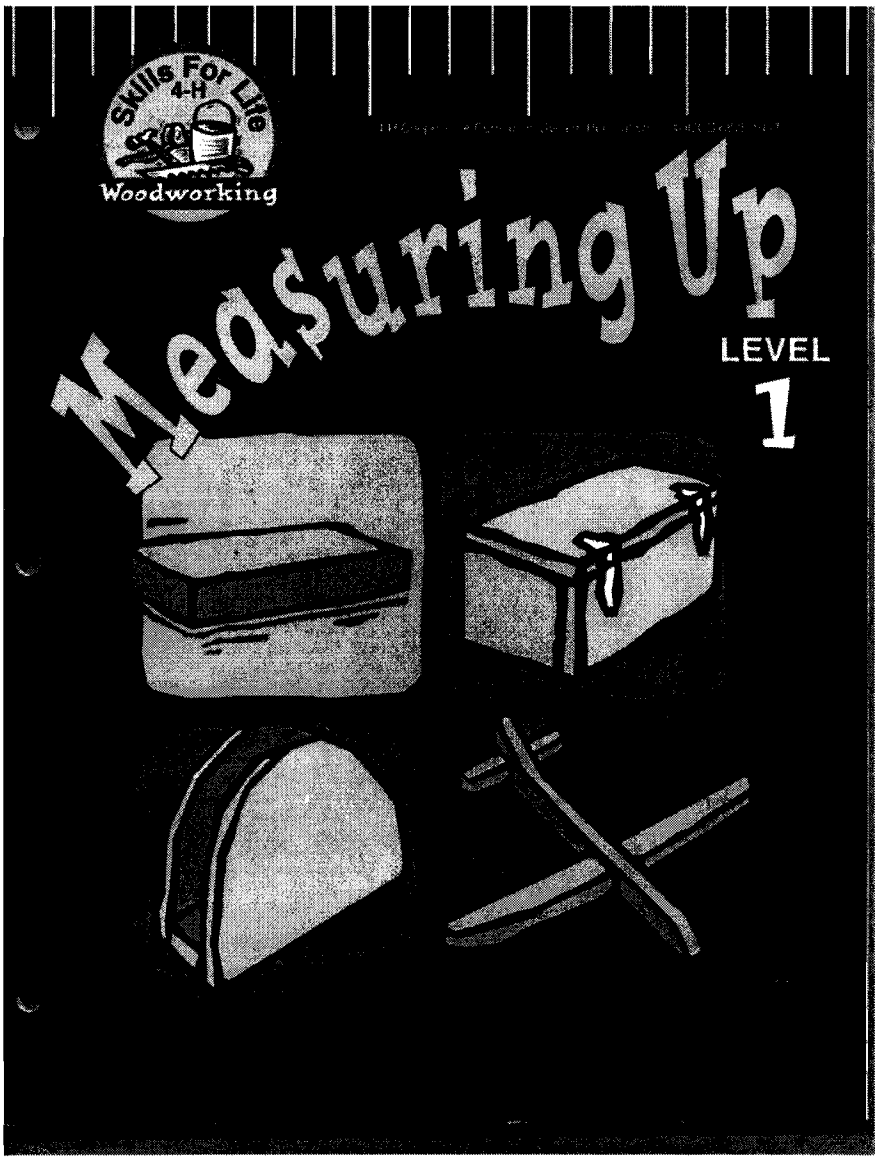
Woodworking Plans
Measuring Up
Level 1

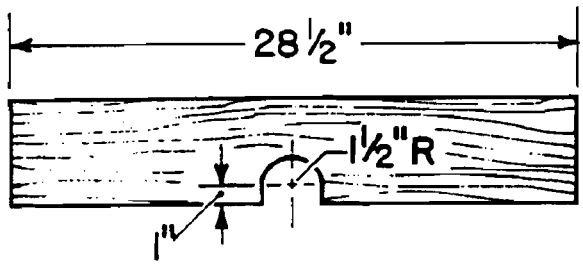


Purdue University, Indiana Counties and U.S.
Department of Agriculture Cooperating
An Affirmative Action/Equal Opportunity Institution

BOX HOCKEY

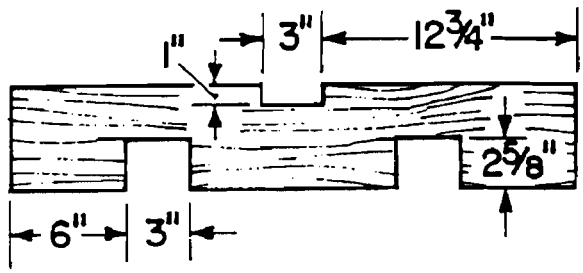
Materials Needed:

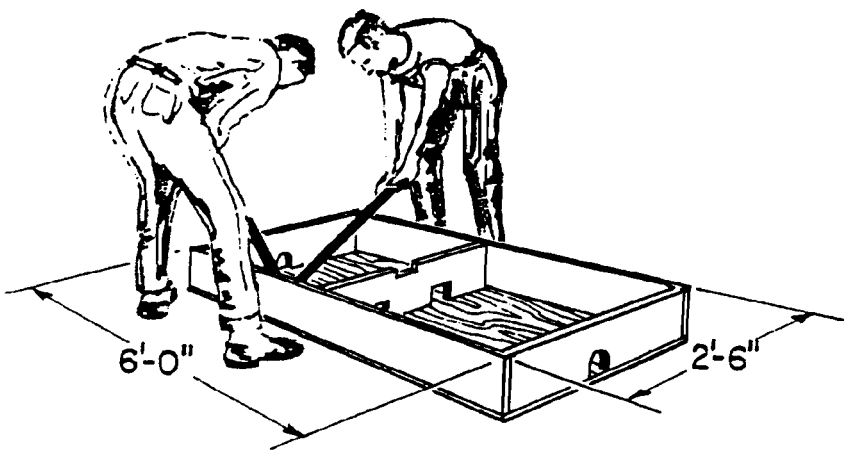
- 1 piece of 5/8" x 30" x 6 feet exterior-grade plywood for floor
- 1 piece lumber 2 x 6 (actual size 1 1/2" x 5 1/2") 8 feet long for ends and partition
- 2 pieces lumber 1 x 6 (actual size 3/4" x 5 1/2") 6 feet long for sides
- 2 pieces lumber 1 x 2 (actual size 3/4" x 1 1/2") 30" long for sticks
- 1 puck—1" thick, 2" diameter
- 12—No. 6, 1 1/4" flathead wood screws
- 36—1 1/2" finishing nails
- Sandpaper
- Paint or varnish



Tools Needed:

- Crosscut saw
- Coping saw
- Pencil compass
- Square
- Countersink
- Claw hammer
- Drill with 1/8" bit
- Paint brush





How to Play Box Hockey:

Players stand on opposite sides of box which is placed on the floor. Each player has a hockey stick and holds it at the end. The puck is placed in the notch in the center partition. To start the game, the players "shinny off." (i.e., They touch the bottom of the box and then each other's stick three times, counting 1-2-3 go.) The object of the game is to knock the puck out of the box through the end opening to the player's own left. When the puck goes through opening, the players start over. Best two out of three goals win.

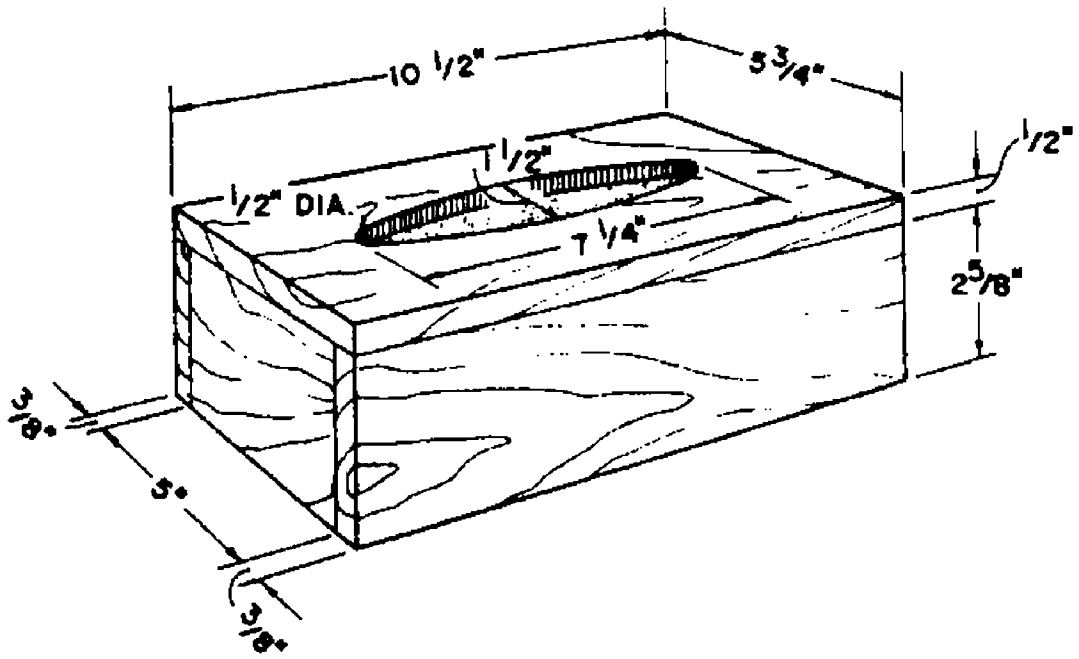
TISSUE DISPENSER

(Plan provided by Bill, Dan, and Bob Beaudreau of Fond du Lac County)

Use as a dispenser over a standard 200 count tissue box. Before building, measure the tissue box that will be used. The inside of the box should be at least 1/8" deeper, 1/4" wider, and 1/4" longer than the tissue box. The inside of this one is 2 5/8" deep, 5" wide, and 9 3/4" long.

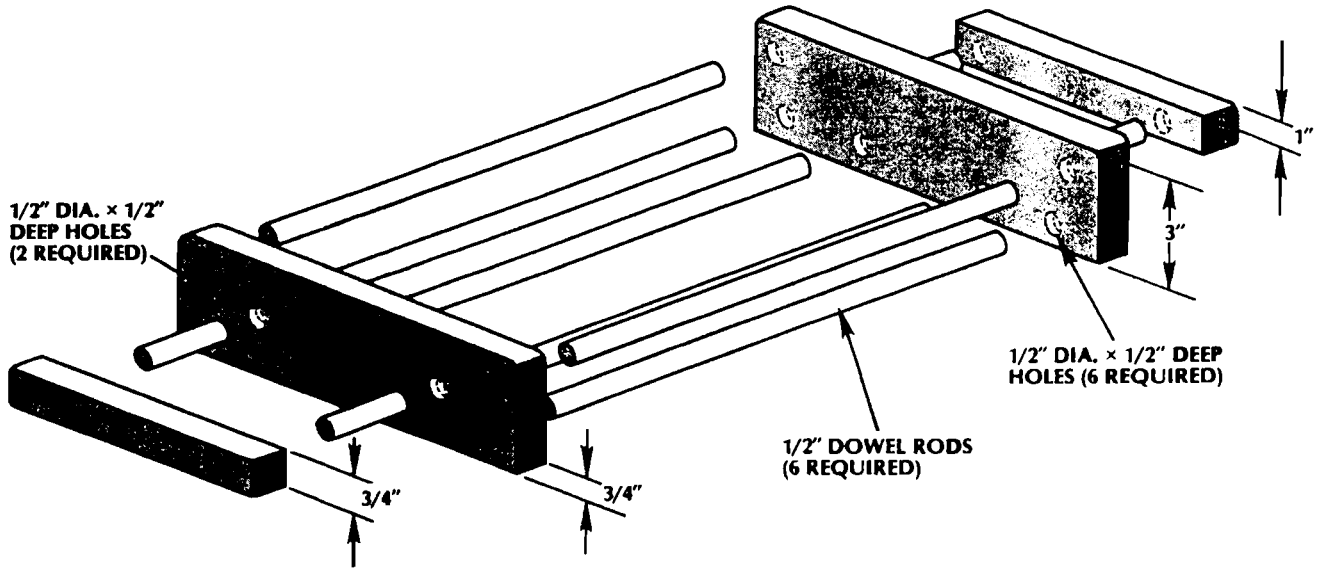
Materials Needed:

- 3/8" material to make:
  - 2 - 3/8" x 2 5/8" x 5" (actual dimensions) for ends
  - 2 - 3/8" x 2 5/8" x 10 1/2" (actual dimensions) for sides (inside dimension, plus 2 times thickness of end piece)
- 1/2" material to make top (3/8" will work)
  - 1 - 1/2" x 5 3/4" x 10 1/2" (actual dimensions) for top
- 3/4" wire brads
- Glue
- Finish materials



CASSEROLE HOLDERS

To make a casserole holder, use 3/4" hardwood stock for the ends and handles and 1/2" dowel rods for the rack. The ends are 3" high and should be 2" longer than the width of the baking dish. The handles measure 4" shorter than the ends and are 1" wide. On the inside of the ends, drill 1/2" diameter x 1/2" deep holes for six dowel rods (see diagram for approximate location). On the outisde of the end pieces, drill 1/2" dowel rod holes for the handles. Round off all edges on the ends and handles using a rasp and sandpaper. Cut the dowel rods to the length required and assemble the project with glue and clamps.

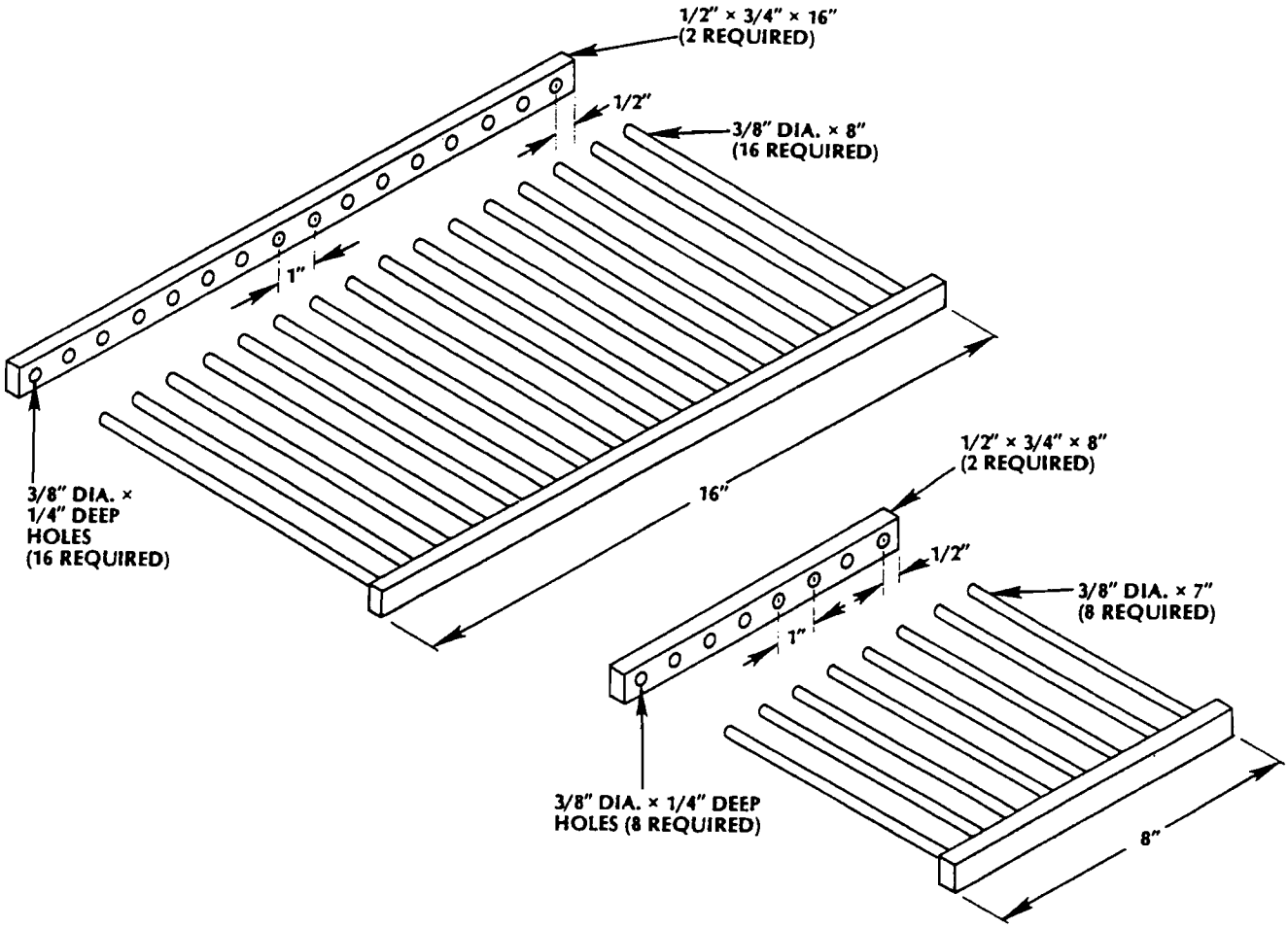


From *HANDS ON* Sept/Oct 83

COOLING RACKS

Here are some simple and beautiful cooling racks that you can make in the time it takes to bake a loaf or two.

