

PROJECT**1****WOODWORKS: BEGINNER
COLLECTIBLES SHELF**
(with optional instructions for throw blanket rack)

A fine addition to any decorating scheme, this easy-to-build shelf is a perfect way to display collectibles. Designed with two Shaker pegs, the piece also can be used as a convenient place to hang hats and scarves. If preferred, woodworkers can make a version of the shelf that includes a length of dowel, instead of pegs, to accommodate a lightweight, folded throw blanket.

Building this shelf will give beginning woodworkers the opportunity to learn a host of basic woodworking skills, such as measuring and marking, making straight and curved cuts, routing edges, boring blind mortises, staining and protecting completed work with a professional-looking finish.

TOOLS REQUIRED:

- Pencil
- Ruler (zigzag or tape)
- Square (combination or try)
- Assorted files
- 1/2" or 3/4" Forstner bit
- Phillips screwdriver (medium)
- Hammer and 1/32" nail set
- Wooden mallet
- Safety glasses
- Rasp
- Scroll or saber saw
- Table saw and dado head
- Sanders (belt, random orbit, pad)
- Router (with assorted bits)
- Drill press (or portable electric drill)

MATERIALS REQUIRED:

See Shopping and Cutting Lists

FINISHING PRODUCTS:**Finish Recommended For This Project**

- MINWAX® Pre-Stain Wood Conditioner
- MINWAX® WOOD FINISH™ and MINWAX® Fast-Drying Polyurethane
- MINWAX® ACCENTS™ Decorative Stain
- MINWAX® POLYCRYLIC® Protective Finish

Alternate finish choices (Choose one)

- MINWAX® WOODSHEEN® Rubbing Oil Stain & Finish
- MINWAX® POLYSHADES® One-Step Stain & Polyurethane

Miscellaneous

- MINWAX fine finishing brushes
- Clean rags
- Paint thinner, if required
- Water-filled metal container with cover
- MINWAX™ Wood Glue
- MINWAX™ Sanding Blocks

BEFORE YOU BEGIN

Make no mistake, good craftsmanship begins and ends with good work habits. So, aspiring woodworkers should always remember to review the plans for every project before picking up any tools or purchasing materials. Also, discuss anything that seems unclear with your instructor at the start, so you'll avoid frustration and wasted materials later.

PROCEDURE:**I. Layout and Cutting**

1. Layout and cut shelf and apron to size.
2. Create the template pattern for the brackets on heavy cardboard or 1/4" plywood referring to the plans for design and dimensions. (Note: If desired, use optional bracket drawings for Shelf with Throw Rack.) When satisfied with
3. Cut brackets to size using a scroll saw or saber saw.

template's form, carefully cut it out and transfer the design to the two pieces of 5/4" stock.

BUILDER'S TIP: *Because of the stock's thickness and the tight cuts required, you should not attempt to tack boards together to cut both brackets at the same time.*

4. Install the dado head on the table saw and plough the 1/4" x 3/4" edge-rabbit in the shelf to receive the apron.
5. Slightly round front corners of shelf and bottom corners of apron using a rasp and pad sander, or stationary belt sander.
6. Using 120-grit sandpaper, sand all surfaces smooth. Remember, always sand with the wood grain to avoid cross-grain scratches.
7. Using a router and beading bit, dress front bracket edges as shown. Also, rout the front plane of the apron along the two end and bottom edges. Do not rout the shelf edges. This

piece is rounded-over using files and sandpaper.

8. Lay out parts on workbench and temporarily assemble piece (without using glue or nails) to check parts for fit and dimensions. Trim parts to exact size if necessary.
9. With parts temporarily assembled, use a pencil to lightly mark the inside planes of the brackets on the apron.

10a. For Shelf with Shaker Pegs:

- i. Determine hole location for Shaker pegs. Start by carefully measuring the distance between the pencil lines just drawn and divide by three. Lightly draw a second set of pencil lines approx. 4-5/8" in from the original lines. Set a combination square to 1-3/4" and, measuring up from the apron's bottom edge along these new lines, mark peg location.

- ii. Bore the two mortises to receive peg tenons.

