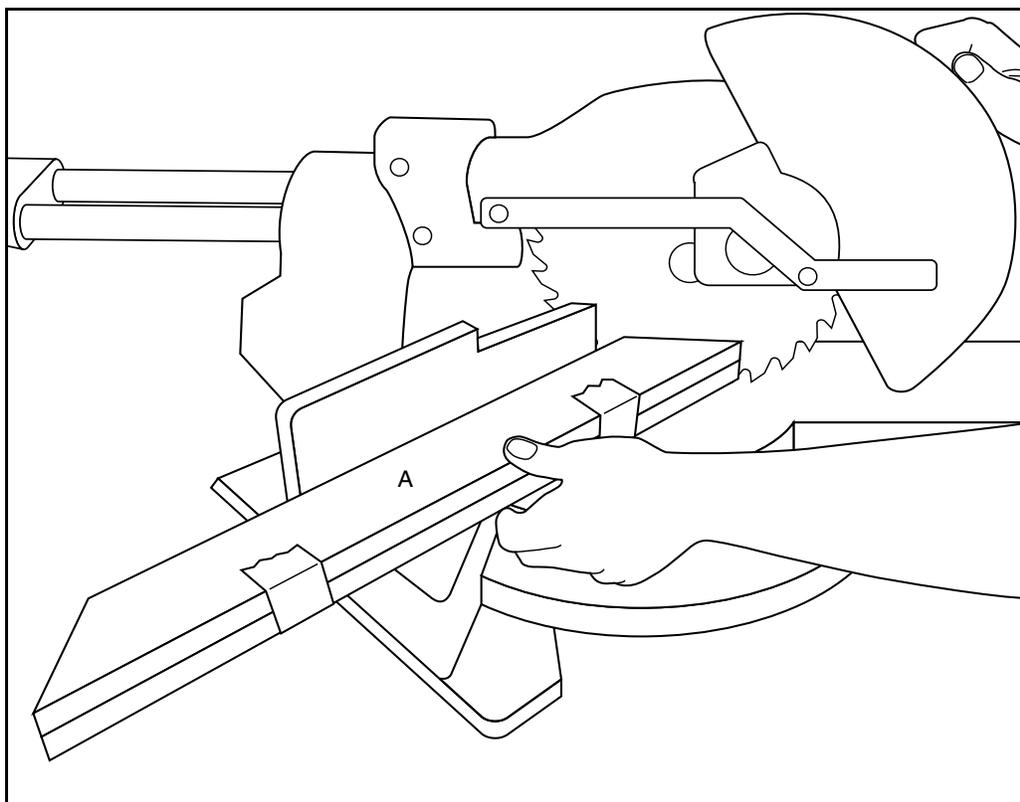


FIG 3.

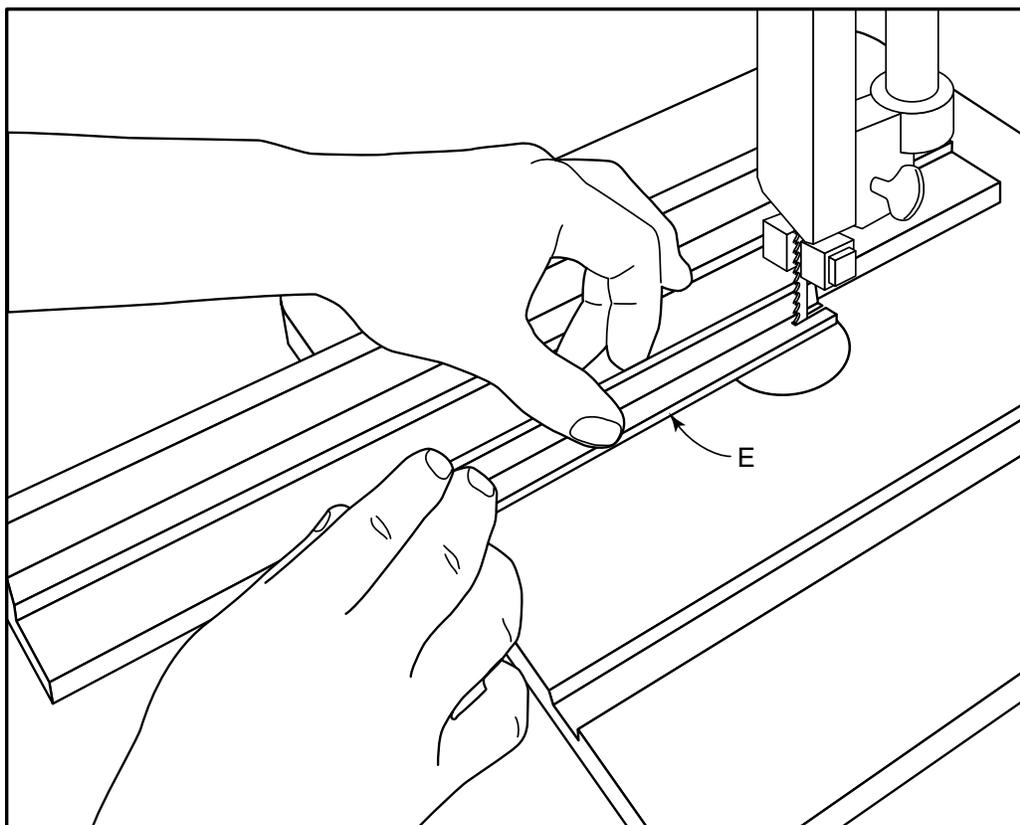


FIG 4.