Cut the sides to length using hardwood from your scrap pile. Drill the 3/8" diameter x 1/4" deep holes in the sides for the dowel rods. Sand the sides and round all the edges by sanding with sandpaper. Next, lightly sand dowel rods, then cut them to length using a hand saw. Assemble the rack with glue and clamp it with bar clamps. Apply a nontoxic finish or leave natural.



From *HANDS ON* Apr/May/June 83

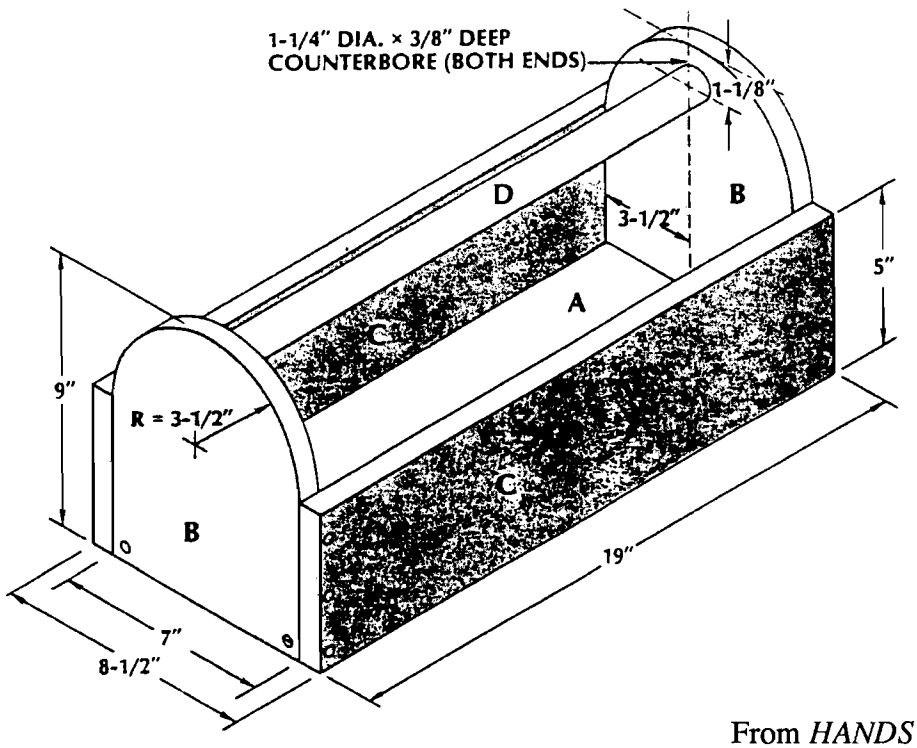
GARDEN TOOL BOX

Here's a handy carrier for your garden tools that's a cinch to put together. The toolbox is equally useful for the plumber, electrician, or mechanic in your home.

List of Materials:
(finished dimensions in inches)

A	Bottom	1/4 x 7 x 17-1/2
B	Ends (2)	3/4 x 7 x 9
C	Sides (2)	3/4 x 5 x 19
D	Handle	1-1/4 dia. x 18-1/4
	Flathead wood screws (22)	#9 x 1-1/2

1. Select your stock. Pressure-treated or a suitable outdoor wood such as redwood or cedar is best, but any scrap wood will do. The handle is standard 1-1/4" closet pole stock—or you can use part of an old broomstick.
2. Prepare the stock. Rip the bottom (A), ends (B), and sides (C) to width using a hand saw, then crosscut all pieces to length. Cut the contours on the ends (B) with a coping saw, and sand.
3. Drill the holes for the handle (D). Use a 1-1/4" Forstner bit to drill these 3/8" deep holes. Next, drill pilot holes for the assembly screws.
4. Assemble the toolbox with #9 x 1-1/2" flathead wood screws. Attach the ends (B) to the bottom (A) and insert the handle (D). Attach the sides (C). Round off all sharp edges with a rasp or sandpaper.



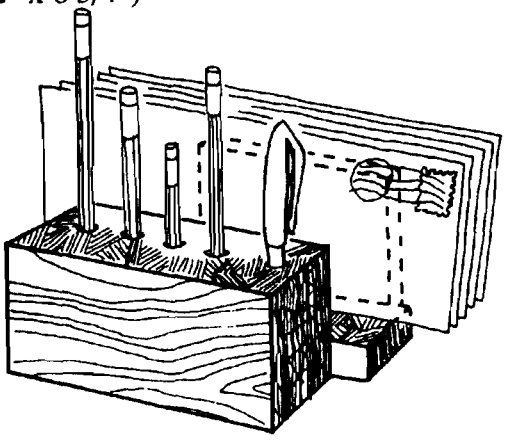
From *HANDS ON* June/July/Aug 84

LETTER & PENCIL HOLDER

Use to store pencils and mail.

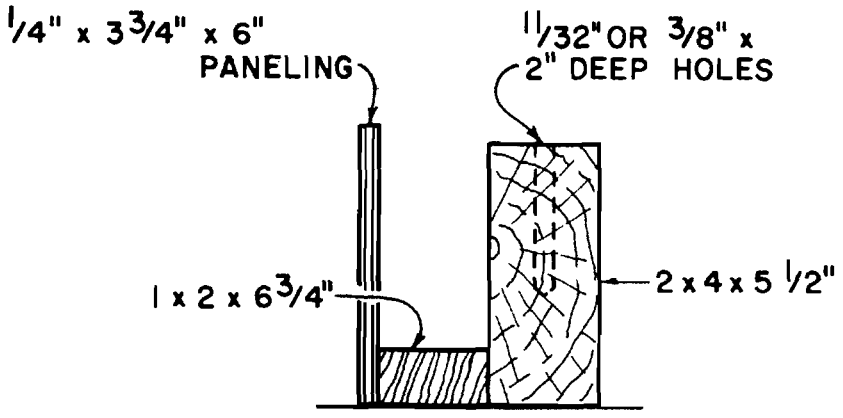
Materials Needed:

- 2 x 4 x 5 1/2" (actual dimensions about 1 1/2" x 3 1/2" x 5 1/2"). 5/4" material may be used as an alternate.
- 1 x 2 x 6 3/4" (actual dimensions about 3/4" x 1 1/2" x 6 3/4")
- 1/4" plywood or paneling 3 3/4" wide and 6" long
- 3 - 8 penny finishing nails
- 3/4" wire brads
- Glue
- Finish materials



Tools Needed:

- Pencil
- Saw
- Square
- Hammer
- Bit brace (or electric drill) with 11/32" or 3/8" bit
- Hand drill (or electric drill) and headless 8 penny finishing nail (or drill bit of that size)
- Nail set



END VIEW

Hints:

- Mark centers of pencil holes on 2 x 45, 7/8" apart.
- Attach the 1 x 2 to the 2 x 4 with two finishing nails and glue. (Drill pilot holes for nails.)
- Attach the paneling or plywood to the 1 x 2 with 3/4" wire brads and glue.

TURTLE PUZZLE

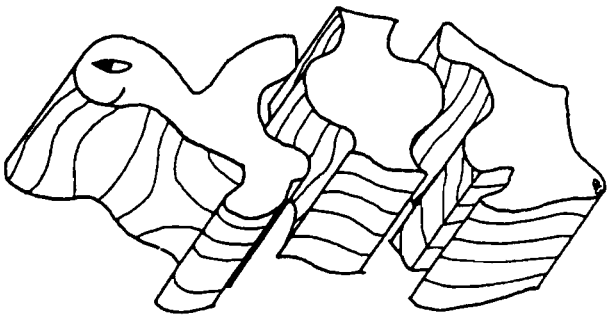
Can be used as a toy and puzzle for youngsters ranging in age from 3 to 6 years.

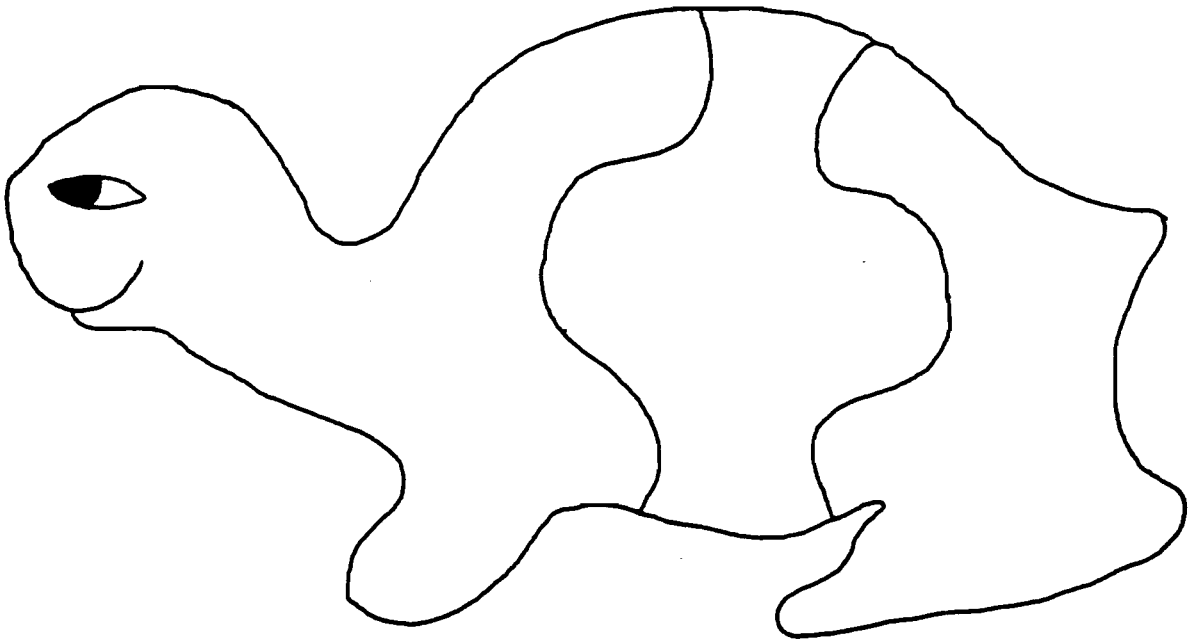
Materials Needed:

- A piece of 5/4 or 2 x 4 material about 7" long. The 5/4 material is about 1 1/16" thick and the 2 x 4 is about 1 1/2" thick.
- Finish materials you select.

Tools Needed:

- Pencil and carbon paper
- Coping saw with coarse teeth
- Sandpaper (80 grit for rough surfaces and 120 grit for smooth surfaces)





THE SHIFTING PYRAMID GAME

Materials Needed:

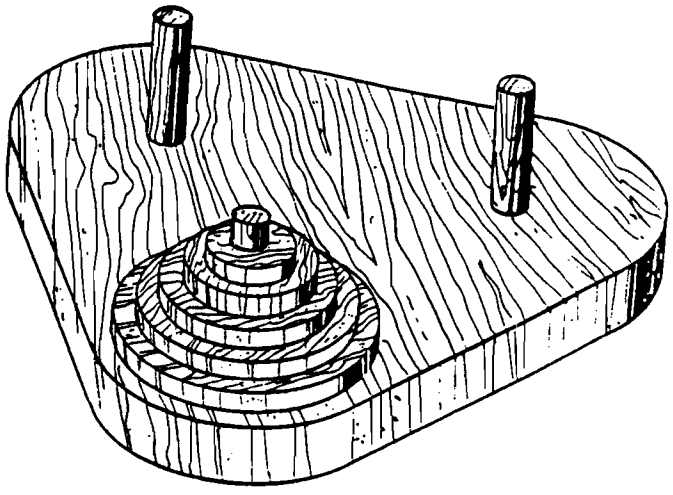
- 1 piece of 3/4" x 8" x 8" A-D or better plywood, or use a piece of lumber 1 x 10 (actual size 3/4" x 9 1/4") 8" long (base)
- 1 piece of 1/4" x 6" x 6" A-D or better plywood, or use a piece of lumber 1 x 8 (actual size 3/4" x 7 1/4") 6" long (game pieces)
- 1 piece of 1/4" dowel stock, 12" long (pegs)
- Glue
- Sandpaper (medium and fine grit)
- Finishing material (optional)

Tools Needed:

- Coping saw
- Boring tool with 1/4" and 3/8" bits

Instructions:

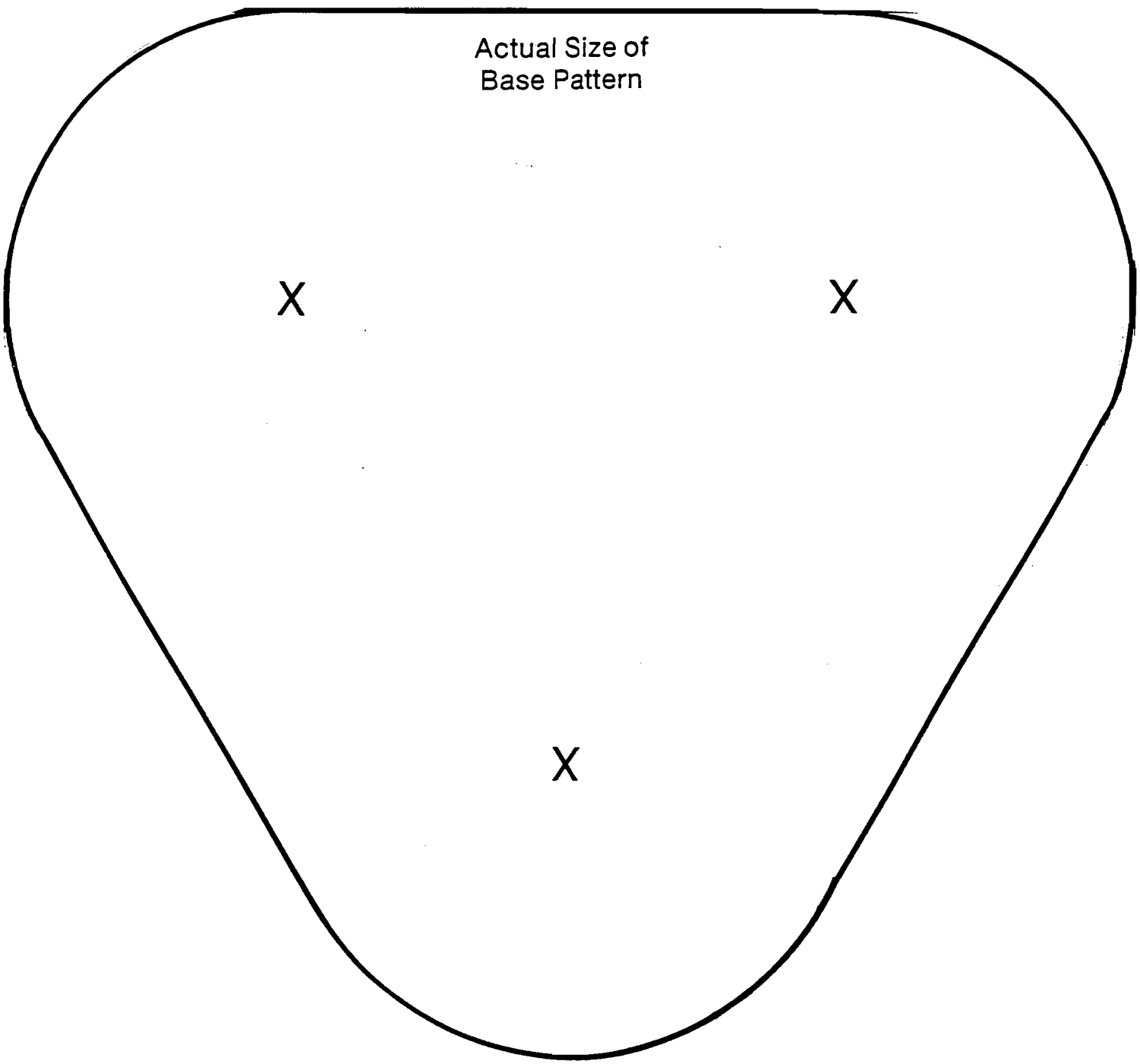
1. Trace the pattern for the base using carbon paper between your piece of wood and the pattern. Use the pattern on the next page.
   NOTE: If your saw cuts on the pull stroke trace your pattern on the back side of your wood piece so that the front face of the piece does not get damaged during cutting.
2. Cut out the base using a saw.
3. Mark and drill 1/4" peg hoes, 1/2" deep in the base at the locations marked with an X.
4. Sand the surfaces and edges of the base.
5. Cut three pieces of the 1/4" dowel stock, 3" in length.
6. Sand the dowel pegs rounding the top ends.
7. Apply glue to the sides of the holes with a small stick, then place the pegs in the holes.
8. Mark and cut the five movable pieces from the 1/4" plywood. Dimensions of the pieces are (3" x 3") (2 1/2" x 2 1/2") (2" x 2") (1 1/2" x 1 1/2") and (1" x 1"). These pieces can be cut round or square.
9. Mark the centers of each individual piece and drill a 3/8" hole completely through the piece.
10. Sand each piece and finish with a material of your choice. Painting the pieces different colors adds eye appeal.