BUILDER'S TIP: Peg dimensions can vary, so carefully measure both the diameter and length of the tenons on the pegs you are using. The pegs for the prototype project required mortises that were 1/2" diameter by 5/8" deep. They were made with a 1/2" diameter hole cutter with a brad point. If the mortise exits back side of the apron, don't worry. This provides an escape hole for excess glue if any is present.

10b. For Shelf with Throw Rack:

- i. Locate and mark position for blind mortises on brackets to hold dowel (see plans).
- ii. Use a 3/4" dia. Forstner bit to bore both mortises 1/4" deep.

II. Assembly

BUILDER'S TIP: When assembling parts with glue and nails, do not drive nailheads home until after the glue has dried completely. This allows you to reset parts that may have moved or shifted during assembly.

BUILDER'S TIP: Do not make the mistake of thinking that more glue means a better bond; in fact, the opposite is true. Using an excessive amount of glue results in a) a weaker joint, and b) glue squeeze-out, which can permanently mar the look of your piece and inhibit the absorption of stain. As a general rule, apply a thin, even film of glue to the surfaces to be joined.

For Shelf with Pegs:

1. Apply small amount of glue to peg tenons. Position tenons in holes and fully seat by carefully tapping with a mallet. Wipe away excess glue, making sure pegs are at 90 degrees to apron. Allow glue to dry undisturbed for 24 hours.
2. Apply small amount of glue to shelf rabbet; join shelf to apron using five to six 1-1/4" finishing nails driven through shelf into apron (see plans for nail placement). Wipe away excess glue.
3. Apply small amount of glue to top and back edges of first bracket; align with previously drawn pencil line. Permanently assemble using six 1-1/4" nails; drive three each through shelf and apron. Repeat for second bracket.
4. Allow assembly to dry overnight.

For Shelf with Throw Rack:

1. Apply small amount of glue to shelf rabbet; join shelf to apron by driving five to six 1-1/4" nails through shelf into apron. Wipe away excess glue.
2. Measure the distance between the previously drawn pencil lines on the apron and add 1/2". This figure equals the length to which the dowel should be cut.
3. Apply small amount of glue to top and back edges of first bracket; align with previously drawn pencil line. Permanently assemble using six 1-1/4" nails; drive three each through shelf and apron.
4. Insert dowel end into mortise of first bracket. (Note: Do not use glue here to allow for possible expansion and contraction.) Push second bracket onto dowel.
5. With dowel held between brackets, apply glue to top and back edges of second bracket; align bracket with apron and nail into place using six 1-1/4" nails; drive three each through shelf and apron.
6. Allow assembly to dry overnight.

III. Sanding, Staining, Finishing

BUILDER'S TIP: When it comes to staining and finishing, you can work with the traditional two-step method (MINWAX® WOOD FINISH™ and MINWAX® Fast-Drying Polyurethane) or use a stain-and-finish-in-one product, such as MINWAX® POLYSHADES® or MINWAX® WOODSHEEN®.

Two-Step Method:

1. Sand surfaces smooth. Wipe with a tack cloth to remove dust.
2. If using a soft wood such as pine apply MINWAX® Pre-Stain Wood Conditioner according to label instructions. Wait 10 to 15 minutes, and wipe away excess using a clean, lint-free rag.
3. Within two hours, apply the MINWAX® WOOD FINISH™ of your choice to all surfaces (even back) using a natural bristle brush and with-the-grain strokes. Remember to stir the stain well. Allow stain to penetrate for 5 to 15 minutes, depending on desired tone. Wipe off excess with clean, lint-free rag.
4. If a darker tone is desired, let the first coat rest for four to six hours then repeat step #3 for a second coat. Allow stain to dry for eight hours before proceeding. Note: for stain and polyurethane protection in one easy step instead, use any MINWAX® POLYSHADES® or MINWAX® WOODSHEEN® color according to label instructions.
- 5a. Stir MINWAX® Fast-Drying Polyurethane before and during use. Do not shake. Using a natural bristle brush, apply a thin coat to all stained surfaces per label instructions.
- b. For a wider choice of colors or a more contemporary look, apply MINWAX® ACCENTS™ following label directions. Topcoat with MINWAX® Fast-Drying Polyurethane or MINWAX® POLYCRYLIC® Protective Finish.
6. Allow finish to dry for at least three hours (longer if conditions are humid); when dry, lightly sand again using 220-grit sanding block and wipe clean.
7. Apply second coat and let dry.
8. Allow piece to cure for at least 24 hours.
9. Position and install mounting hangers on shelf back as indicated in the drawing.

