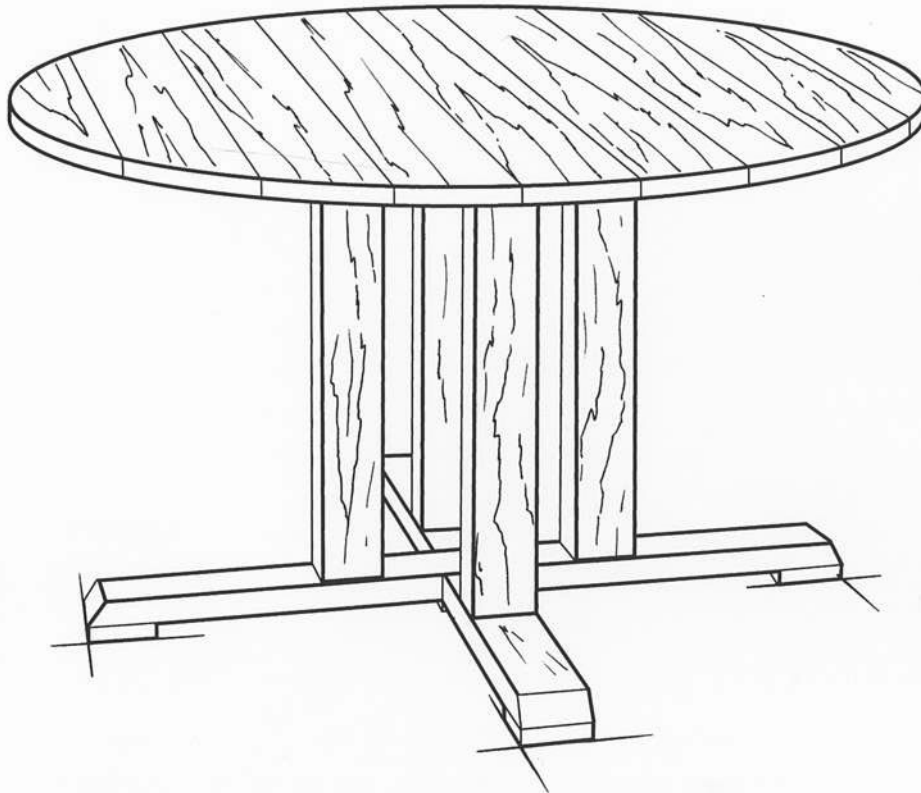


WOODWORKS: INTERMEDIATE PROJECT 2002-2003
PEDESTAL PICNIC TABLE



If you're looking for a picnic table that's simple to build but looks great on a deck or patio, here's the design for you.

- The 48"-dia. top easily accommodates six people, and with its traditional pedestal support, no one can complain about being "on the leg."
- Since the top is fastened from below, there are no screws or nails visible on the top.
- The pedestal is joined with threaded rods, which makes it very strong and simple to retighten if it ever gets a little loose.

This table gives intermediate woodworking students the opportunity to learn a number of important, basic skills, including measuring, cutting, marking, drilling and assembly of several pieces. And after you make the table, you'll learn how to protect the wood and keep it looking beautiful.

TOOLS REQUIRED

Hand Tools

- 1/2"-dia. x 12"-long auger bit
- Screwdriver
- Socket wrench

Power Tools

- Drill
- Table saw
- Router
- Bandsaw or jigsaw
- Belt sander
- Orbital sander

Miscellaneous

- Pencil
- Length of wire or chain for drawing tabletop cutout
- Sanding belt, 80-grit
- Sandpaper, 120-grit

NOTE: Among the tools you'll need to build this table, one is a little unusual: a 1/2"-dia. "ship auger" bit that's at least 12" long. It's needed to drill the long holes through the legs of the pedestals without wandering off course and coming out off center or, worse, through the side of the wood. An auger is available at a home center or woodworking specialty store for around \$15. Unfortunately, a spade bit with an extension just won't do the trick.

SHOPPING LIST

Item	Quantity
2x4 x 8'	2
4x4 x 8'	1
1x4 x 12'	1
5/4 x 6" x 12'	3
1x8 x 8' pine (for clamping jig)	1
2" galvanized deck screws	22
1-5/8" galvanized deck screws	70
5/16" x 26-1/2" threaded rod	4
5/16" nuts and washers	8
Brown exterior-grade caulk	1 tube

CUTTING LIST

Overall Dimensions: 48" dia. x 28-3/4" h		
Part	Quantity	Dimensions
A	1	2x4 x 46"
B	1	2x4 x 26"
C	2	2x4 x 41"
D	4	4x4 x 23-7/8"
E	5	1x4 x 3-1/2"
F	2	5/4 x 6" x 30"
G	2	5/4 x 6" x 42"
H	5	5/4 x 6" x 50"
J	2	1x4 x 24"
K	4	1x4 x 18"

NOTE: The wood for this project should be naturally rot resistant, which means choosing either redwood, cedar or cypress in anything from clear, vertical grain to construction-grade boards.

