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Classic Project

In this plan you'll find:

- Step-by-step construction instruction.
- A complete bill of materials.
- Construction drawings and related photos.
- Tips to help you complete the project and become a better woodworker.

Moravian Chair

Bill of Materials
(all dimensions actual)

Part	Description	Size	No. Req'd.
A	Seat	1⅛ x 17 x 14	1
B	Cleat	¾ x 2½ x 12½	2
C	Leg	1½ x 1⅞ x 21*	4
D	Leg Wedge	See Detail	4
E	Back	1 x 11 x 19	1

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Moravian Chair

We must confess, when we started building this chair in the shop we all agreed that it looked as though it would be terribly uncomfortable to sit in. However, much to our surprise, the finished product is not only a handsome looking piece, but it is quite comfortable. The slightly angled back feels just right against the spine, and it encourages the sitter to "sit straight".

As with most Pennsylvania Dutch designs, the chair is sturdy. The splayed legs lend it a wide stance, and the key or wedge tenoned back provides a strong support. We made our chair from walnut, a Pennsylvania Dutch favorite, but it would also look good in maple or cherry.

Begin by gluing up 1 in. thick stock for the back (E), and 1⅛ in. thick stock for the seat (A). Referring to the seat back grid pattern, transfer the shape to your back stock and band saw the perimeter. Use the saber saw to cut out the heart center, first drilling a starter hole for the saw blade. The ⅝ in. square mortises in the tenons to accept the back "key" wedges are made by first drilling through with a ⅝ in. diameter drill bit, and then squaring the hole with a chisel. As you will note, these mortises are cut straight through, and need not be angled since the back wedge will bear only on the bottom of the mortise. Chamfer the tenon ends as shown.

Next, referring to the seat grid pattern, transfer the profile to the 1⅛ in. thick stock and cut out the seat. Cut the two cleats (B) from ¾ in. thick stock and glue and clamp them in place on the seat underside, also as shown in the grid pattern. Now make a boring jig as illustrated in steps 1 through 3. Again referring to the seat grid pattern, locate the leg tenon centerpoints and establish the 45 degree jig alignment lines. Keeping the jig on the 45 degree line, eyeball through the jig's guide hole, centering the bottom end of the guide hole over the tenon center point. Clamp the jig securely and bore the 1 in. diameter tenon holes as shown in step 4.

You may now cut the two mortises through the seat and cleats to accept the back tenons. As shown in the side view, these tenons must be angled at 100 degrees. If you have a drill press, by tilting the table 10 degrees with the seat clamped to the table, you can drill through and establish the mortise angle. In any event there will be considerable hand work with the chisel in cutting these mortises. Check the seat back tenons against the mortises as you work to insure a proper fit. These tenons must fit snugly, and cannot be sloppy or loose. Bevel the seat back shoulder for an even fit where it meets the seat.

To make the legs, first cut the leg tapers using the table saw tapering jig. The 45 degree chamfers along the four edges can be cut by hand with the plane. We cut our leg tenons on the lathe. The square tenon shoulders are not a problem since they are fairly well out of sight. If you use the lathe, naturally you will need sufficient length in the leg stock to allow for mounting in the lathe. Make the tenons extra long, so they may be flushed up later after assembly. We made our tenons 3½ in. long, allowing ½ in. for cut off of the end mounted in the lathe. Cut the saw kerf in the tenons as shown to accept the wedges. Note: If you do not have a lathe you might consider making the leg tenons square and cutting their mortises with a chisel, although this will entail considerable hand work and can be quite fussy.

Bill of Materials
(all dimensions actual)