IV. Clean Up

- If you have product left over, wipe the can rim so that product in the rim won't dry out and prevent the lid from forming a tight seal.
- Clean brushes used for oil-based finishes with mineral spirits; soap and water are all that is needed for brushes used for water clean-up products such as MINWAX® ACCENTS™ and MINWAX® POLYCRYLIC® Protective Finish.

V. PRODUCT SAFETY

DANGER! HARMFUL OR FATAL IF SWALLOWED. SKIN IRRITANT. COMBUSTIBLE. KEEP OUT OF REACH OF CHILDREN.

DANGER: Contains mineral spirits. Harmful or fatal if swallowed. Do not take internally. Skin irritant. Avoid contact with skin and eyes. Wear rubber gloves and safety glasses when handling. Combustible. Do not use or store near heat, sparks, flame or other source of ignition. Close container after each use. Avoid inhalation and use only with adequate ventilation. If using indoors, open all windows and doors to make sure there is fresh air movement. If you experience lightheadedness, dizziness or headaches, increase fresh air movement or leave the area. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

FIRST AID: If swallowed: Do not induce vomiting. Call physician immediately.

FOR SKIN CONTACT: Wash thoroughly with soap and water. If irritation persists, get medical attention.

FOR EYE CONTACT: IMMEDIATELY flush eyes thoroughly with water, then remove any contact lenses. Continue to flush eyes with water for at least 15 minutes. If irritation persists, get medical attention.

IF AFFECTED BY INHALATION: Immediately remove to fresh air. If symptoms persist, call physician.

VI. Safe Disposal of Rags & Waste

Please be mindful of the safe way to dispose of used rags and other waste. Rags, steel wool and other waste soaked with oil finishes may spontaneously catch fire if improperly discarded. Place rags, steel wool and waste immediately after use in a water-filled metal container. Tightly seal and then dispose of in accordance with local regulations. Be sure to keep the container out of reach of children.

FINISHER'S TIPS

- Use scraps of wood to test the stains and finishes you are planning to use. Label the stain/finish used, and the type of wood, on each test sample chip. Allow all samples to dry thoroughly before making your final finish selection. Save samples for quick reference on future projects.
- Remember to pretreat soft woods like pine with MINWAX® Pre-Stain Wood Conditioner before staining to help ensure the even absorption of the stain.
- For a clean, sharp finish, all final passes with the brush or cloth should be made in the same direction as the wood grain.
- When additional surface protection is desired, apply two or three coats of MINWAX® Paste Finishing Wax over all exposed surfaces. Let stand for 10 minutes, then buff with a clean fiber scrub brush. Finish buffing with a clean, lint-free cloth.
- It is critical that all stains and finishes be allowed to dry thoroughly between coats. Remember, drying times can vary due to humidity and other climatic conditions.

Materials Shopping List, nominal dimensions

Note: Eastern white pine is recommended for this project. If a hardwood is substituted, make certain to check for dimensional differences in stock.