WOOD FINISHING PRODUCTS

Recommended Finish

Thompson's® Water Seal® Clear or Tinted Wood Protector, which is available in five colors: Honey Gold, Natural Cedar, Rustic Red, Nutmeg Brown, and Coastal Gray.

Alternate Finish

Thompson's® Water Seal® Deck & House Latex or Oil Stain, which are available in up to 117 Solid and Semi-transparent colors in both Latex and Oil formulas.

Miscellaneous

Gloves
Plastic drop cloths
Brush, roller, applicator pad,
deck sprayer or pump-up
garden sprayer
Mineral spirits (for cleanup)
Rags

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.

Building Tips

- When you're making the boards for the top, plan your scrap. Cut the longest pieces (H) first so you can use the remaining pieces to cut the shorter parts F and G. There are few things more frustrating than sawing up a long board, only to find you need to buy more lumber for the short pieces.
- Before cutting the threaded rod for the base, screw a nut onto it. Cut the rod to the required length, file the cut end smooth and then unscrew the nut. It will clean up the threads nicely.
- It's easier to sand the base pieces before they're assembled.
- You can finish the table after it's assembled, but for maximum longevity, put a weather-repellent finish on all the parts before putting them together, making sure the finish soaks well into the end grain. The only exception is areas that will be glued; leave them unfinished.

CUTTING AND ASSEMBLY PROCEDURE

1. Refer to the Cutting List and Figure A to cut all the pieces of the table to size.

Woodworker's Tip: When you're cutting the 4x4s that make the pedestal legs (D), it's more important to have the ends flat and square, and all four pieces the exact length, than to make them exactly the length given in the Cutting List. You can set their length according to how high or low you want the table. The standard height for dining tables is 30".

2. Cut dados in the four boards (A, B and C) that will form the top and bottom x's on the pedestal. Cut the dados all at once, making them half the thickness of your boards so that a lap joint is formed. Cut the dado a little undersized in width, then "sneak up" on the final width, using a scrap of the lumber to test the fit. It should be a snug, sliding fit.

Woodworker's Tip: Before cutting a dado, clamp a piece of scrap at the edge of the board in order to prevent the blade from "blowing out" and splintering the wood as it comes out of the cut.

3. Cut bevels on the ends of boards A, B and C. Be sure the bevels are on the same side as the dado on two of the boards, and on the opposite side from the dado on the other two. Thus, when the two x's are assembled, all the bevels will face up. Drill 1"-dia. x 3/4"-deep coun-

terbore holes in these boards on the non-beveled sides. Then drill 5/16" holes, located as shown in Figure A, for the threaded rods.

4. Drill a hole through the center of each pedestal leg, drilling in halfway from each end with the 12" auger bit. Use a guide block to help the bit go straight through the center (Fig. B). It may be hard to believe that the two holes will meet, but the special design of the drill bit prevents it from wandering off course.

5. Assemble the base on blocks so you can hold the nuts on the bottom (see Fig. C). After inserting the threaded rods through the legs (D), put on the washers and nuts. Tighten the nuts from both ends. Fill the 1" counterbores on the top with brown caulk so water can't collect in the holes. Glue and screw the small feet (E) on the ends of the base.

6. Clamp the tabletop boards (F, G, H) in a simple clamping jig (see Fig. D), bottom side up, with 1/8" spacers between them. Draw a line across the middle of each board beforehand to make them easier to align when they're clamped. To make the jig, use a piece of 3/4"-thick by 6" to 8"-wide scrap that's at least 60" long. This will be the clamp bar. Fasten a rectangular end block near one end of the bar, then lay the tabletop boards on the bar. Next, fasten a tapered block to the other end of the bar, leaving about a 2" gap between it and the outermost tabletop board. To make the clamp work, make an 8"-long stick that tapers from 2-1/2" to 1-1/2" wide and drive it between the tapered block and the tabletop, thus forcing the boards and spacers tightly together.

7. Draw a 48"-dia. circle on the tabletop using thin wire or chain and a nail in the middle of the centerboard (see Fig. E). Take the boards out of the jig, cut out the arcs with a bandsaw or jigsaw and sand the ends. Put finish on the top boards and reassemble the top, including the spacers, on the clamping jig. You'll need to reposition the end block to shorten the clamp bar, because the top is now a little smaller.