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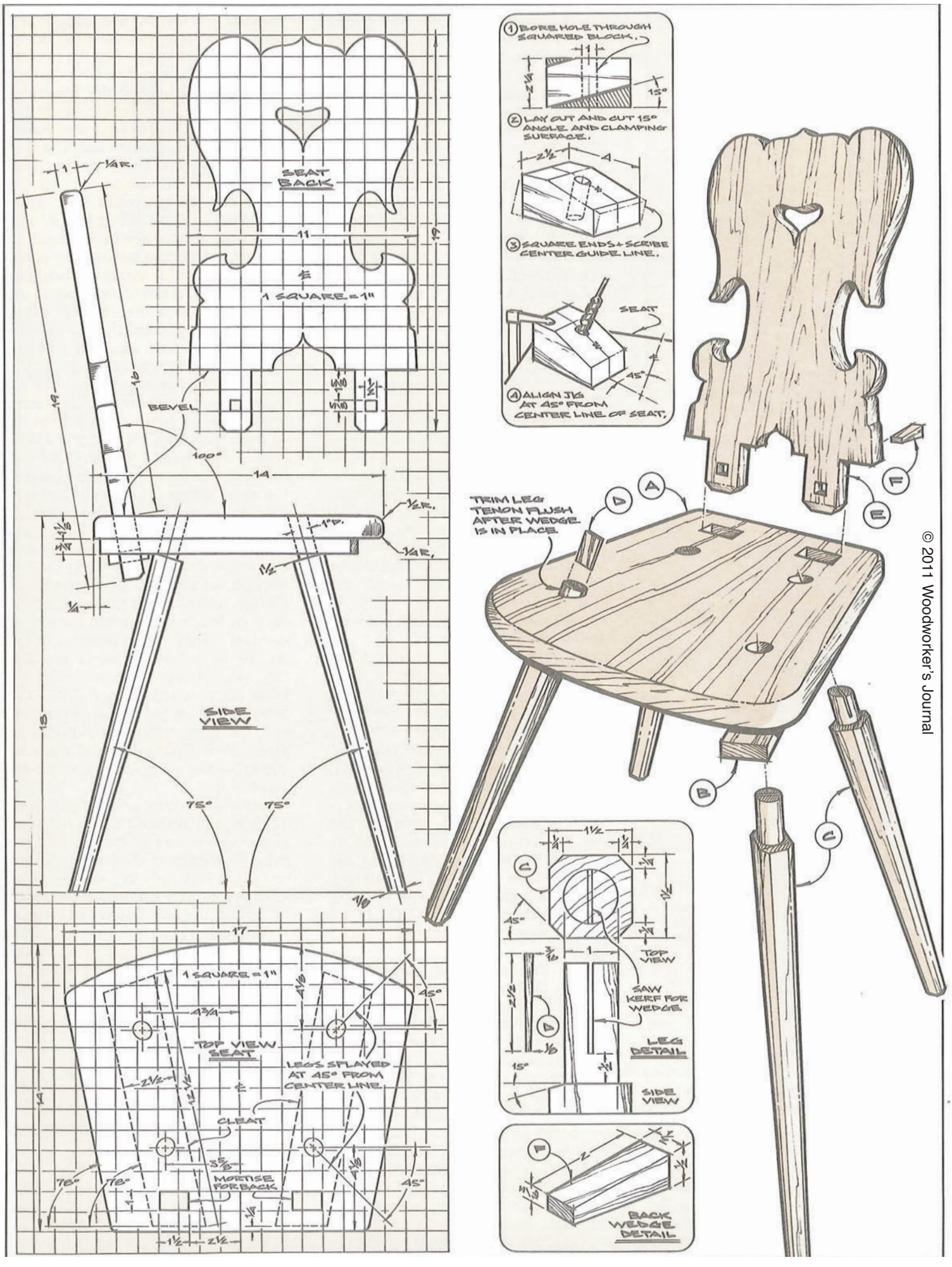
A	Seat	1⅛ x 17 x 14	1
B	Cleat	¾ x 2½ x 12½	2
C	Leg	1½ x 1½ x 21*	4
D	Leg Wedge	See Detail	4
E	Back	1 x 11 x 19	1
F	Back Wedge	See Detail	2

*Length dimension allows extra.

Before assembly, apply the various round-overs as shown on the seat and back. We used the router with bearing guided round-over bits. Also, carefully sand all pieces.

The legs are mounted and wedged, and then trimmed flush with the seat top. Remember to align the wedges perpendicular to the grain direction of the seat. To mount the back, first cut two key wedges, as shown in the back wedge detail. These wedges are tapped into place, but not socked up hard. Since their function is to anchor the back, they may be adjusted as necessary if after years of use the back should come a little loose.

After assembly is complete, set the chair on a flat surface such as the saw table, mark the leg ends, and trim them so they will sit flush. We finished our chair naturally, with several applications of tung oil. Rub in paste wax to lend the finish a low luster shine. WWJ



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