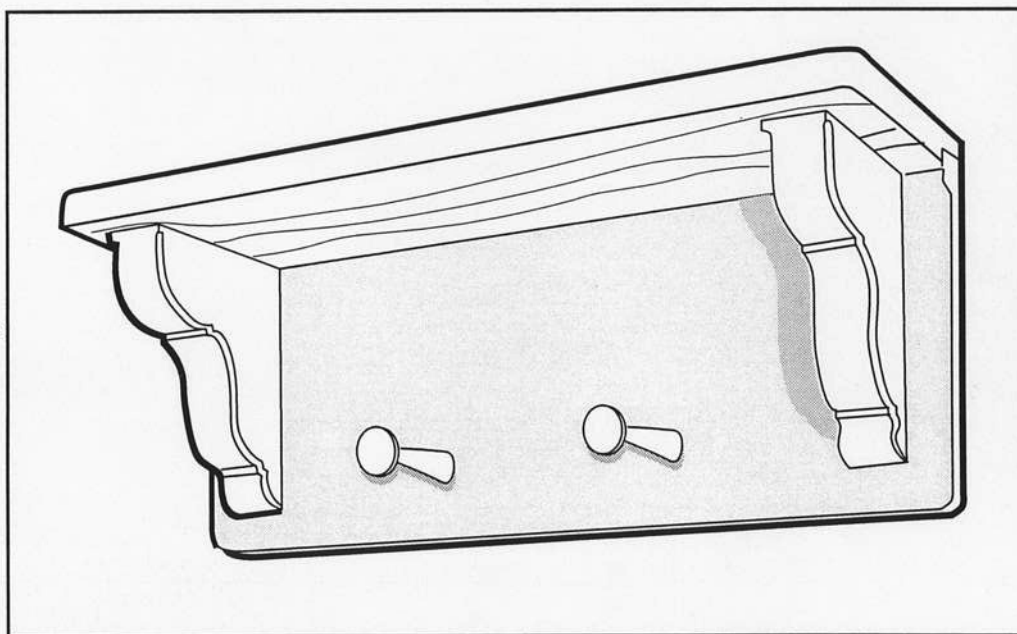
A	Shelf	1 x 8, 2' long	eastern white pine(1 pc.)
B	Apron	1 x 8, 3-1/2' long	eastern white pine(1 pc.)
C	Brackets	5/4 x 6, 1-1/2' long	eastern white pine(1 pc.)
D	Shaker pegs	dimensions will vary	2 required
D (alt)	Dowel	3/4" dia. x 1-1/2" long	1 pc. required