How to Play:

Place five pieces on one peg in pyramid formation. The object is to shift the entire pyramid (5 pieces) to another peg moving one piece at a time and at no time having a larger piece above a smaller one. Can you do it in 31 move—that's perfect?

To make the puzzle more challenging use seven blocks instead of five.



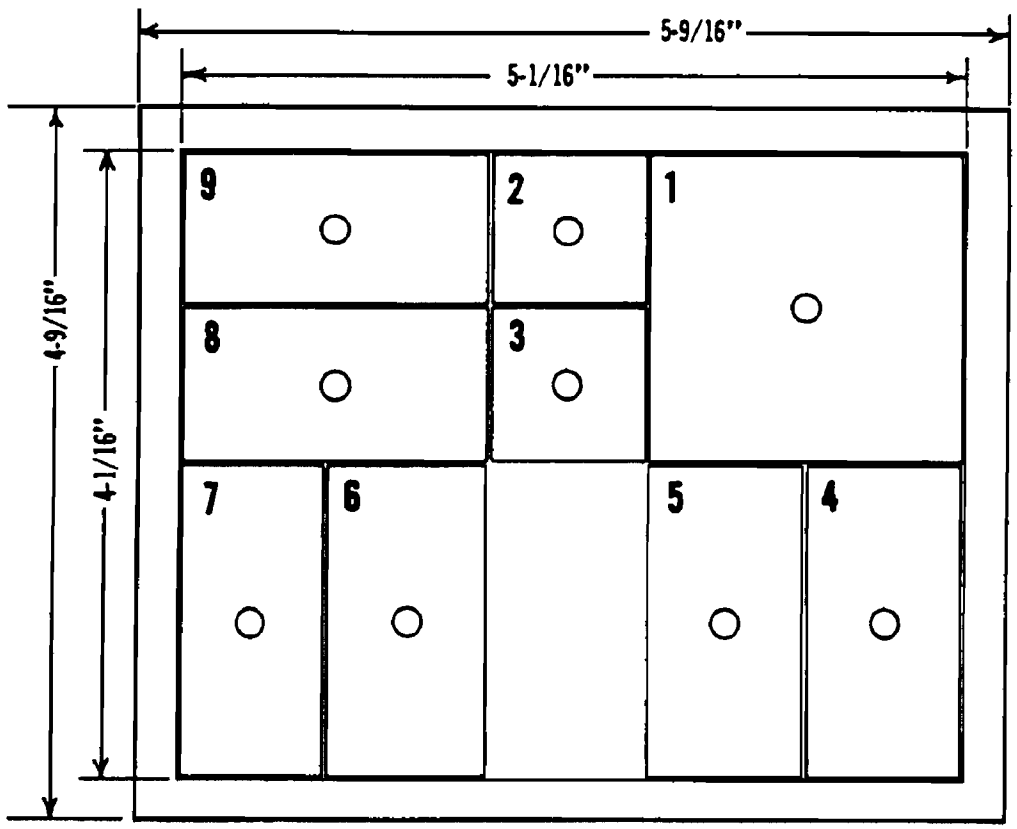
NINE BLOCK PUZZLE

Construct shallow box in proportion of 4 inches by 5 inches inside measurements with 1/4 inch trim around the edges. Entire puzzle may be built from 1/4 inch plywood. The model shown is: (1) 2 inches by 2 inches, (2-3) 1 inch by 1 inch, (4-5-6-7-8-9) 1 inch by 2 inches. An extra 1/16 inch is allowed on inside base for ease of moving blocks. Overall size is 4 9/16 inches by 5 9/16 inches with 1/4 inch trim.

Countersink holes in blocks at dots for easy moving.

Puzzle: Move large block (1) from upper right corner to position of (8) and (9).

Key to solution: Small blocks move around the board in clockwise fashion. Do not get the large block in either of the lower corners.



LETTER HOLDER

Materials Needed:

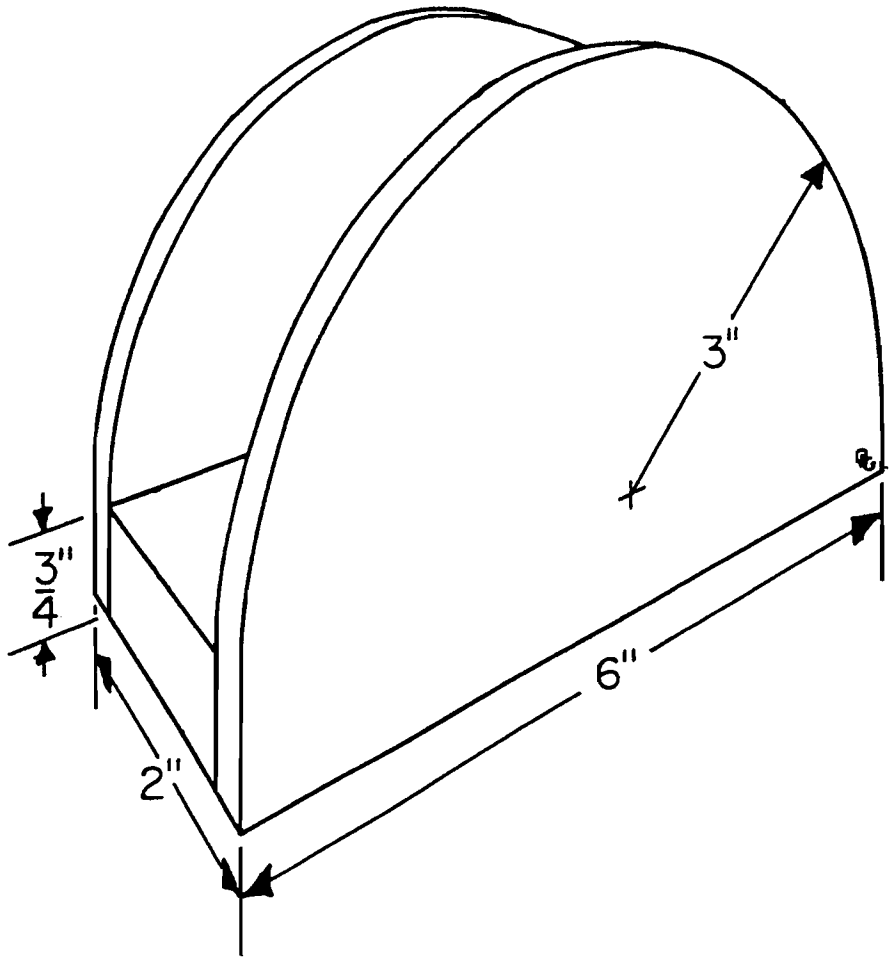
- One piece of 1 x 2 (actual dimensions approximately 3/4" x 1 1/2") 6" long
- Enough plywood or paneling to cut 2 pieces each 4" x 6"
- Eight - 1" wire brads
- Glue
- Finish materials

Tools Needed:

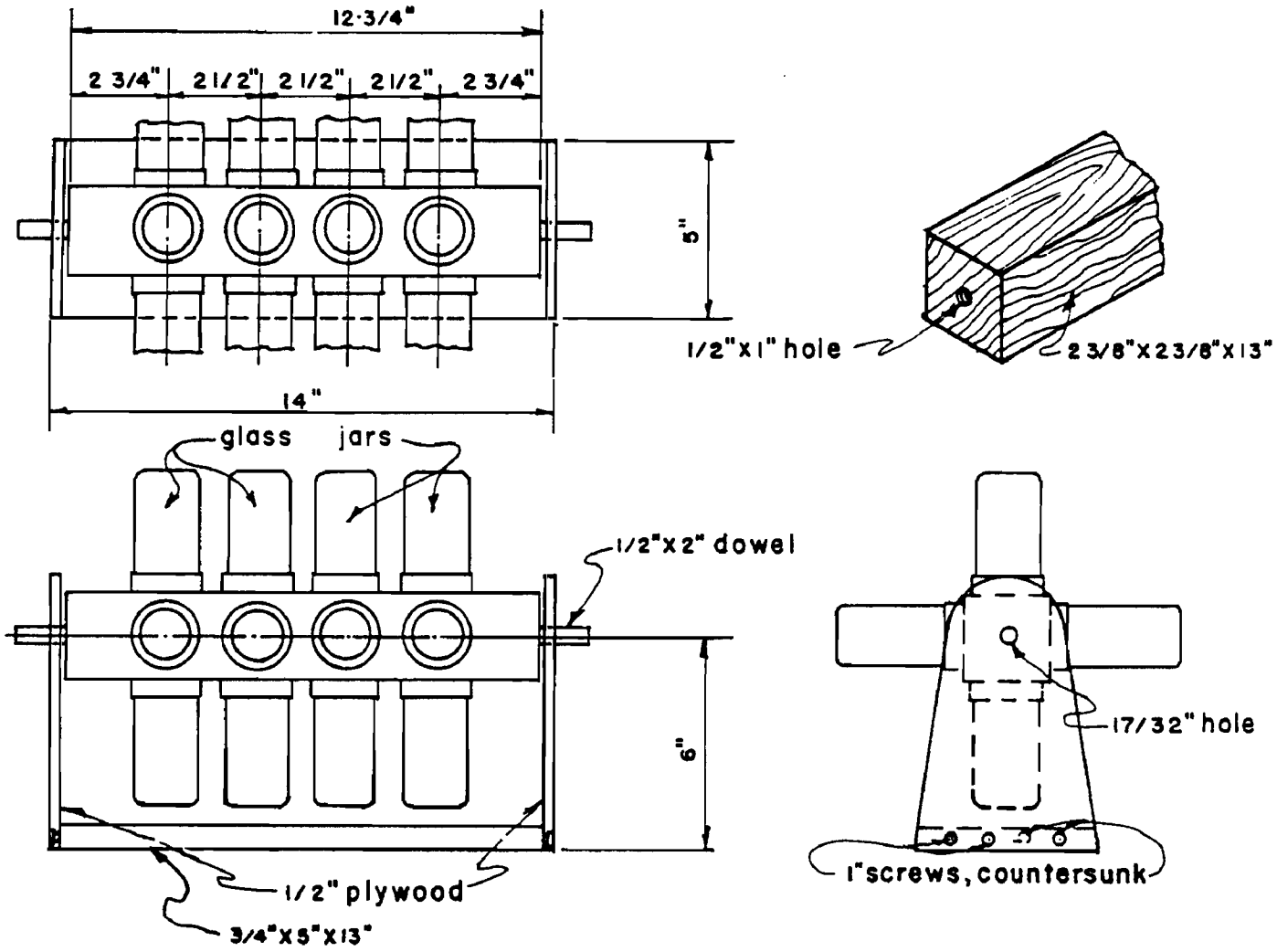
- Square
- Pencil
- A saw for square-cuts
- A coping saw for curve cuts
- Pencil compass
- Hammer
- Nail set
- Sandpaper (80 grit for rough wood and 120 grit for smooth wood)

Instructions:

1. Cut the center piece of the 6" length.
2. Mark the cutout lines for the side pieces. Remember, most plywood and paneling has one side better than the other side. Arrange your pieces so the best side of the plywood will be the outside of both the front and back piece. You may want to clamp both pieces together and cut both at the same time. *Other Ideas:* Add designs or decals to the side pieces. Use different material. Change the shape. Make it larger for a napkin holder.



NAIL AND SCREW HOLDER



NOTE: Screw the jar lids onto the block on all four sides.

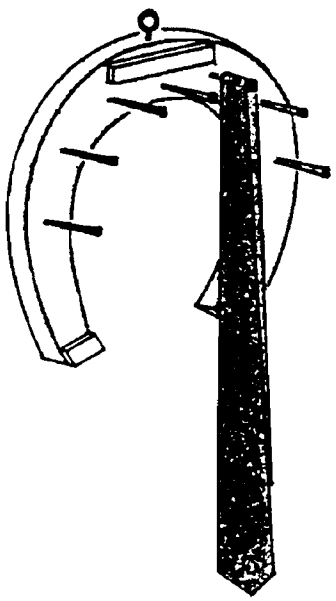
HORSESHOE TIE RACK

Materials Needed:

- One piece of lumber or plywood 6" x 6" about 3/4" thick
- One piece of wood 1/8" x 3/8" x 4"
- Seven 2" horseshoe or cut iron nails
- One small screw eye
- 1/2" wire brads
- Interior finish materials

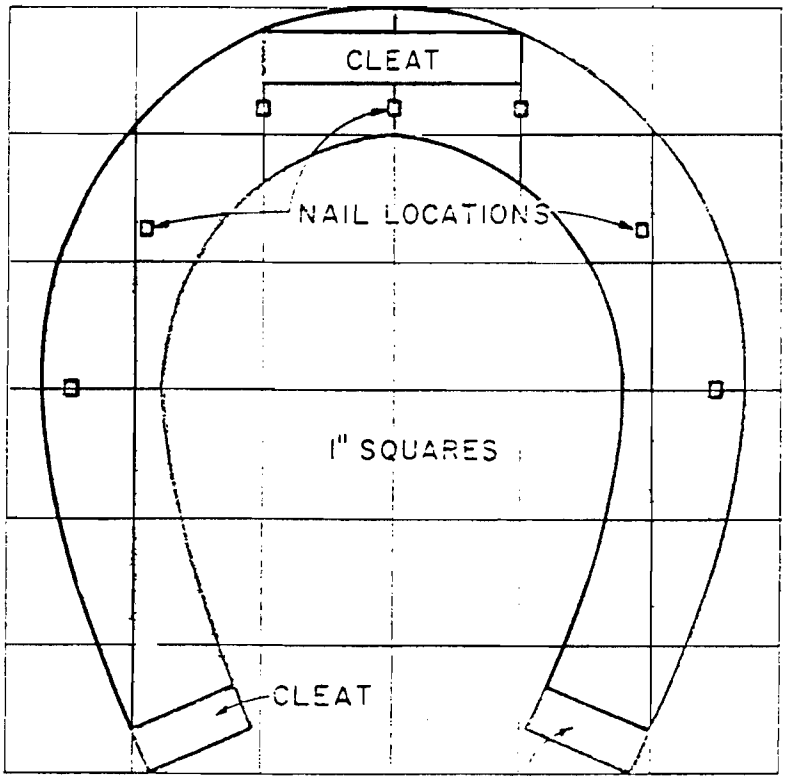
Tools needed:

- Pencil
- Saw
- Drill
- Sandpaper
- Hammer
- Brush



Instructions:

1. Cut out the horseshoe and cleats.
2. Attach the cleats with glue and wire brads.
3. Drill pilot holes for the horseshoe or cut iron nails.
4. Sandpaper smooth.
5. Apply finish.
6. Drive in nails to equal height.