8. Attach the base to the top by setting the upside-down pedestal assembly onto the top boards and screwing it down. Cut the cleat boards (J, K) and screw them down as well. Flip the table over, remove the spacers and you're done.

PROTECTING YOUR PROJECT

Any type of wood that's used outdoors needs protection from water damage. We've chosen Thompson's® Water Seal® Clear or Tinted Wood Protector to provide complete protection for your project. It not only prevents water damage, but the coating also resists mildew and U.V. (ultraviolet radiation in sunlight) damage, and it exceeds industry standards for waterproofing on wood. In addition, Clear Wood Protector will help maintain the wood's natural color while Tinted Wood Protector adds color without hiding natural wood grain.

Woodworker's Tip: Always be sure to choose a waterproofer that claims to exceed industry standards for waterproofing on wood.

9. Before applying Clear or Tinted Wood Protector, read and follow the directions found on the back of the can. Be sure that both surface and air temperature are above 50° F during application and

for 48 hours after application, and do not apply product if rain is forecasted within 24 hours of application.

10. The surfaces must be free of all mildew, dust, dirt, oil, soot, grease and other contaminants. If the surface is damp or wet from cleaning or weather, allow the surface to dry thoroughly (a minimum of 48 hours) before application.

11. Cover plants and shrubs and move all objects that could come in contact with Wood Protector. If a sprayer is used, any overspray of product onto glass should be removed immediately with paint thinner or mineral spirits.

12. When you apply Clear or Tinted Wood Protector, do not mix it with other waterproofing products because variations in the final appearance of the surface being treated may result. Also, do not thin this product.

13. Before applying Wood Protector over the entire surface, a small trial patch is recommended to verify color.

14. In most applications, only one light coat is necessary. Apply with a brush, roller, applicator pad or sprayer or by dipping the piece into the product. A garden "pump-up" style sprayer is the simplest method. Regardless of which application method is used, remove excess within 15 minutes by redistributing it to drier areas or wiping it off.

15. Use only with adequate ventilation. Oiliness and tackiness will result if over-applied or applied to wet or damp surface or if overnight temperature falls below 50° F within 48 hours of application. Excessive oiliness caused by over-application may be removed by scrubbing wood with a concentrated degreaser.

Woodworker's Tip: *The approximate coverage of Clear Wood Protector on cedar is 300 to 400 sq. feet per gallon. A gallon of Tinted Wood Protector will cover about 250 to 300 sq. feet.*

16. Allow at least 48 hours to dry. Drying time will vary depending on the substrate, temperature and humidity.

Woodworker's Tip: *Unsure if you need to protect? Perform the splash test. Sprinkle water on various sections of surface to be sealed. If water absorbs and darkens color of substrate within 5 seconds, the surface is porous and considered ready to be treated. If water beads up or otherwise sits on top of surface, then surface doesn't need protection at this time.*

17. Clean brushes and equipment with mineral spirits, then rinse with clean water.

NOTE: The length of protection will vary depending on environment. Perform the splash test once a year to see whether reapplication is necessary. For maximum protection from color change and other damage caused by the sun, reapplication is recommended every year. Vertical and horizontal surfaces will experience color changes at different rates.

Alternate Finish

If you want more color along with excellent protection, use Thompson's® Water Seal® Deck & House Latex or Oil Stain, both of which come in Solid and Semi-transparent formulations and are available in 117 ready- and custom-mixed colors.

18. Before applying any of these stains, read and follow the directions found on the back of the can. To ensure good penetration, do not apply in direct sunlight or on hot days. Be sure that both surface and air temperature are above 50° F and below 95° F during application and for 48 hours after application, and do not apply product if rain is forecasted within 24 hours of application.

19. The surfaces must be free of all mildew, dust, dirt, oil, soot, grease and other contaminants. If the surface is damp or wet from cleaning or weather, allow the surface to dry thoroughly (a minimum of 48 hours) before application. Shake or mix thoroughly before application. (Mechanical shaking is recommended.)

20. Since in-store color samples may vary slightly when actually applied to wood (based on color, texture, grain, porosity and type of wood), apply the stain to a small test area and let it dry to determine final color before proceeding with the entire project.

21. Apply stain with an exterior paint pad, brush, roller or compression-driven sprayer set for low pressure. *Do not use product in a pump-up garden sprayer.* When rolling or spraying, be sure to go back and brush-in stain to ensure even coverage. When using a pad or brush, keep the leading edge wet and distribute stain evenly. This will help avoid lap marks and keep color uniform.

