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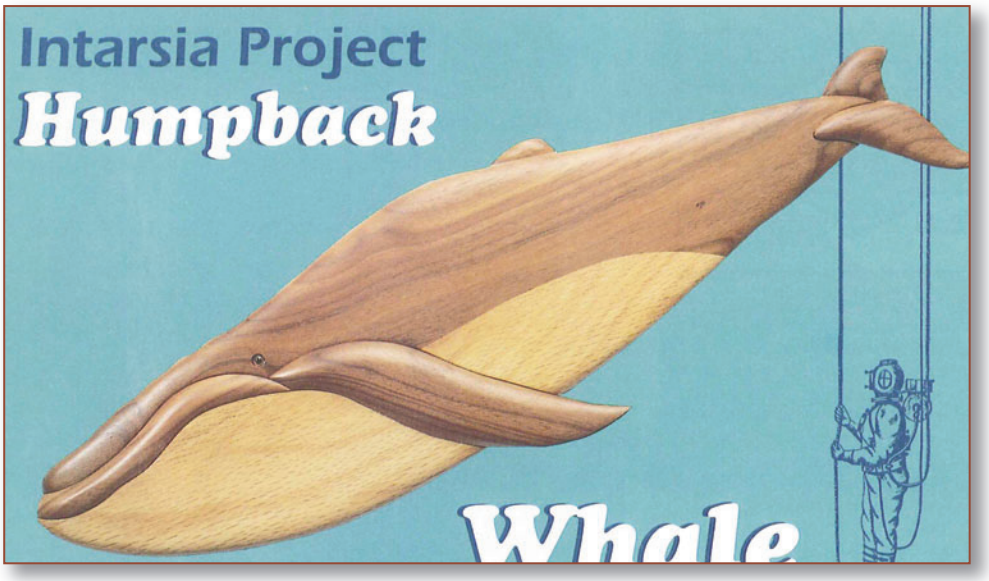
Classic Project

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.

Intarsia Humpback Whale



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Intarsia Project Humpback Whale

by Robert J. Hlavacek

If you haven't tried intarsia yet, the Humpback Whale is an ideal project to get started with. The whale is comprised of just 8 pieces, which are cut, shaped, assembled and then mounted to a plywood backing board. All the whale parts are cut from standard 3/4 in. thick stock, with shims under several of the pieces giving their raised effect. We've provided a full-size pattern and step-by-step instructions and illustrations to guide you through the process.

In many traditional furniture projects, it's frustrating to see a commercially made item, similar to one you've made, for sale at a price less than the cost of your materials. With intarsia, you'll end up with a work of art that will be worth far more than the cost of both your time and materials.

Step-by-step

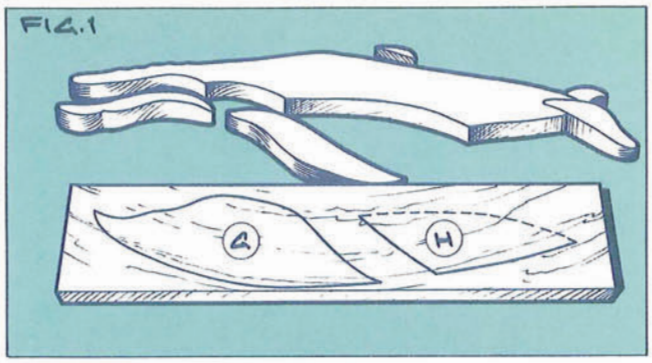
The Humpback Whale shown is made from walnut and red oak. Since much of the beauty of the piece is in the selection of boards with an attractive grain pattern, you'll want to take care here. The whale shown was sized to fit on the pages of *The Woodworker's Journal* magazine, but I've made humpback whales using this same pattern in sizes up to 37 in. long. If you want to make the pattern larger, just keep in mind that you'll need to use a larger glass eye to match. By the way, in case anyone is wondering, the humpback whale is one of nine species classified as baleen (toothless) whales.