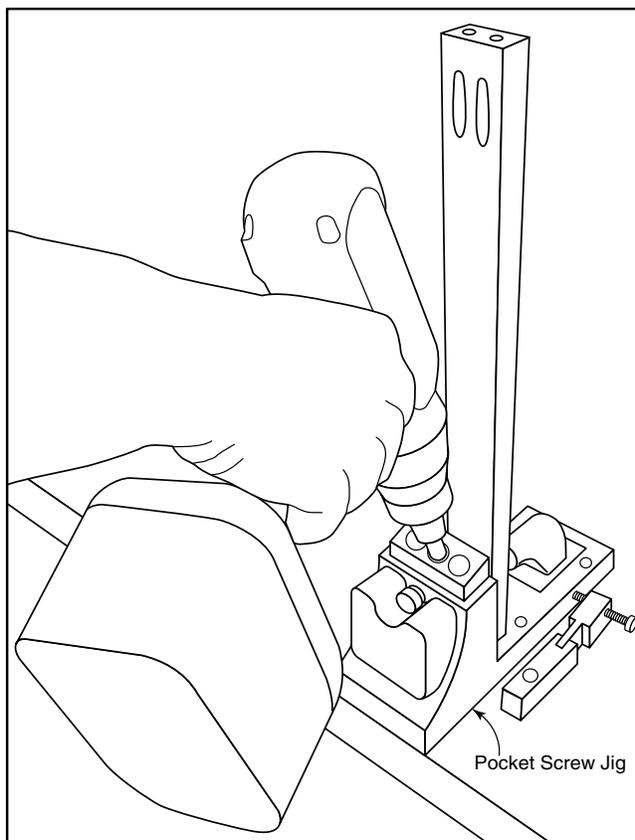


FIG 5.

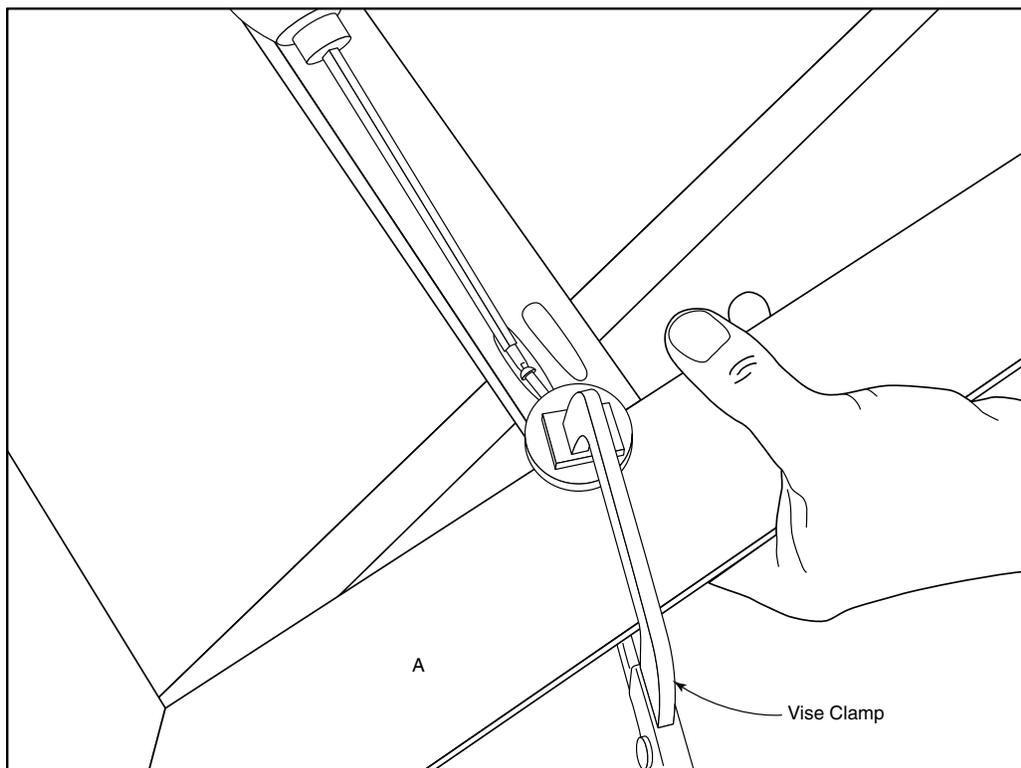


FIG 6.