3/8" FIBERBOARD
OR WOOD CLEAT

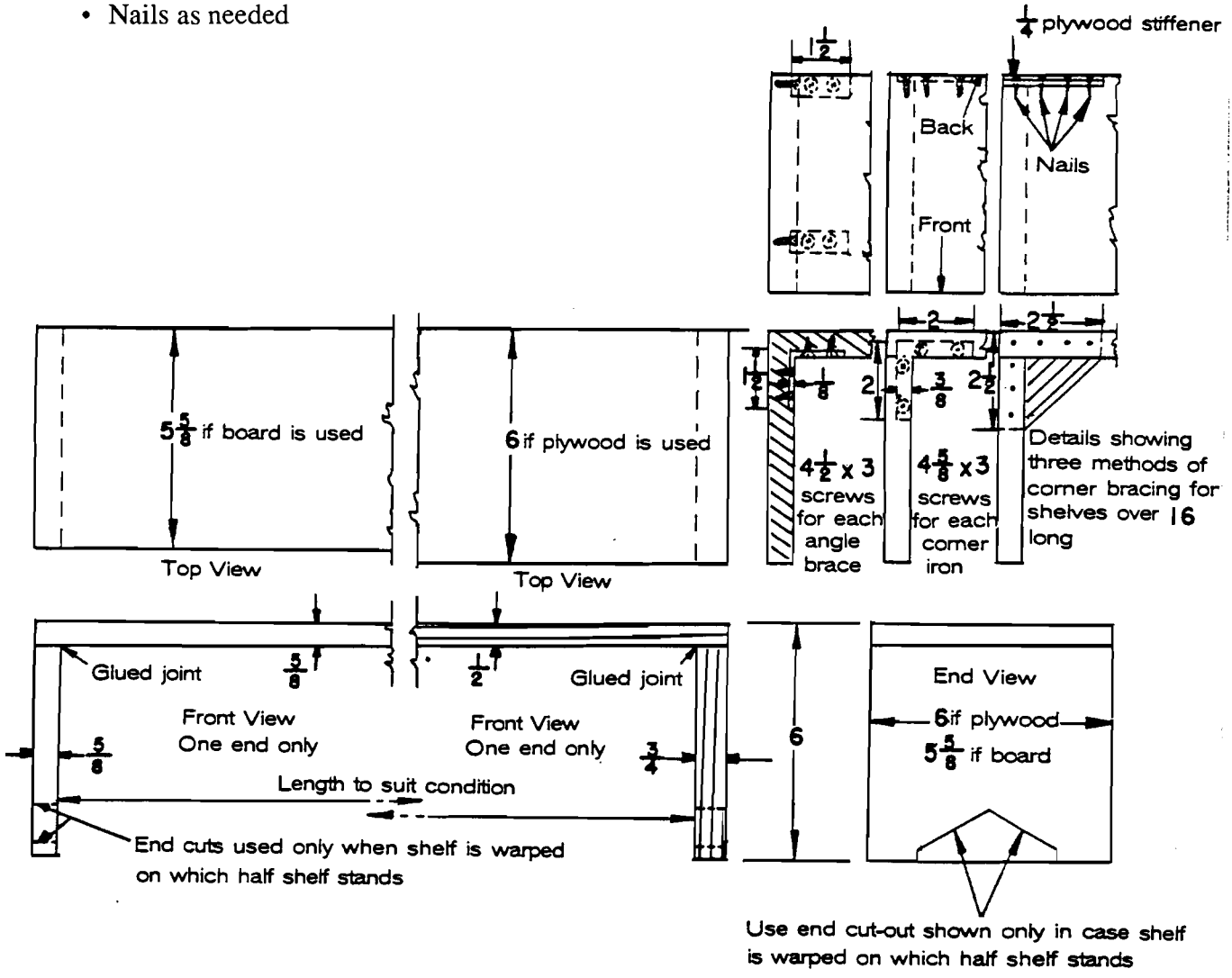
HALF SHELF

Materials Needed:

- 1—1 inch by 6 inches in length to suit conditions
  Use 1/2 inch plywood with 3/4 inch uprights if paint or enamel is finishing material.

Hardware Needed:

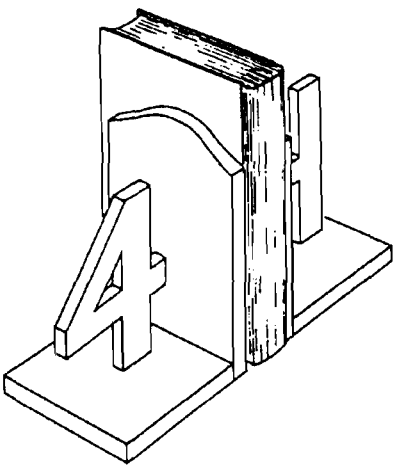
- Short shelves do not need corner bracing
- Corner braces are needed if shelves are over 16 inches
- Glue for all joints
- Nails as needed



4-H BOOK ENDS

Materials Needed:

- 1 piece of 1 x 6 lumber (actual size 3/4" x 5 1/2") and 36" long or you can use interior type plywood (3/4" A-C grade or better)
- 10—1 1/2" finishing nails
- Sandpaper (medium and fine grit)
- Glue
- Paint and varnish, optional

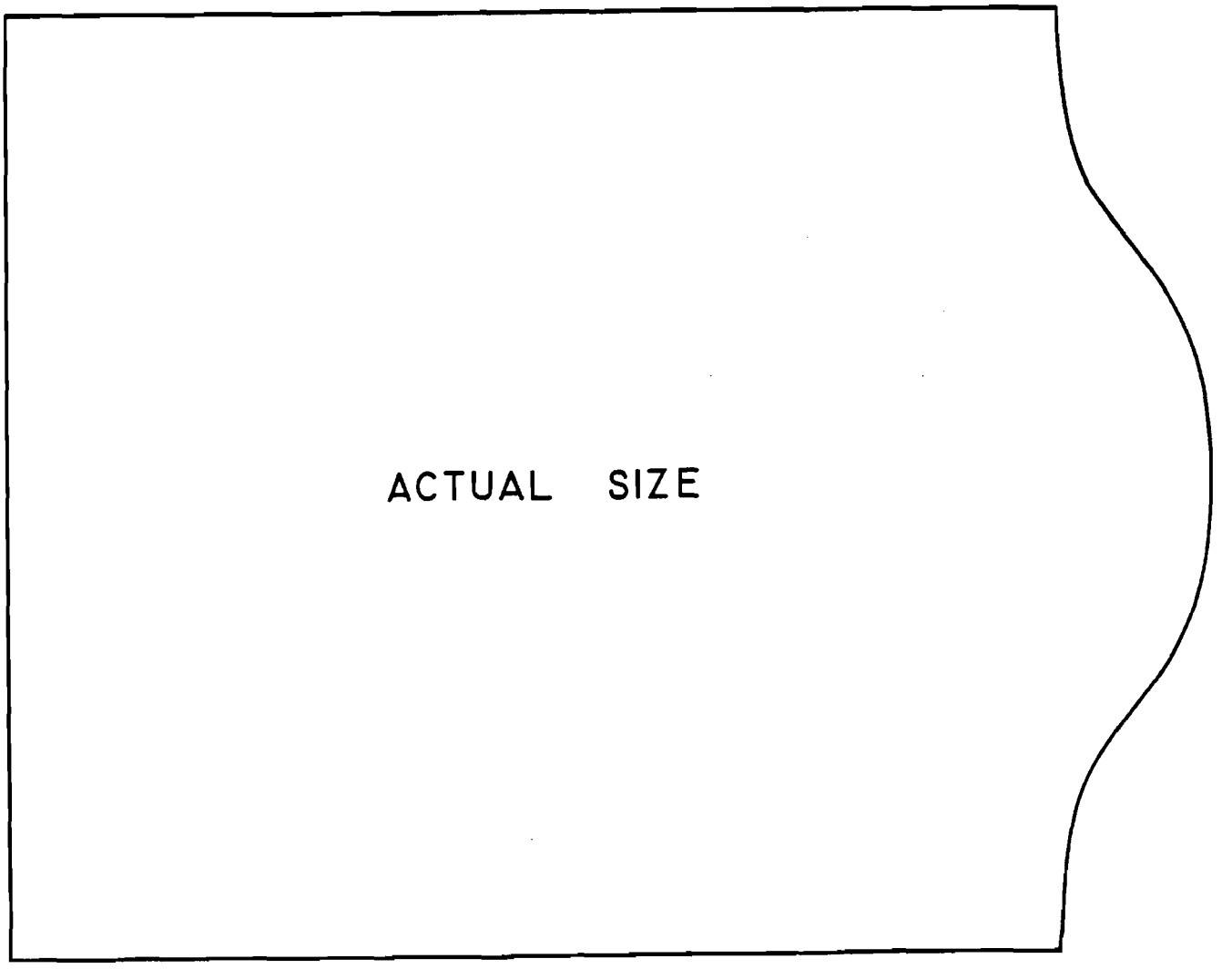


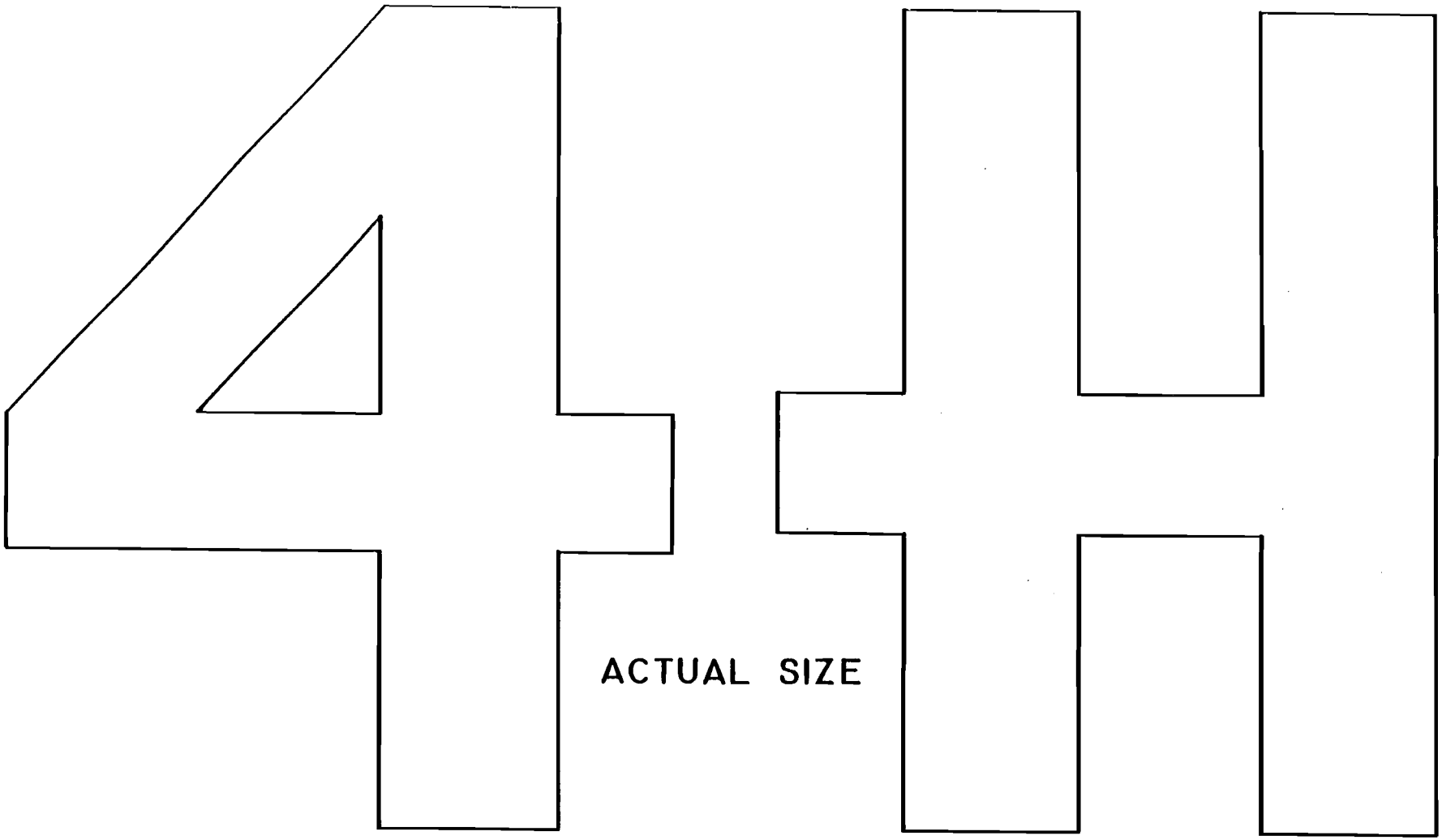
Tools Needed:

- Coping saw
- Hammer

Instructions:

1. Mark out two base pieces 5 1/4" long. Mark out the end pieces and the 4 and H. They can be traced with carbon paper and pencil.
2. Cut out the pieces and sandpaper smooth. Put together with 1 1/2" finishing nails and glue.
3. Apply finish.



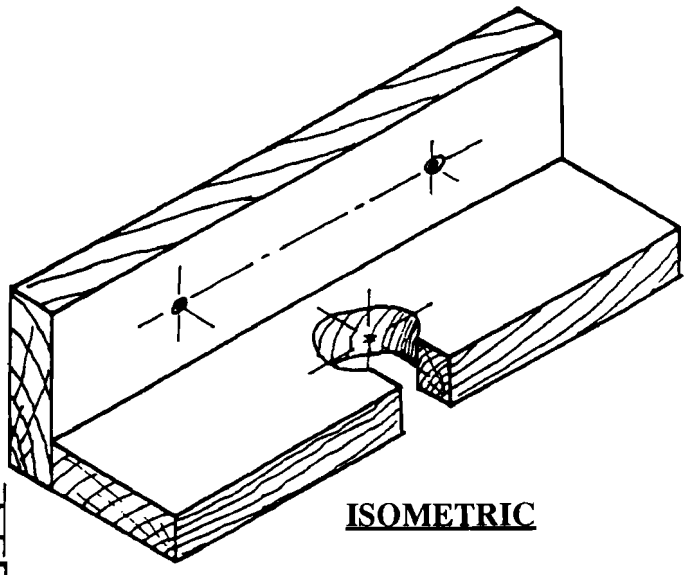


ACTUAL SIZE

BROOM HOLDER

Materials Needed:

- 2 pieces of lumber 1" x 4" x 10"
- 4—#5 flathead wood screws 1 1/4" long
- Enamel or varnish finish



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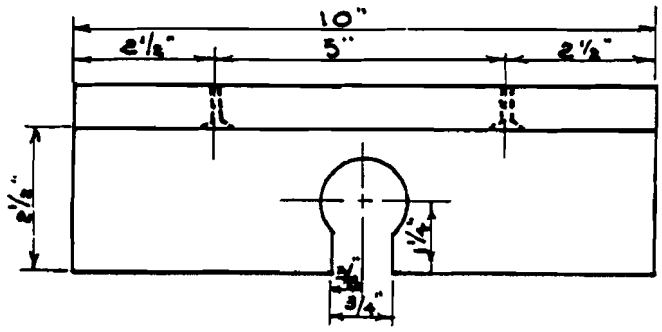
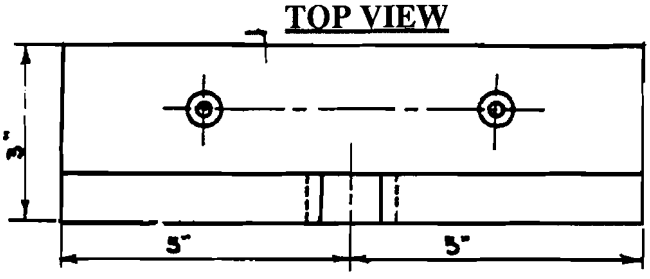
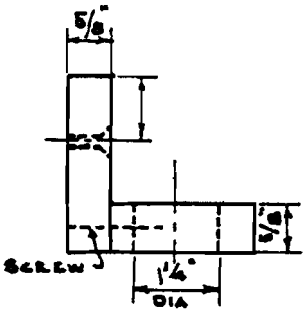