22. Work from top to bottom or side to side in areas small enough to allow the leading edge to remain wet at all times during application. Use natural breaks as boundaries to divide large areas into more manageable work areas.

23. One coat of stain is recommended, but a second coat can be added if desired. Allow the first coat to dry thoroughly (approximately 4 hours for latex, 24 hours for oil) before second application.

Woodworker's Tip: *The approximate coverage of oil or latex stain on smooth wood is 250 to 300 sq. feet per gallon.*

24. Allow a drying time of at least 4 hours for latex, and 24 hours for oil. Drying time will vary depending on the substrate, temperature and humidity.

25. For oil-base stain, clean brushes and equipment with mineral spirits, then rinse with clean water. For latex stain, clean brushes and equipment with soap and water.

IMPORTANT: Place rags, steel wool and waste immediately after use in a sealed, water-filled metal container.

PRODUCT SAFETY

Contents are COMBUSTIBLE. Keep away from heat and open flame.

Contains ALIPHATIC HYDROCARBONS.

VAPOR HARMFUL. 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 supply, or wear respiratory protection (NIOSH/ MSHATC23C or equivalent) 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 for 15 minutes and get medical attention. For skin contact, wash thoroughly with soap and water. In case of respiratory difficulty, provide fresh air and call physician.

If swallowed, get medical attention immediately.

**DELAYED EFFECTS FROM LONG-TERM
OCCUPATIONAL EXPOSURE.**

Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

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

**DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH
OF CHILDREN.**

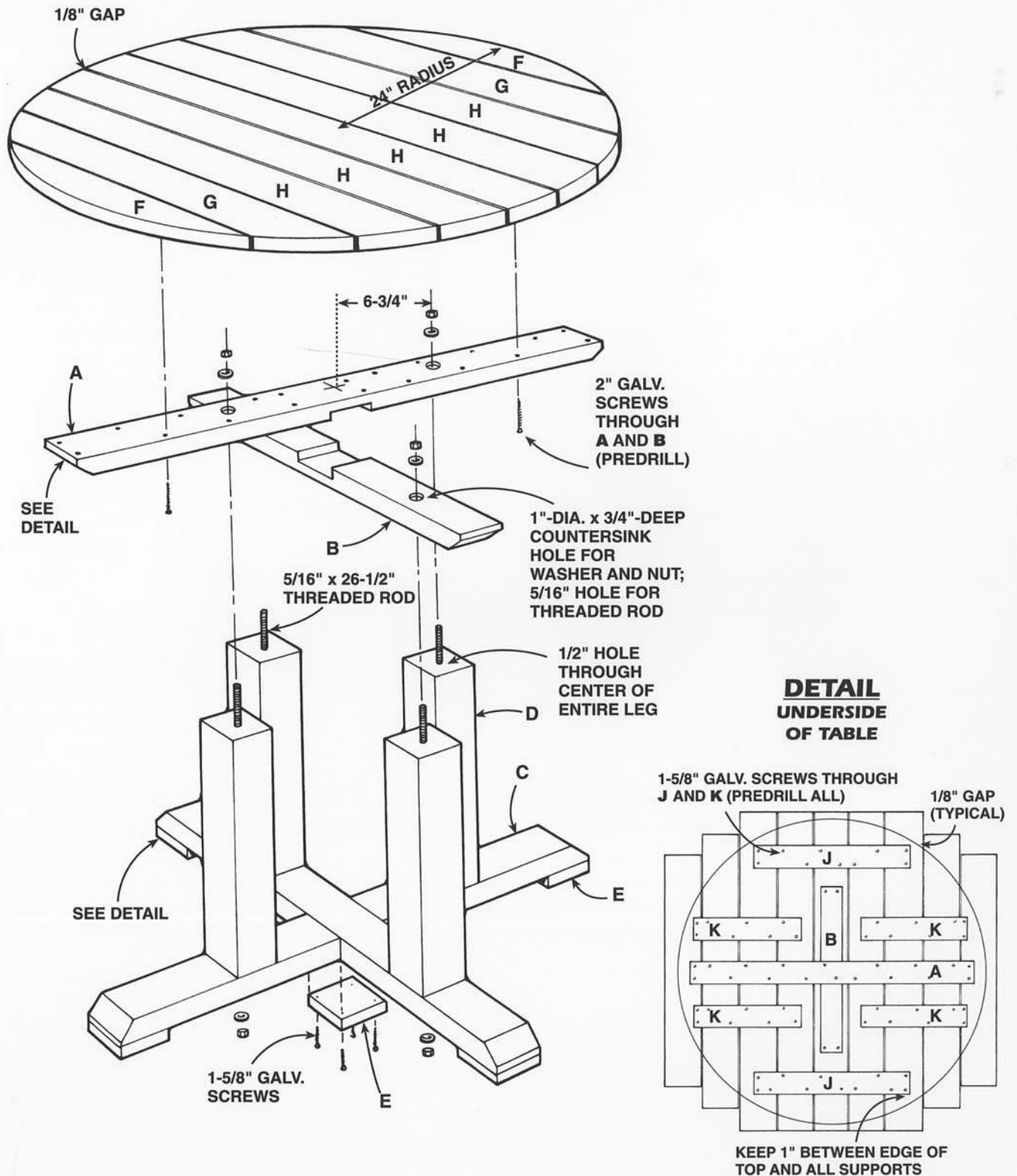
SAFE DISPOSAL OF RAGS AND WASTE.