Cutting List, actual dimensions

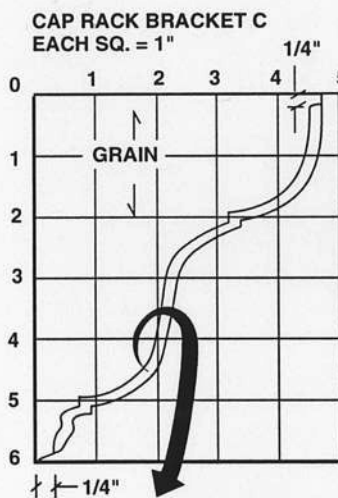
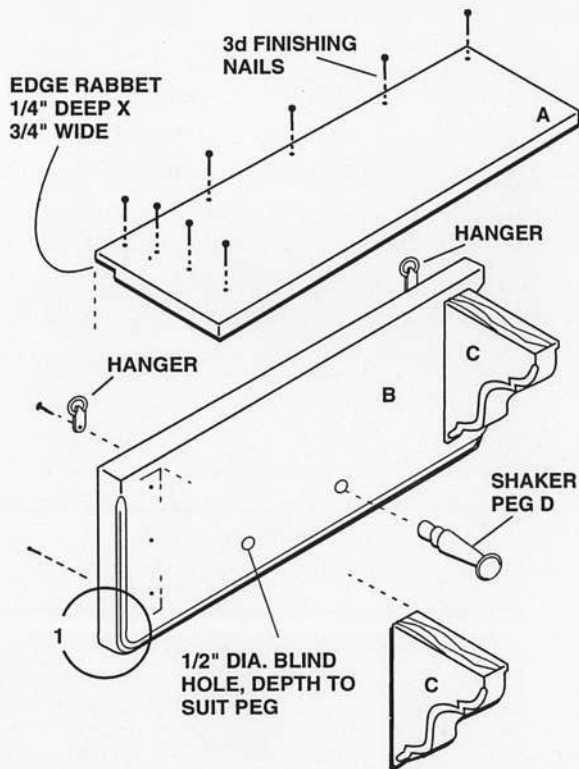
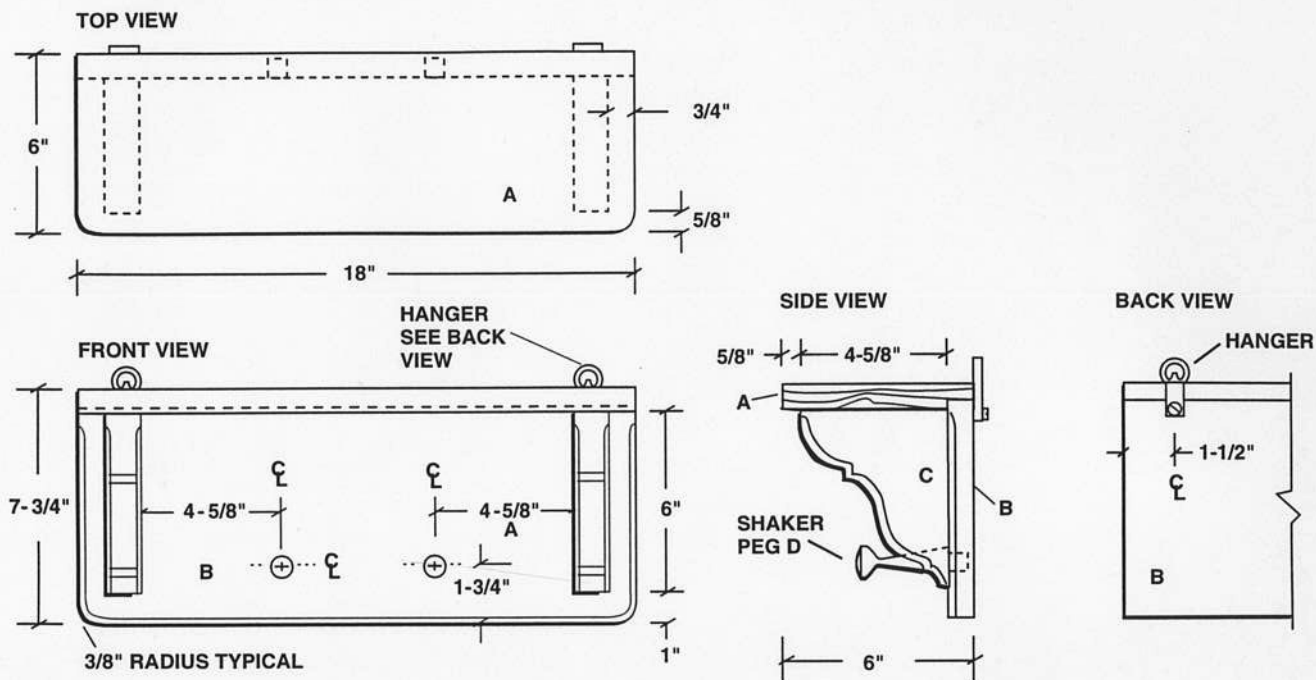
A	Shelf	3/4 x 6 x 18"	1 pc.
B,	Apron	3/4 x 7-1/4 x 18"	1 pc.
C	Brackets	1-1/16 x 4-5/8 x 6"	2 pcs.
D	Shaker pegs	dimensions will vary	2 pcs.
D (alt)	Dowel	3/4" dia. x 14-3/4" long	1 pc.

Miscellaneous:

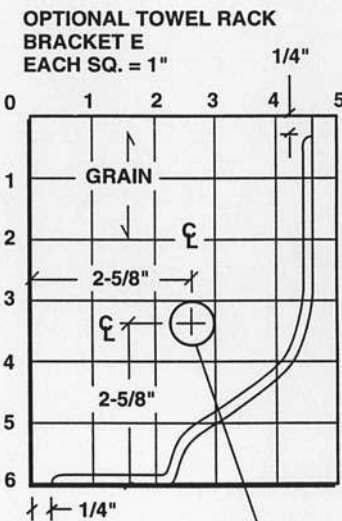
Finishing nails (1-1/4"), MINWAX Professional Strength Wood Glue, MINWAX fine finishing brushes, tack cloth, clean rags, water-filled metal container with lid, mounting shelf hangers, sandpaper (100- through 220-grit), mineral spirits.



COMPLETED PROJECT



DETAIL 1
 1/8" RADIUS WITH 1/16" STEP TYPICAL FOR BRACKETS C AND APRON B. NOTE: ONLY FRONT EDGE OF APRON B HAS BEADING.



3/4" DIA. HOLE 1/4" DEEP FOR DOWEL. NOTE: RIGHT AND LEFT REQ.