TOP VIEW



FRONT VIEW



END VIEW

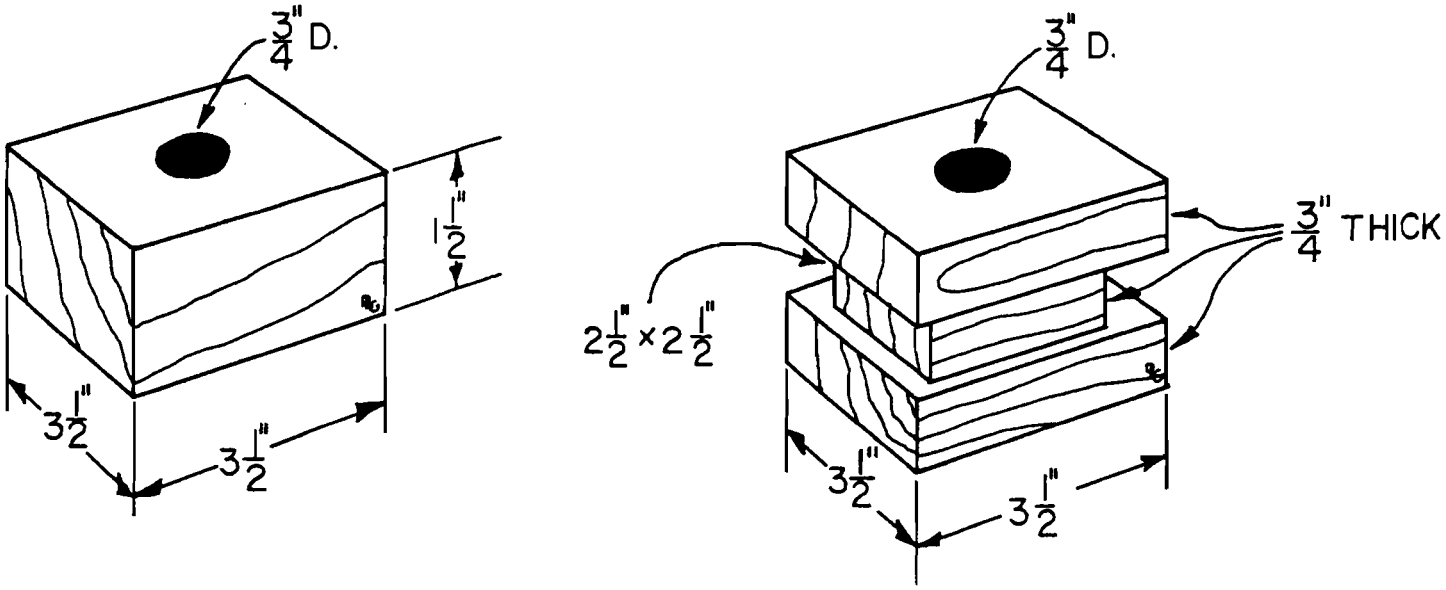
CANDLE HOLDERS

Materials Needed:

- 2 x 4 material for the single block 1 1/2" thick. Actual dimensions of the 2 x 4 is about 1 1/2" x 3 1/2".
- 1 x 4 material (actual dimensions about 3/4" x 3 1/2" for the multippiece unit)
- 1" wire brads and glue for the multi-piece unit
- Finish materials you select

Tools Needed:

- Square
- Pencil
- Saw
- Drill for 3/4" hole
- Sandpaper (80 grit for rough surfaces and 120 grit for smooth surfaces)



COPING SAW PUZZLE

Materials Needed:

- A piece of 1/4" plywood or paneling or 1/4" medium density hardboard about 6" x 8"
- One plastic or paper bag or large envelope to hold the completed puzzle

Tools Needed:

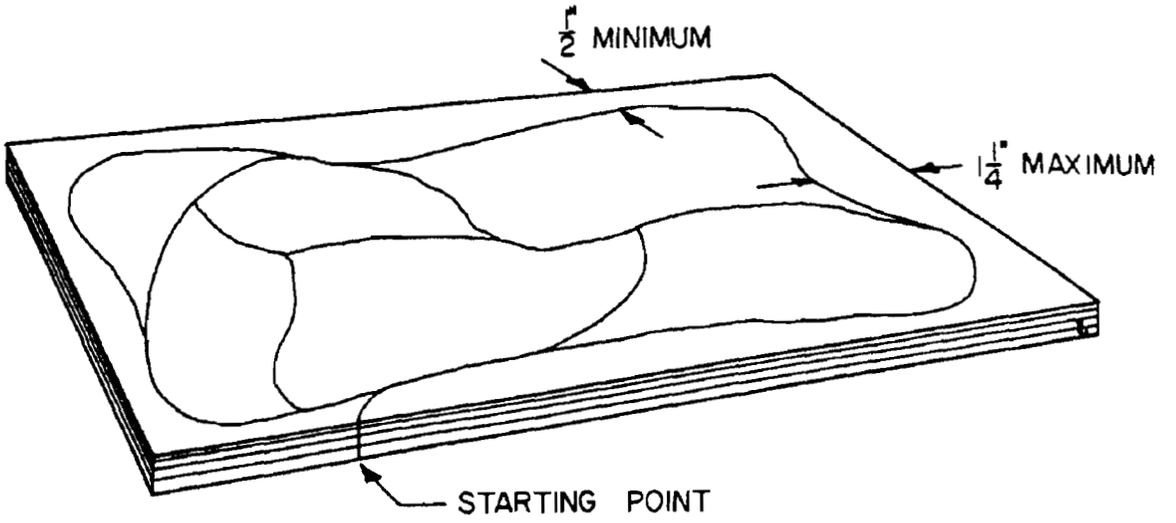
- Square
- Pencil
- Saw for square cuts
- A coping saw for curved cuts

Instructions:

1. Draw a wavy line around the piece near the edge. Keep the line at least 1 1/4" from the edge.
2. Cut along this line to cut out the center piece.
3. Draw more wavy lines on the center piece for the puzzle.
4. Cut along these lines to make your puzzle. Put each piece in the paper bag or envelope. Do not lose any of the puzzle.

Other Ideas:

- Use your imagination. Glue or cement a picture or drawing on the work-piece before cutting it.
- Cut a second board to the exact same size as the first board. Cut the outer piece of the puzzle from the first board and attach to the second board.



CUTTING BOARD

Materials Needed:

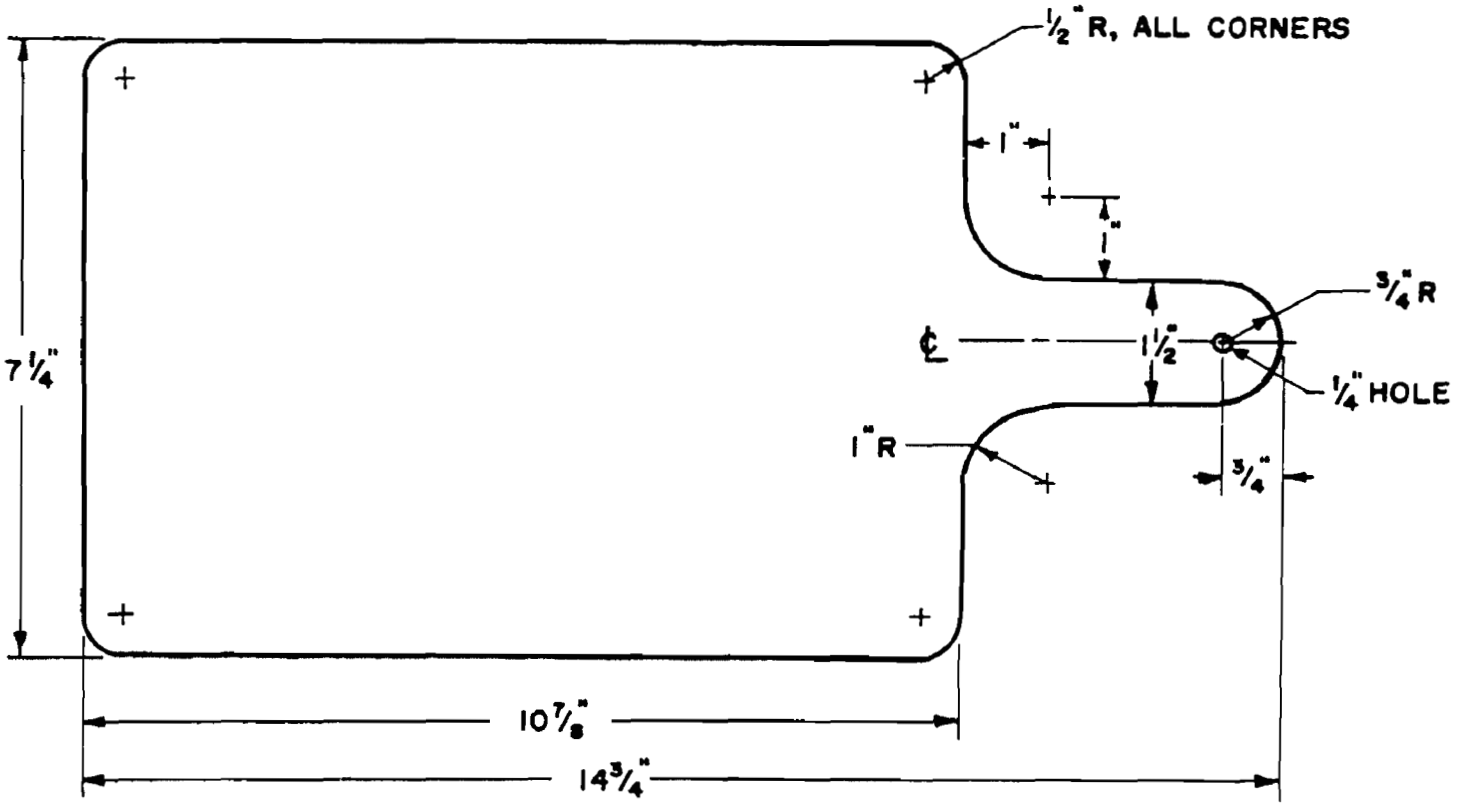
- 1 piece of 1 x 8 hadwood (actual size 3/4" x 7 1/4") 15" long
- Sandpaper (medium and fine grit)
- Varnish

Tools Needed:

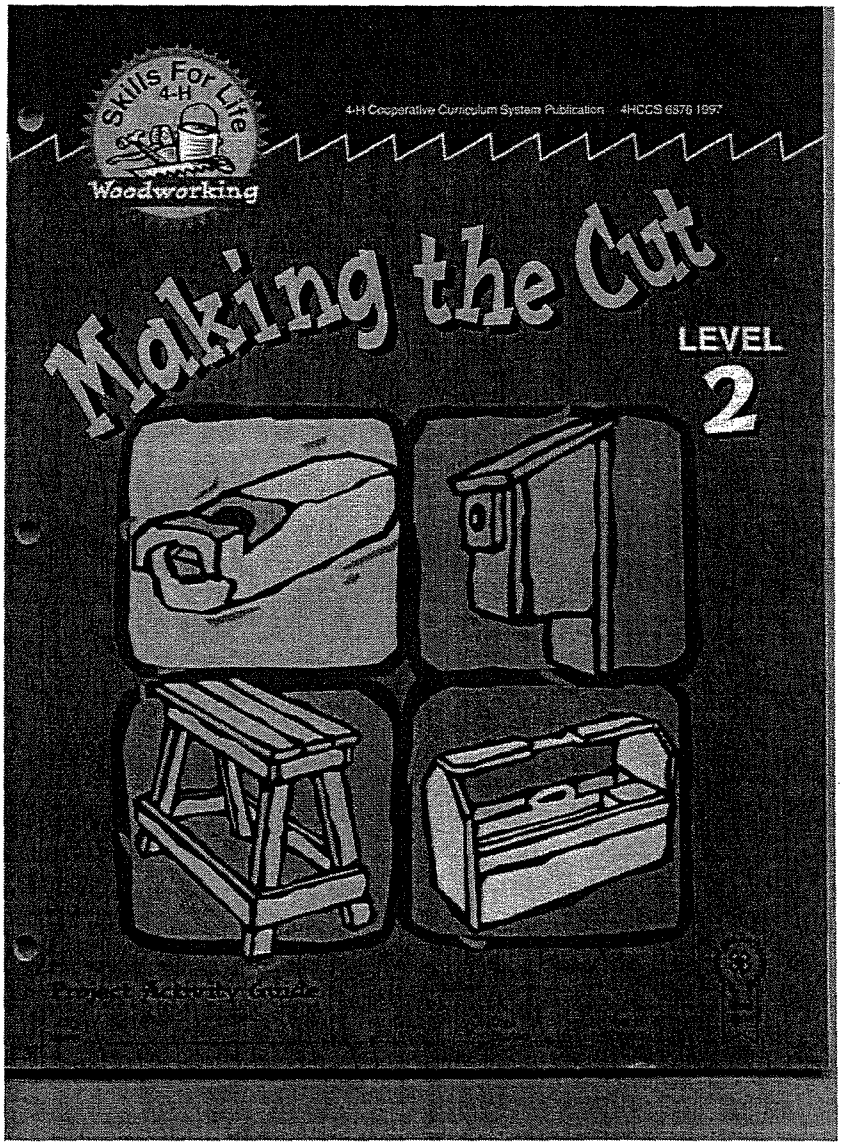
- Pencil compass
- Square
- Coping saw
- Boring tool with 1/4" bit

Instructions:

1. Using the pencil compass, lay out curves and hole in handle on your wood piece. Use the square to make straight lines on the sides and end.
2. Cut out the curves and drill hole.
3. Sand both sides.
4. Finish with two or three coats of varnish, one side only. This process is optional.
   Note: After each coat of varnish, lightly sand before applying the next coat of varnish.



Woodworking Plans
Making the Cut
Level 2



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CUTTING BOARD

The wood used to form the cutting board is cut into pairs. Thus you start with one center piece for the handle and glue each matching pair on both sides of the center piece. This results in a symmetrical pattern that balances the cutting board visually.

Materials Needed:
(Finished dimensions in inches)

A	Slat	3/4 x 3/4 x 9 hardwood	4
B	Slat	1/2 x 3/4 x 9 hardwood	4
C	Slat	1/4 x 3/4 x 9 hardwood	6
D	Slat	3/4 x 2 x 13 1/4 hardwood	1

Use the faced wood surface as the area to edge-glue. This forms a straight glue joint. Cut the strips to 3/4 inch width (cutting board thickness). Place the strips on edge and glue. If you cut the strips to correct cutting board thickness, these surfaces will be difficult to finish because they are so small.

Make an overall cutting board pattern out of paper or cardboard and lay and arrange the cut strips onto the pattern. When the arrangement suits you, prepare the workpieces for gluing.

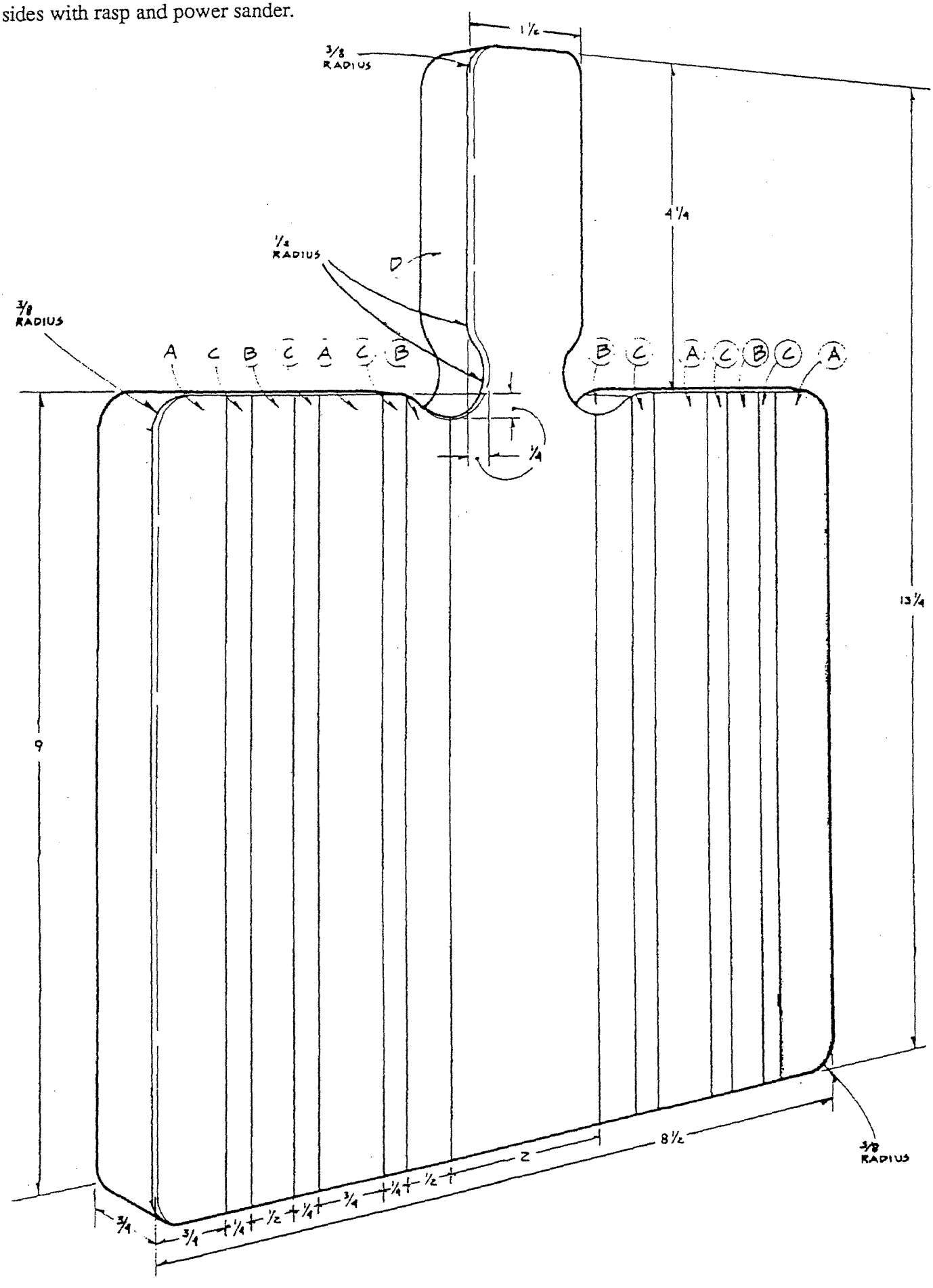
Place wax paper on a flat surface where you are to glue the cutting board. Carefully keep all workpieces in their correct order. Then brush on a *thin* coat of carpenter's glue to one mating surface. Join and rub each workpiece firmly as you proceed through the gluing process. Secure the assembly with bar clamps and with one cross beam placed across the assembly's middle. Place wax paper under the cross beam. Clamp this beam to prevent the strips from sliding up as you apply side clamping pressure. Do not apply too much clamping pressure. Make sure the strips sit flat on the work surface. Then allow the assembly to dry for 24 hours.

