

how they did it

Japanese lattice

BY JONATHAN BINZEN

The decorative latticework in John Reed Fox's cabinet (back cover) is based on examples he has studied in Japanese shoji screens and transom frames. Like the originals, his latticework, or kumiko, is assembled largely without glue—almost all the parts are merely press-fit, putting a premium on perfect accuracy in the joinery. Made carefully, however, the latticework is extremely rigid. Fox's work begins with a known opening for the lattice panel and a very precise full-scale drawing. He generally builds with Port Orford cedar, which is straight-grained and relatively soft, but will hold a clean, sharp edge. To the back of the lattice, Fox glues a sheet of handmade paper, available in art-supply stores.

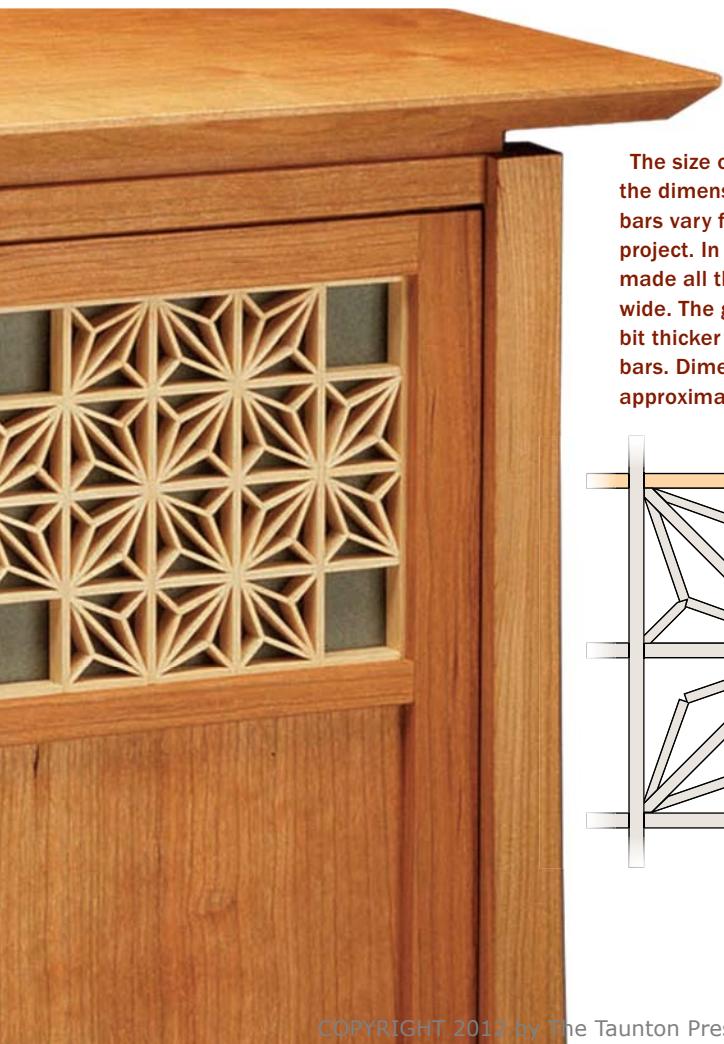


Gridwork

Accurate bars. After milling his blanks, Fox cuts dadoes (left) for the half-lap joints that will create the grid. A registration pin in the miter fence establishes the spacing between the dadoes. Fox rips the daded blank (right) into strips slightly thicker than the final thickness of the grid bars.

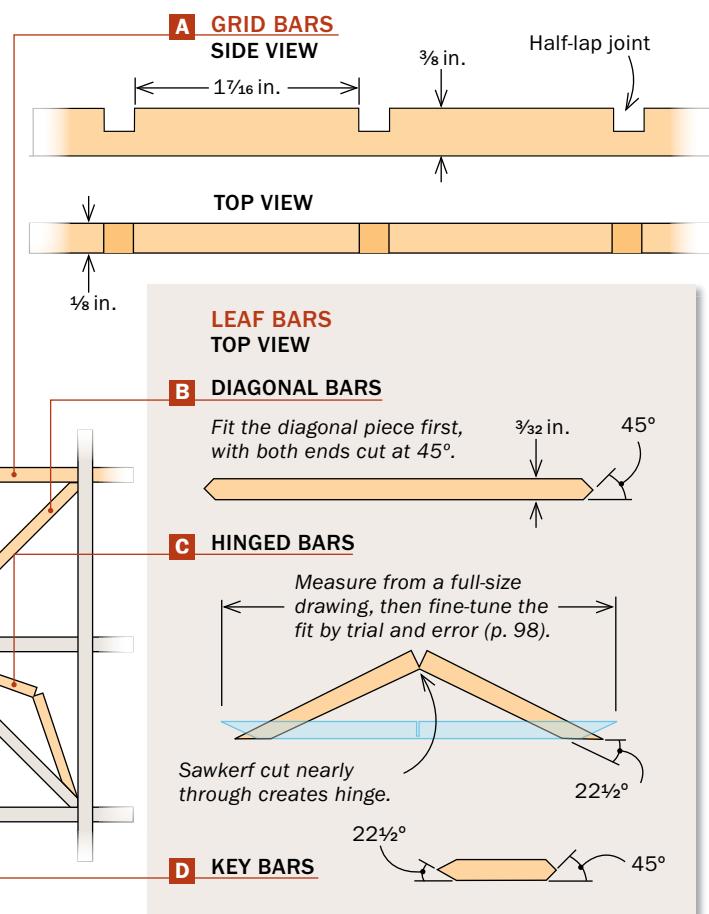
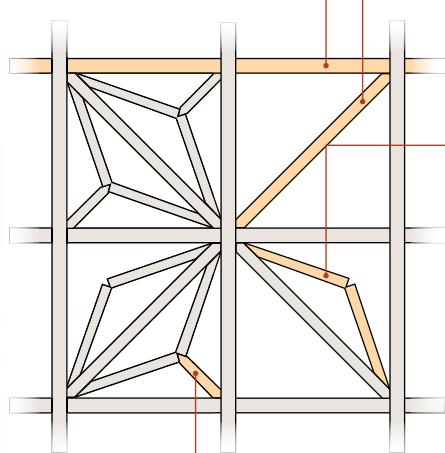


