

A wooden waterfall

BY JONATHAN BINZEN

Hank Gilpin's first waterfall armchair (see the back cover) spawned a series of related designs. Building in sets of 2, 4, 12, and even 24, he has made more than 80 of them. The signature arm—"the triple-blip arm," as he calls it—is cut from a rectangular blank and joins the back leg, front leg, and low side stretchers to form a flat frame. Gilpin borrowed this approach from a chair by Duncan Phyfe, and it makes his chair far easier to build. He first glues up the two side frames, then joins them with the seat rails and crest rail. The strength of the side frames also allows him to dispense with side seat rails, leaving the vertical lines unbroken.

BREAKING DOWN THE ARM

Gilpin makes the waterfall arm itself in a carefully thought-out sequence, cutting the joinery while the workpiece still has square reference edges, postponing some of the shaping until after assembly to leave a horn that provides clamping purchase. For maximum strength, the arm meets the front leg in a bridle joint and the back leg in a through-tenon joint. Both joints are pinned. The narrow verticals are unshouldered at the top where they enter the mortises on the underside of the arm.

5. The horn enables direct vertical and horizontal clamping pressure.

1. After milling the rectangular blank to size, Gilpin cuts a groove at one end for the bridle joint, and a tenon at the other end.

2. He bandsaws the rounded shapes on the underside of the arm and fairs the curves with rasps, files, and scrapers.

3. The mortises can be cut with a hollow-chisel mortiser or drill press.

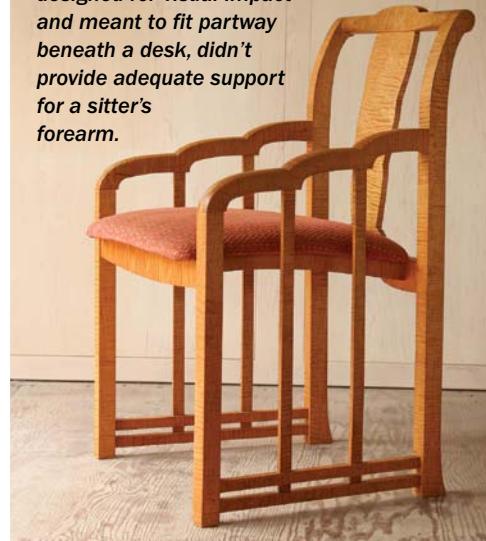
4. When bandsawing the top of the arm, he leaves a horn at the front for clamping.

The horn will be bandsawn away and the curve cleaned up with hand tools after the side frame is assembled. The joints are then pinned.

6. With the long clamps in place, pinching pressure completes the clamp-up.

EVOLUTION OF A CHAIR

The arm in Gilpin's original chair, designed for visual impact and meant to fit partway beneath a desk, didn't provide adequate support for a sitter's forearm.



To address that issue, he next made a two-level arm where the upper level presented a long, flat surface. He also replaced the original splat with a resilient slatted back.



In the most recent version, seen here in spalted maple, the overall structure is the same, but the arm is S-shaped for even more comfort, and the back is a slat-splat hybrid.