Once the glue has cured remove the glue that has squeezed up with an old wood chisel. This makes it easier to finish the wood surfaces. Use a belt sander to finish the board's surfaces. Then transfer the pattern's design to the assembly. Drill the two radii at the handle's base with a Forstner bit, positioned in a drill press or drill guide.

Next, cut the board's perimeter with a band saw, using a 1/4 in. or 3/8 in. blade. Carefully round the corner radii and sand all edges with an abrasive sander. Finally, with a rasp and power sander, round the edges.

Fine sand the cutting board and apply several coats of vegetable oil or some of the cutting board oils available at fine cutlery shops.

Round over all outside edges on both sides with rasp and power sander.



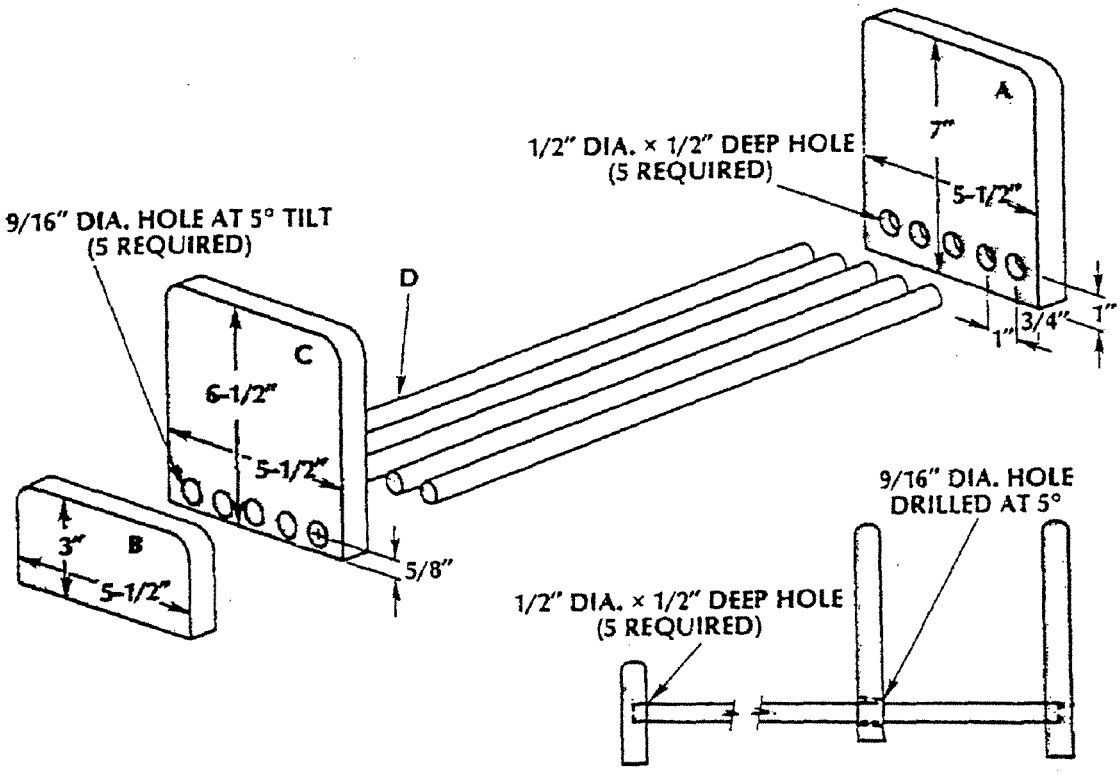
ADJUSTABLE BOOK RACK

Materials Needed:
(finished dimensions in inches)

A	Large end	3/4 x 5-1/2 x 7
B	Small end	3/4 x 5-1/2 x 3
C	Adjustable end	3/4 x 5-1/2 x 6-1/2
D	Dowels (5)	1/2 dia. x 18

Instructions:

1. Cut all the stock to size according to the list of materials.
2. Drill the 1/2" diameter x 1/2" deep holes in the ends (A, B).
3. Using a T-bevel and drill, drill the 9/16" through-holes in the adjustable end at a 5° angle.
4. Round over the edges using a rasp and sandpaper.
5. Sand all the parts. Do not sand the ends of the dowels (D).
6. Assemble with glue and clamp securely. Be careful not to get any glue on part (C).
7. Apply the finish of your choice.

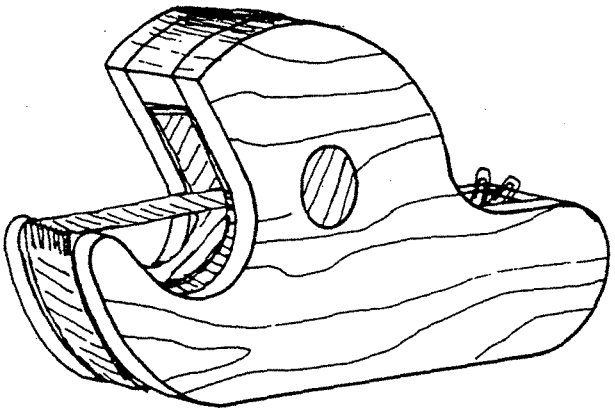


From *HANDS ON* Nov/Dec 84

TAPE & PAPER CLIP DISPENSER

Materials Needed:

- 1 x 4 x 6" Actual thickness of lumber is about 3/4".)
- 3/8" x 3 1/2" x 12" (actual dimensions for the two outside pieces)
- 3/4" dowel, as long as the dispenser is wide
- Glue
- 1" wire brads
- Finishing materials

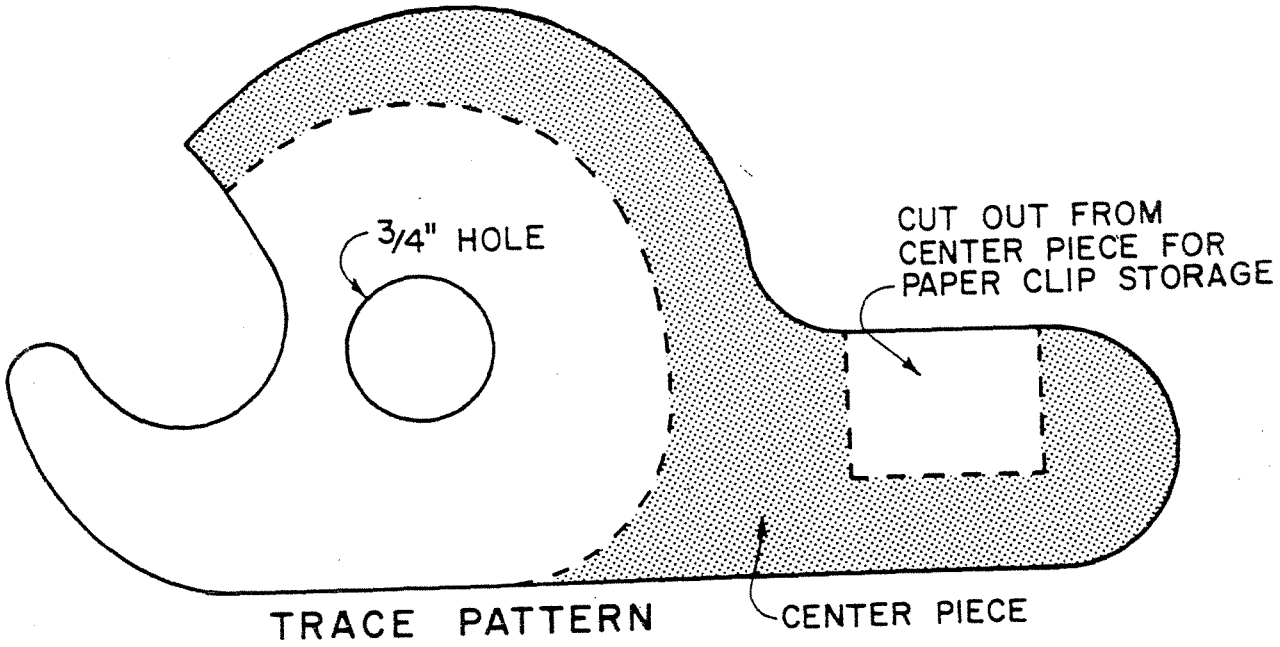


Tools Needed:

- Trace pattern materials
- Coping saw (or jig saw)
- Hammer
- Drill and 3/4" bit
- Nail set

Instructions:

1. Match the outlines of the plastic tape dispenser to the lines on the drawing. Adjust so the dispenser will slip in the hole cut out of the center piece.
2. Transfer the trace pattern to the 3 pieces of wood.
3. Cut out the 3 pieces. The center piece is shorter and has the paper clip storage hole cut out of it.
4. Hold the 3 pieces together and check that the plastic tape dispenser will slide in. If it is tight, partly sand off the plastic hub retainer knobs.
5. Drill the 3/4" hole.
6. Sand the inside curve and storage hole of the center piece.
7. Glue together. Then sand edges.



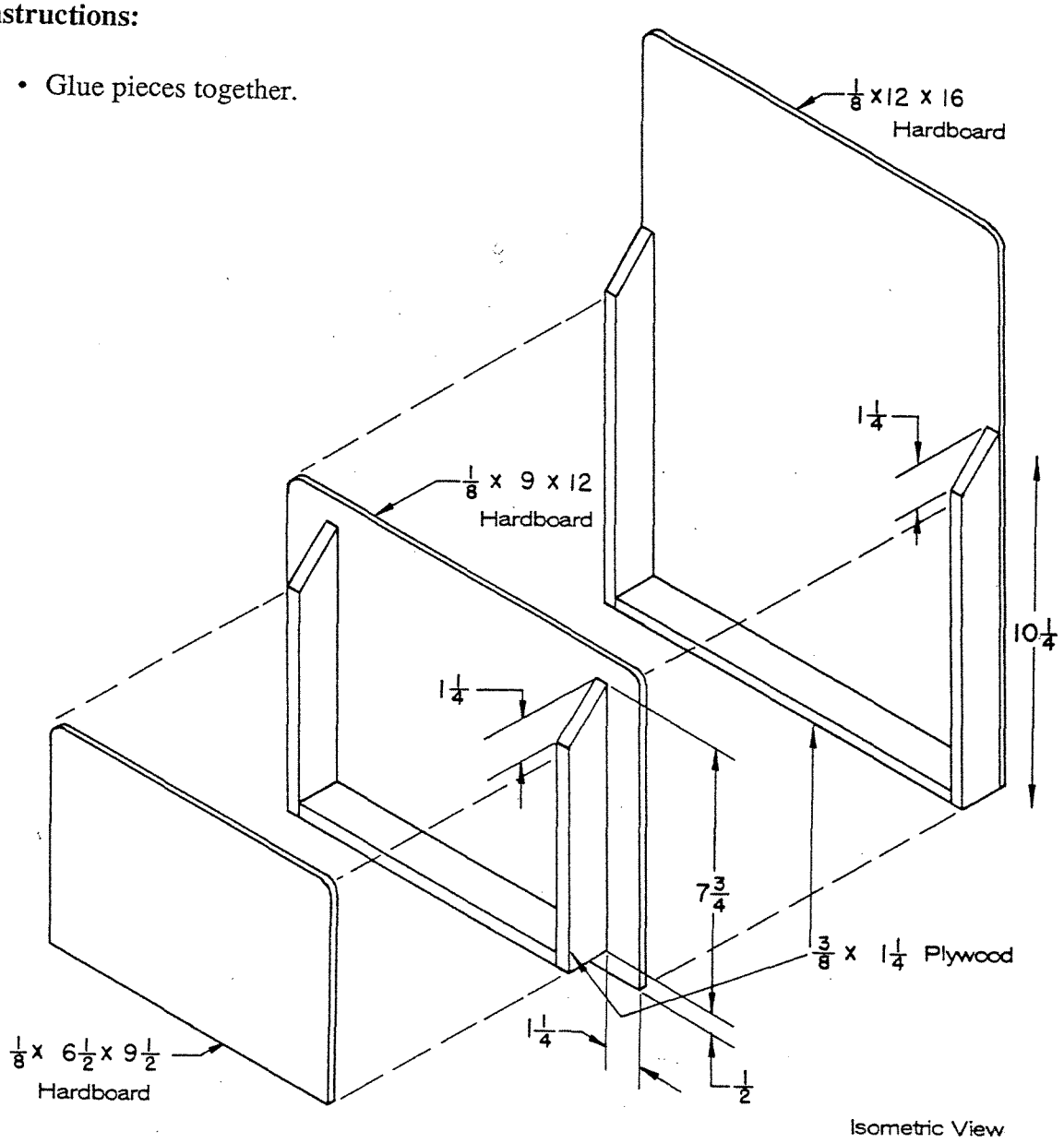
STORAGE FOR GROCERY BAGS

Materials Needed:

- 1—1/2 inch by 12 inches by 32 inches piece of hardboard
- 1—3/8 inch by 1 1/4 inches by 48 inches piece of plywood
- Finish materials you select

Instructions:

- Glue pieces together.



Isometric View

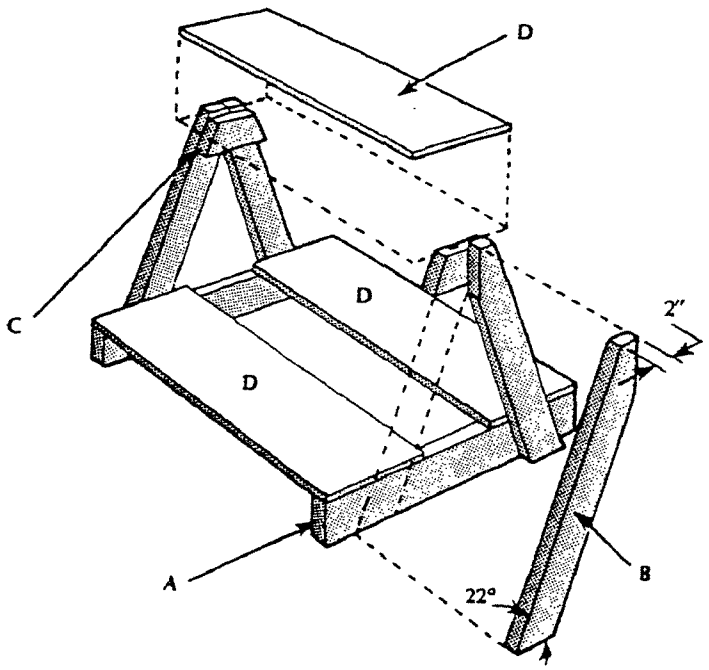
STEPLADDER PLANT STAND

Materials Needed:
(finished dimensions in inches)

A	Base pieces (2)	1-1/2 x 3-1/2 x 22
B	Legs (4)	1-1/2 x 3-1/2 x 20
C	Braces (2)	1-1/2 x 3-1/2 x 7-1/2
D	Shelves (3)	3/4 x 7-1/4 x 30
	10 d galvanized nails	
	Water-resistant wood glue	

Instructions:

1. Cut all the pieces to size according to the dimensions given.
2. Cut a 22° bevel on each end of each leg (B) so that, when installed, the legs will slant in but their ends will remain parallel.
3. Measure from the outside edge 2" across the beveled end at the top of each leg and square a line down from that point. Cut along those lines to create the joints between legs shown in the drawing.
4. Place a pair of legs together on a flat surface and lay a brace (C) across their upper ends. Adjust the brace so that its upper edge is parallel to and 3/4" below the upper ends of the legs. Mark and trim the ends of the brace so they will be flush with the outside edges of the legs. Repeat with the other brace and pair of legs.
5. Begin the assembly of the stand by laying each pair of legs across its brace and base piece (A). Make sure the bottom edges of the legs and base are flush and that the base extends an equal distance to either side. Fasten the legs to the base and brace using water-resistant wood glue and 10d galvanized nails. If working with redwood, blunt the ends of the nails before using.
6. Set the two leg units upright and fit the shelves (D) between them. Make sure the outer edge of each lower shelf is flush with the ends of the base and that the upper shelf is centered over the braces. Fasten the shelves in place using water-resistant wood glue and 10d galvanized nails.
7. Blunt any penetrating nail ends and break over all sharp edges. Apply a water-resistant finish.