Gridlock. After handplaning the grid bars to final thickness with just a few passes on each side (see p. 98), Fox assembles the frame. Only the joints around the perimeter are glued, yet with all the snug-fitting half-lap joints, the completed panel is very rigid.



LATTICE ANATOMY

The size of the grid and the dimensions of all the bars vary from project to project. In this case, Fox made all the bars $\frac{3}{8}$ in. wide. The grid bars are a bit thicker than the leaf bars. Dimensions are approximate.



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continued



Producing the parts



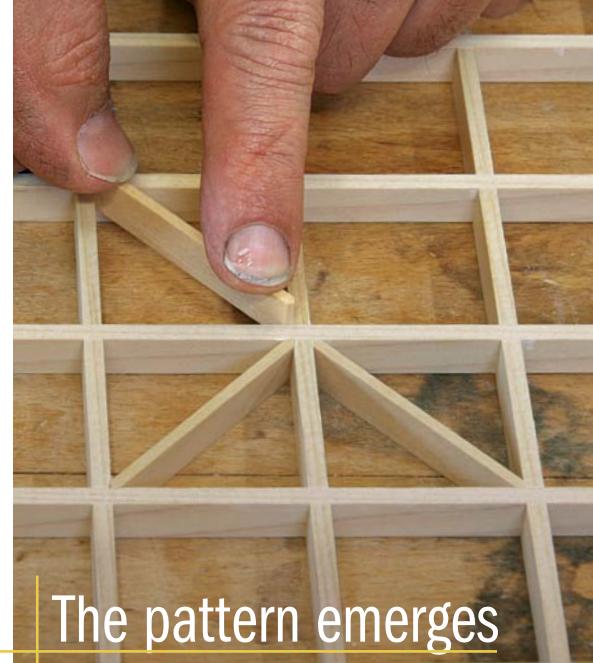
Precise thicknessing by hand. To make stock for the small bars that create the leaf pattern, Fox tucks strips of the desired thickness to the bottom of a handplane as depth stops (left). Then, working on a dead-flat surface, he gangs several workpieces (above). Note that he is pulling an Asian-style plane, so the end stop is at the rear.



Little jigs for little bars. Fox cuts the pattern pieces to length using a simple miter box—just a stepped piece of wood—clamped to his bench (left). He miters and fits the ends of the bars on a shopmade donkey's ear planing jig with an adjustable end stop (right). This jig is for 45° cuts; he made another for the 22½° cuts.

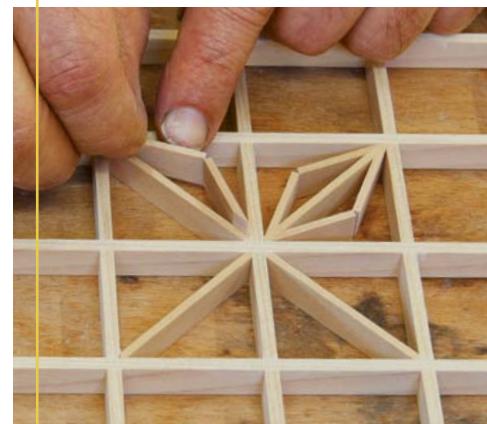


Bend it with a kerf. Fox cuts a kerf to within a whisper of a full through-cut to create a hinge in one of the bars (above). The strip of wood clamped to his saw acts as a depth stop. He can fine-tune the depth of cut by placing tape beneath the workpiece. After moistening the hinge points with water, Fox bends the hinges open (right) over a wooden block.

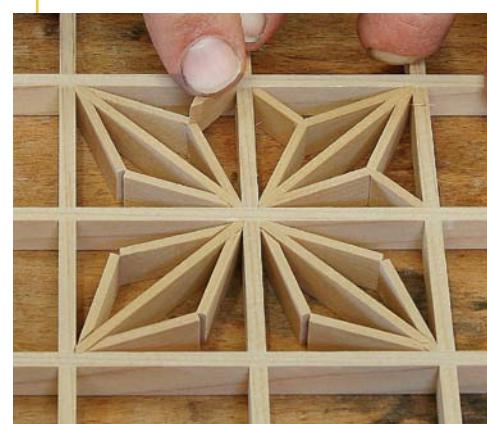


The pattern emerges

Begin with the diagonal bars. The fit needs to be precise. If it is sized correctly, the cedar will compress slightly as it is slid home. But it shouldn't be so tight that you can't remove it if necessary.



Hinges next. Fox establishes the length of the hinged bars and the key bars at the same time, working with one pair by trial and error until they fit just right. Then he planes all the parts to final length and inserts them.



The leaf is finished. When the key bar is pushed home, all the small parts are locked in and the leaf pattern emerges.