Rags, steel wool or waste soaked in Thompson's® Water Seal® Tinted Wood Protector may spontaneously catch fire if improperly discarded. Immediately after use, place rags, steel wool or waste in sealed, water-filled metal container. Dispose of in accordance with local fire regulations.

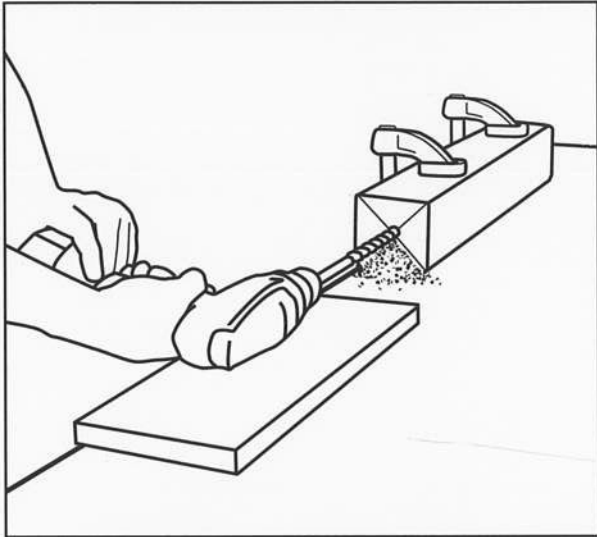
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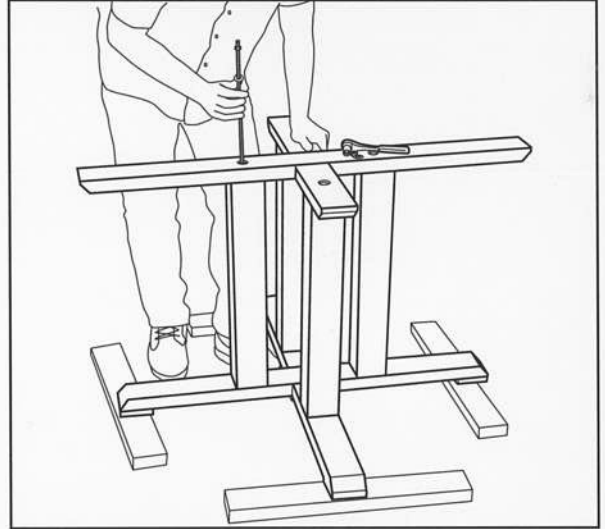
FIG A. PEDESTAL PICNIC TABLE



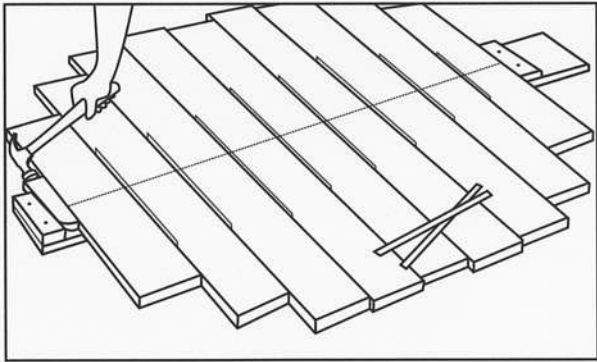
**FIG B. DRILLING THE CENTER
OF THE TABLE LEG**



**FIG C. ASSEMBLING THE
PEDESTAL**



**FIG D. CLAMPING JIG FOR
TABLETOP BOARDS**



**FIG E. LAYING OUT THE
TABLETOP CIRCLE**