STEP STOOL/CHAIR

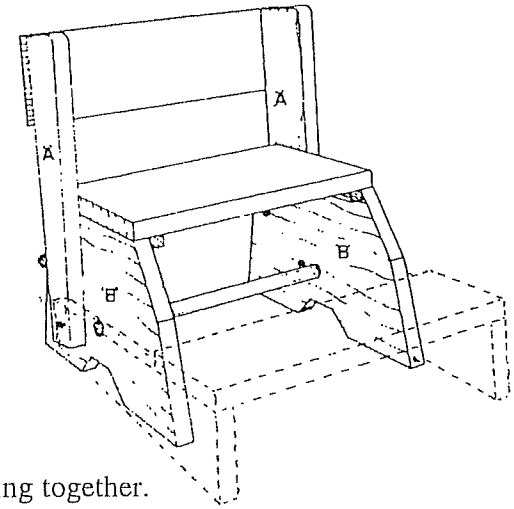
Materials Needed:

- 1 piece of lumber 1 x 8 (actual size 3/4" x 7 1/4") and 6 feet long.
  Out of this piece cut:
  - Two A pieces
  - Two B pieces
  - One seat, 7 1/4" x 12"
  - One back rest, 4 1/4" x 13 3/4"
  - Two corner blocks, each 3/4" x 1" x 6 1/2"
- 1 piece of 3/4" x 16" dowel stock.
  Out of this piece cut:
  - Two stops, 3/4" x 1 1/2"
  - One spacer, 3/4" x 12"
- 2—1/4" x 2" machine bolts
- 6—1/4" steel washers
- 6d finishing nails
- Glue
- Finish, optional

Tools Needed:

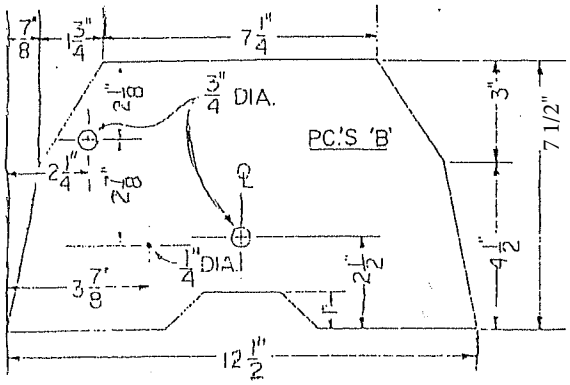
- Hand saw
- Hammer
- Drill press or boring tools with appropriate bits
- Coping saw
- Belt or oscillating sander (or sandpaper)
- Clamp (if gluing pieces together)

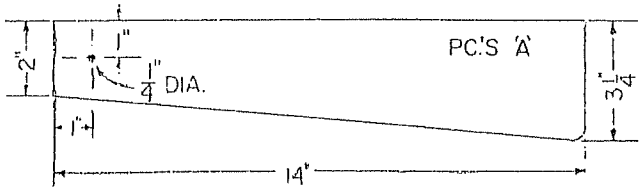
NOTE: Place a steel washer between piece A and piece B, as well as at each end of the bolt.



Instructions:

1. Cut all pieces to size as illustrated.
2. Drill 1/4" and 3/4" holes in B pieces as illustrated.
3. Nail the corner blocks to B pieces.
4. Place dowels for stops and spacer through B pieces, gluing together.
5. Attach seat to B pieces.
6. Drill holes in A pieces as illustrated.
7. Attach A pieces to backrest.
8. Attach A pieces to B pieces using machine bolts and washers on each end of B pieces.
9. Finish as desired.

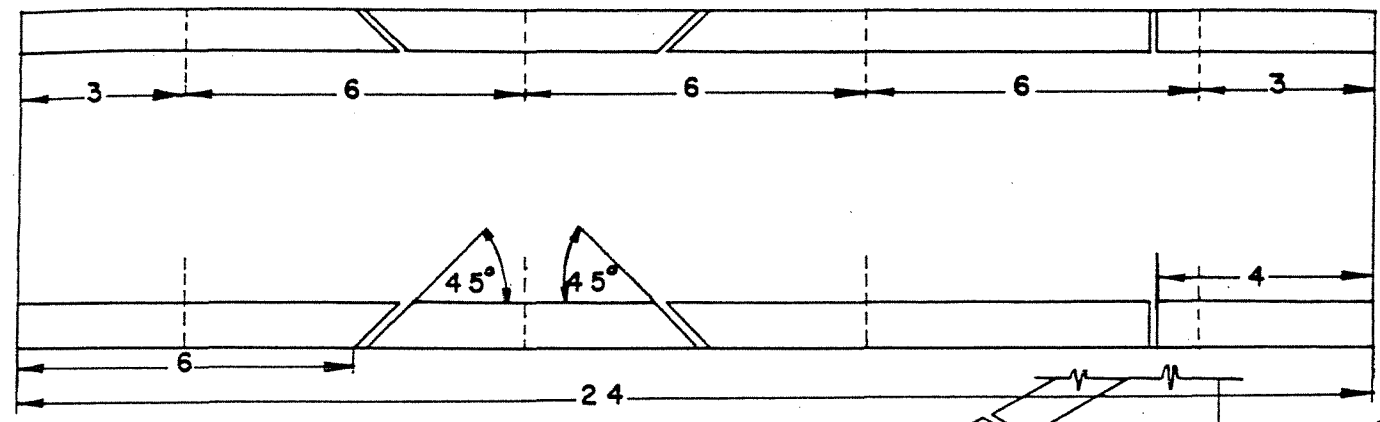




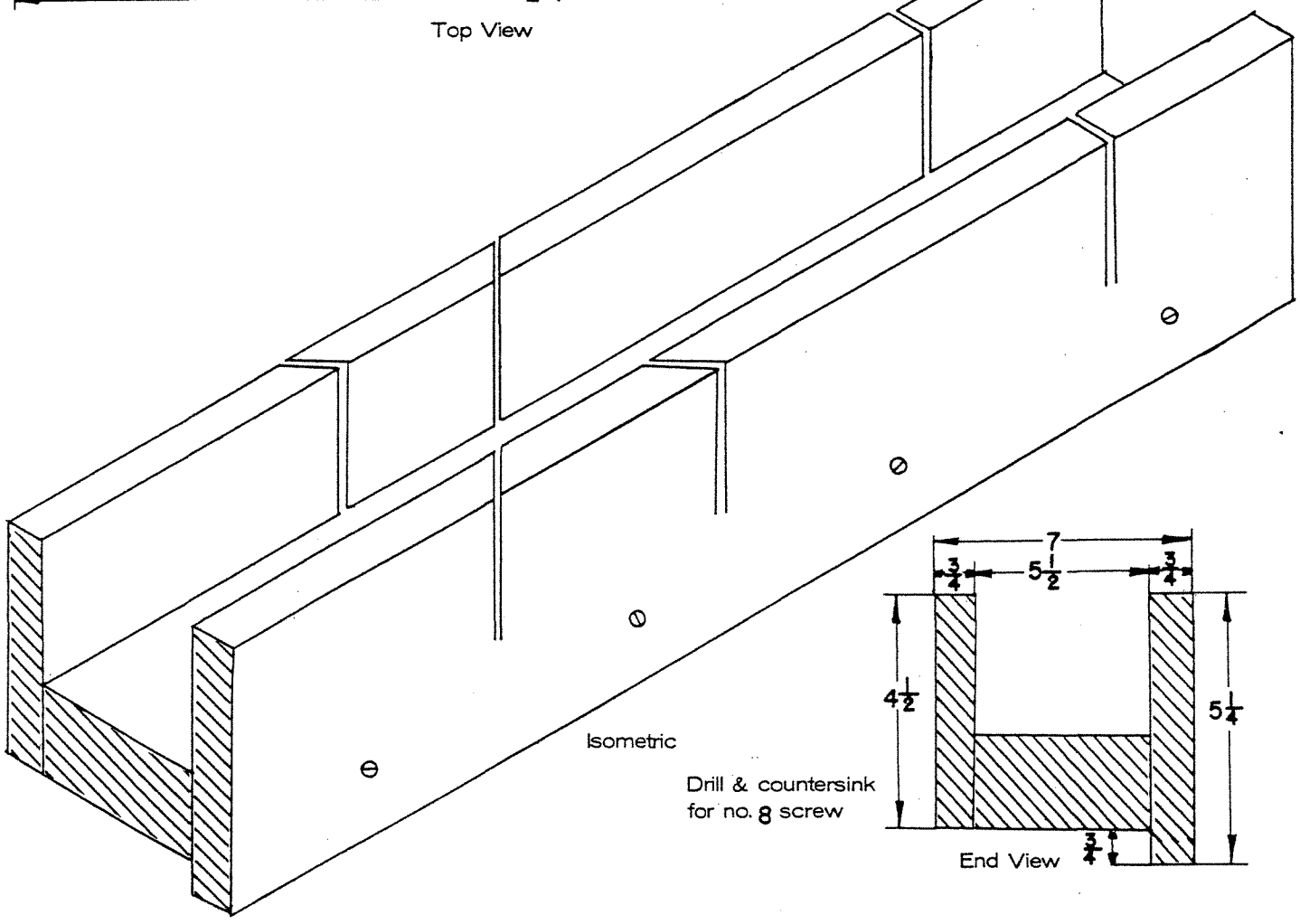
MITER BOX

Materials Needed:

- 2—1 inch by 6 inches by 24 inches (Make sure to use a hardwood for the side pieces.)
- 1—2 inches by 6 inches by 24 inches (Softwood is okay for the base.)
- 8—Number 8 flathead screws



Top View



Isometric

Drill & countersink
for no. 8 screw

End View

BOOK HOLDER

Materials Needed:

- 1—1 inch by 6 inches by 32 inches piece
- 4—Number 3 by 1 inch flathead wood screw
- 1—5 5/8 inches by 16 inches felt
- Finish materials you select

Tools Needed:

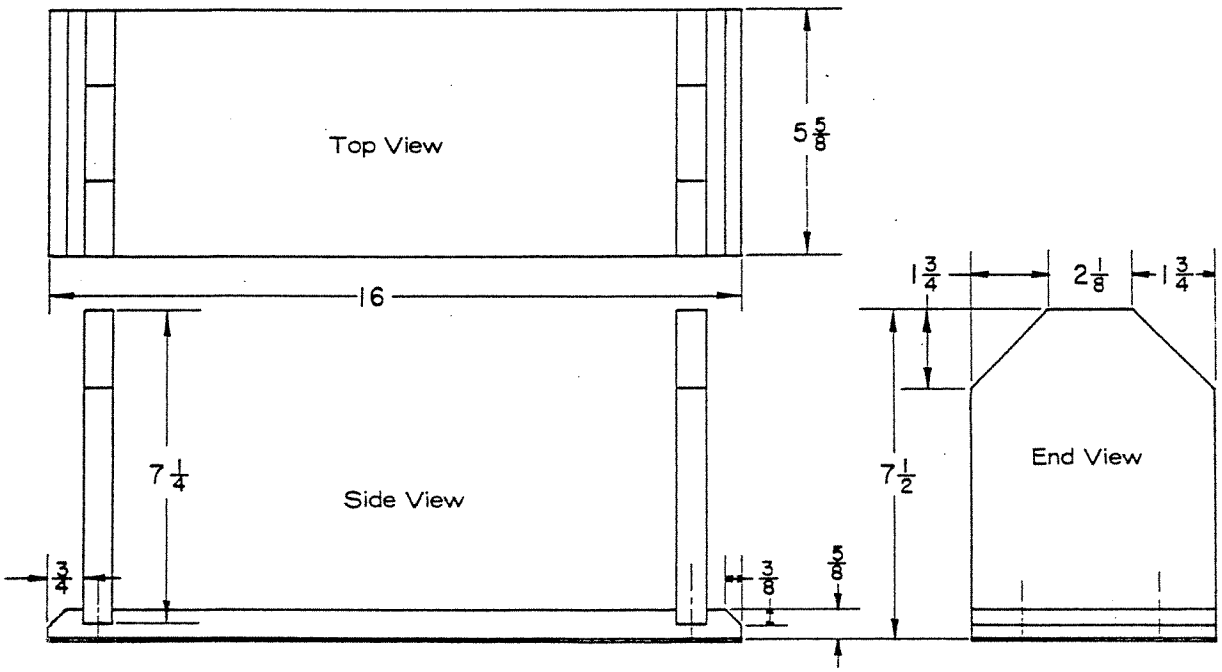
- Saw
- Wood chisel (See note below.)

NOTES:

- Felt glued to underside of bookholder.
- A saw and wood chisel may be used to cut the grooves in the base piece where the sides sit.

Instructions:

1. Cut material to proper size.
2. Assemble.
3. Glue all joints and felt to bottom.

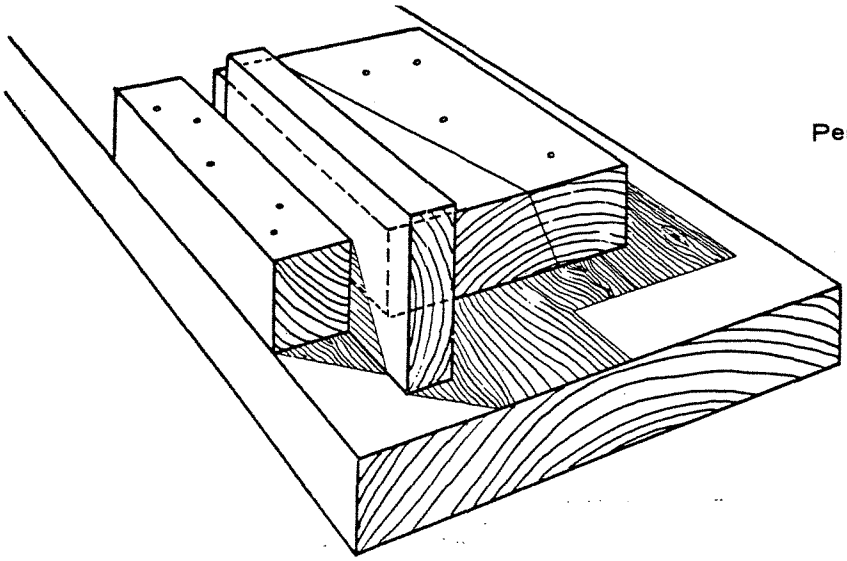


BENCH VISE

Materials Needed:

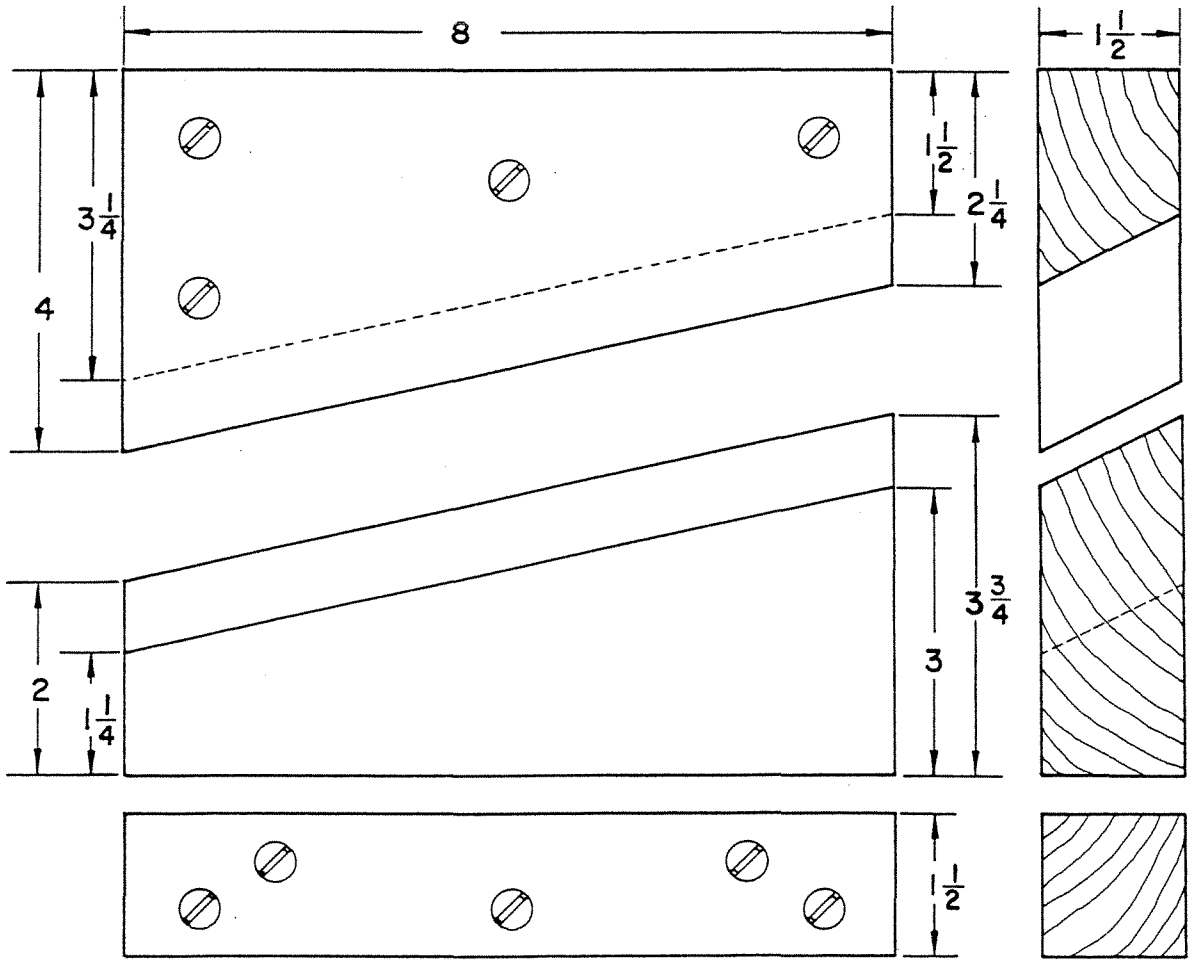
- 1—2 inches by 6 inches by 10 inches
- 1—2 inches by 2 inches by 10 inches
- Number 8 or number 10 flathead screws for mounting

NOTE: A simpler but less satisfactory vise can be made by making the wedge-cut square.



Perspective View

Note: A simpler but less satisfactory vise can be made by making the wedge-cut square



Top View

Edge View

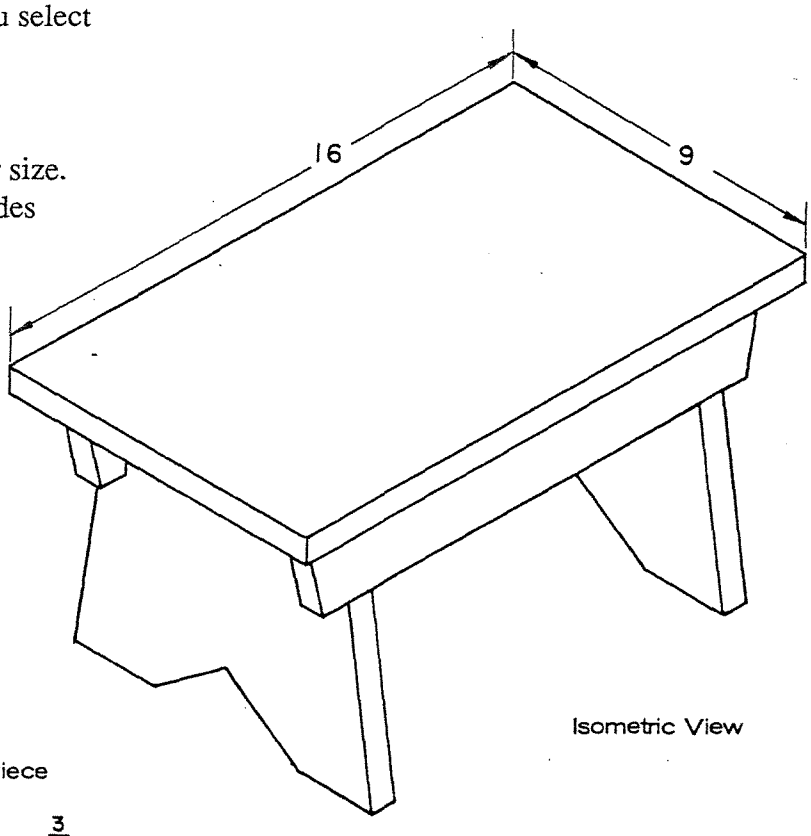
FOOT STOOL

Materials Needed:

- 2—1 inch by 3 inches by 14 1/2 inches
- 2—1 inch by 10 inches by 8 inches
- 1—1 inch by 10 inches by 16 inches
- 8—Number 10 by 1 1/2 inches round head wood screws
- 4—Number 10 by 1 1/4 inches round head wood screws
- Finish materials you select

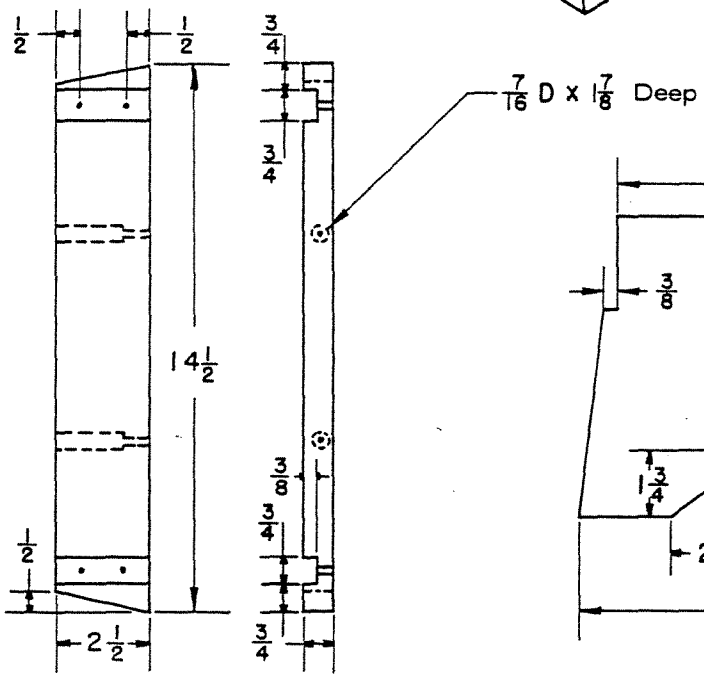
Instructions:

1. Cut material to proper size.
2. Assemble ends and sides and then attach top.

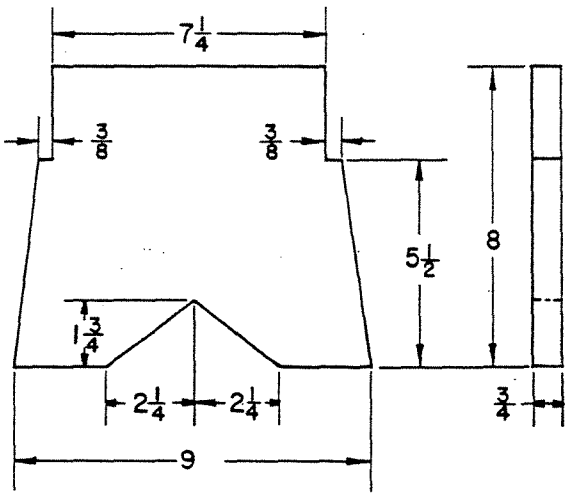


Isometric View

Side Piece



End Piece



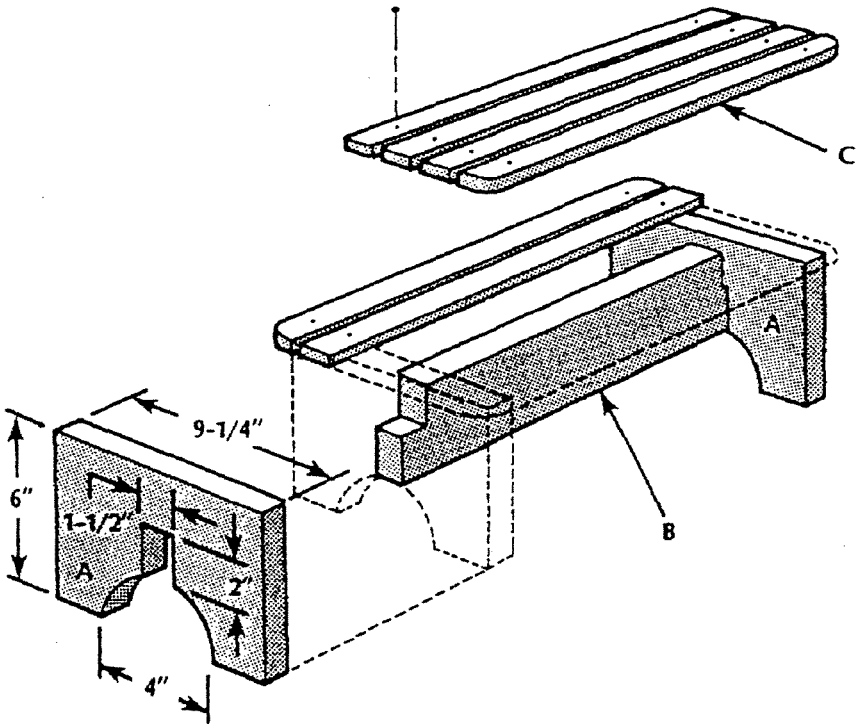
GARDENING BENCH

Materials Needed
(finished dimensions in inches)

A	Legs (2)	1-1/2 x 9-1/4 x 6
B	Cross brace	1-1/2 x 3-1/2 x 12
C	Top (6)	3/4 x 1-1/2 x 15
	Galvanized nails	
	Wood glue	

Instructions:

1. After cutting all of the pieces to size, round off the ends of the two outside top pieces (C).
2. Cut a 1-1/2" x 1-1/2" notch on each end of the cross brace (B) as shown to accommodate the legs (A).
3. Cut a 4" diameter opening and 1-1/2" x 2" slot in the bottom of each leg as shown.
4. Glue and nail the legs to the cross brace. If working with redwood, blunt the ends of the nails before using.
5. Evenly space the top pieces on the legs, and secure them with glue and nails.
6. Sand and apply the water-resistant finish of your choice.



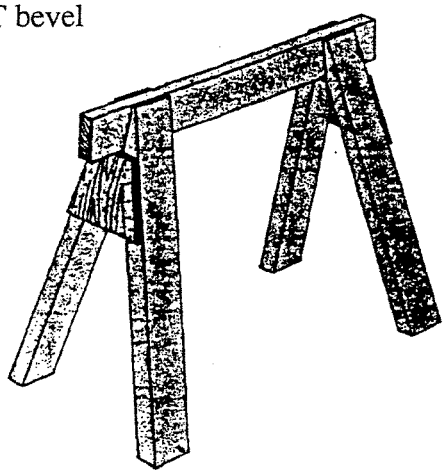
SAW HORSE

Materials Needed:
(for horse with 24" legs)

- 1 piece 2 x 4 lumber (actual size 1 1/2" x 3 1/2") 12 feet long, sound wood, free from cross grain, shakes or other defects which will reduce the strength
- 1 piece 1 x 6 lumber (actual size 3/4" x 5 1/2") 2 feet long
- 8—No. 14, 3" flathead wood screws
- 20—No. 12, 2" flathead wood screws
- 20—4d finishing nails
- Colorless penetrating wood finish, such as boiled linseed oil or varnish with paint thinner or commercial wood weal

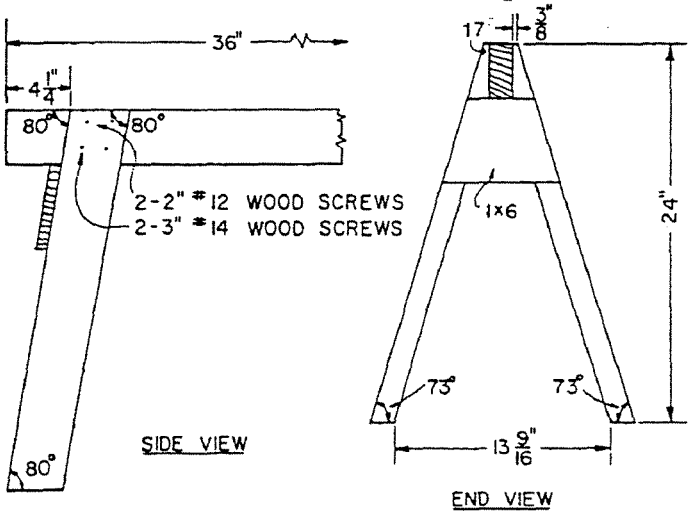
Tools Needed:

- Hammer
- Crosscut saw
- Screwdriver
- Countersink
- Combination square
- Sandpaper
- Tape rule
- T bevel



Instructions:

1. Lay out and cut all pieces.
2. Assemble saw horse as shown with nails.
3. Drill pilot holes and install screws.
4. After the legs are marked and cut out, 1 1/2" is cut off the tapered end to give a narrow, flat end section. The flat end section will be flush with the top of the beam.



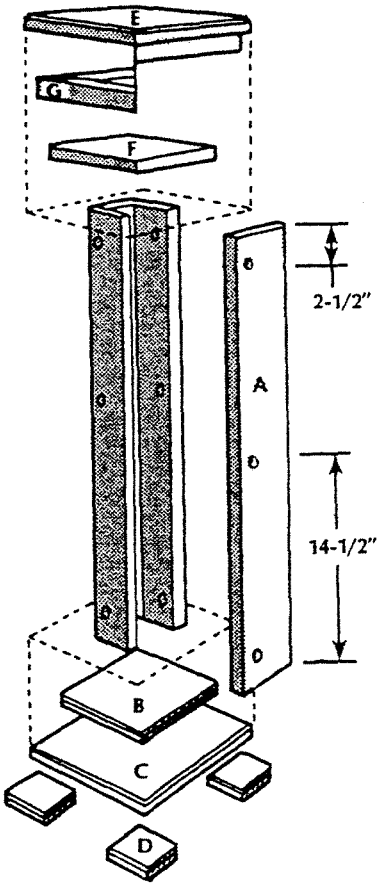
Suggested Construction Dimensions:

Horse height	Leg distance (top from beam end	Layout leg length	Trimmed leg length
18"	3 1/8"	20 5/8"	19 3/8"
20"	3 1/2"	22 5/8"	21 3/8'
24"	4 1/4"	26 3/4"	25 1/2"

PLANT STAND

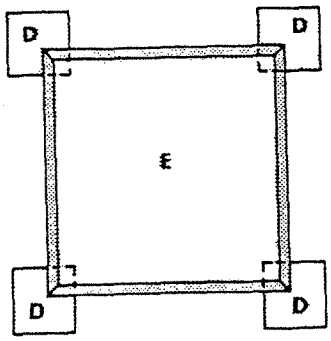
Materials Needed:
(finished dimensions in inches)

A	Column sides (4)	3/4 x 4 x 29
B	Base piece	3/4 x 7-1/2 x 7-1/2
C	Base piece	3/4 x 9-1/2 x 9-1/2
D	Feet (4)	3/4 x 3 x 3
E	Top	3/4 x 11-1/2 x 11-1/2
F	Bracket	3/4 x 7 x 7
G	Apron pieces (4)	3/4 x 3/4 x 10-1/2
	Flathead wood screws	#6 x 1-1/4
	Wood plugs	3/8 dia.
	Wood glue	



Instructions:

1. Cut all of the pices to size according to the dimensions given.
2. Cut three plug holes in each column side (A) as shown. Locate the holes 2-1/2" from each end, with the remaining hole in between. All of the holes should be centered 3/8" from one edge of the piece.
3. Drill pilot holes for the wood screws in the center of the plug holes.
4. Assemble the column by gluing and screwing one corner at a time. Be sure that the assembly is square.
5. Round the edges of the column by sanding.
6. Make 90° butt joints at the corners of the apron pieces (G).
7. Round the upper edges of the top (E), then center the apron pieces on the underside of the top. Glue and screw through the apron into the top.
8. Center the bracket (F) on the column; then glue and screw it in place. Center the top/apron assembly on the bracket; glue and screw through the bracket into the apron.
9. Round the upper edges of the base pieces (B, C) and feet (D); then sand.
10. Center the small base piece on the bottom of the column. Glue and screw it in place from underneath. Repeat with the large base piece.
11. Position the feet so they extend beyond the corners of the base as shown; secure with glue and screws.
12. Sand the completed plant stand; finish as desired.



FOOT DETAIL