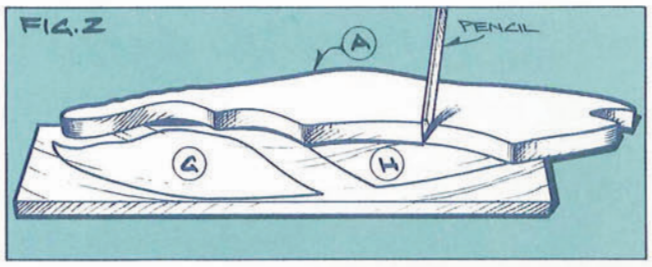
1 Use a large piece of tracing paper (9 in. by 24 in.), and copy first one half of the pattern, then the other, until you have a complete pattern. Label the various parts on your pattern as indicated.

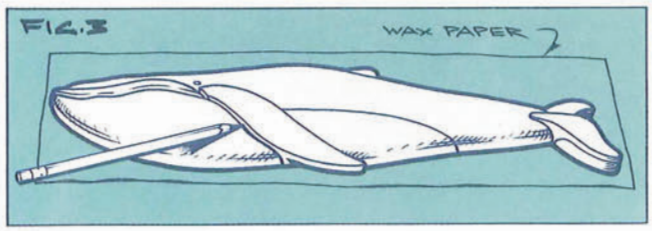
2 Cut one piece of 3/4 in. thick walnut about 6 in. wide by 20 in. long (for parts A, B, C, D, E, and F), and one piece of 3/4 in. thick oak at least 4 in. wide by 16 in. long (for parts G and H). Move the tracing paper pattern around on the stock until you find the best-looking grain, then transfer the pattern by slipping a piece of carbon paper between the tracing paper and the board.

As shown, the two oak parts (G and H) should be laid out on a single board to

maintain continuity of the grain (Fig. 1). For the various walnut parts, try to find grain that works best for each part. As the photo shows, by selecting carefully and paying close attention to grain direction, you can use the grain to help make the piece more dramatic and realistic. For example, by laying out the oak parts so the wood grain is aligned with the natural contours of the whale's body, an essentially flat sculpture takes on a much more lifelike appearance.







3 Cut the walnut part A out. I use a 1/16 in. blade in my band saw, which leaves a fairly smooth cut and is capable of getting into tight corners, such as the end of part A where the tail part F fits. But don't just cut all the parts from the pattern and then expect them to fit perfectly together. You'll get the best fit if you use the larger part as a template for transferring the pattern to the smaller part that will fit up to it. For example, where tail part F fits into part A, by using part A as a template to trace the section of part F that fits into it, the fit will be nearly perfect. This technique is especially important where parts A and H meet. As shown in Fig. 2, use part A as a template to trace the top profile of part H, redrawing over your original pattern line. Since the original pattern line will be from the carbon transfer, by using a pencil you should be easily able to distinguish the final cut line from the carbon copy line.

4 Once all your parts are cut, sand to final adjust the fit of the pieces. Dry assemble parts A through H, to make certain everything fits properly.

Next, you'll need to go to work raising, lowering and shaping the individual pieces. First, you'll need to thin down parts B and E to 3/8 in. thick, then raise part C and part D by 1/8 in. and 1/4 in. respectively. You can rip down parts B and E on the band saw to their 3/8 in. thickness. To raise part C, rip a 1/8 in. strip of walnut, then glue the strip to the back of C (note that you'll need to shape the 1/8 in. thick shim to match the profile of part C). For part D, first use a 1/2 in. drum sander to contour the flipper (the side view of the pattern should help here), then rip a 1/4 in. thick strip of oak and glue it to the bottom of D, fairing the profile to match. A 1/4 in. plywood riser under the rest of part D will support it at the proper level.

5 I've found that the easiest way to assemble this type of intarsia project is to place a sheet of waxed paper on a flat surface and then glue the various pieces together on the waxed paper. When the glue dries, I peel off the waxed paper, and trace the profile onto the backboard stock (1/4 in. plywood), before cutting the backboard to size.

Start by gluing part H to part A. With a good fit, clamping shouldn't be necessary. When dry, belt sand so the tail area of part A tapers down to about 1/2 in. thick. Then use a large sanding drum to round the outside edges of parts A, H and G.

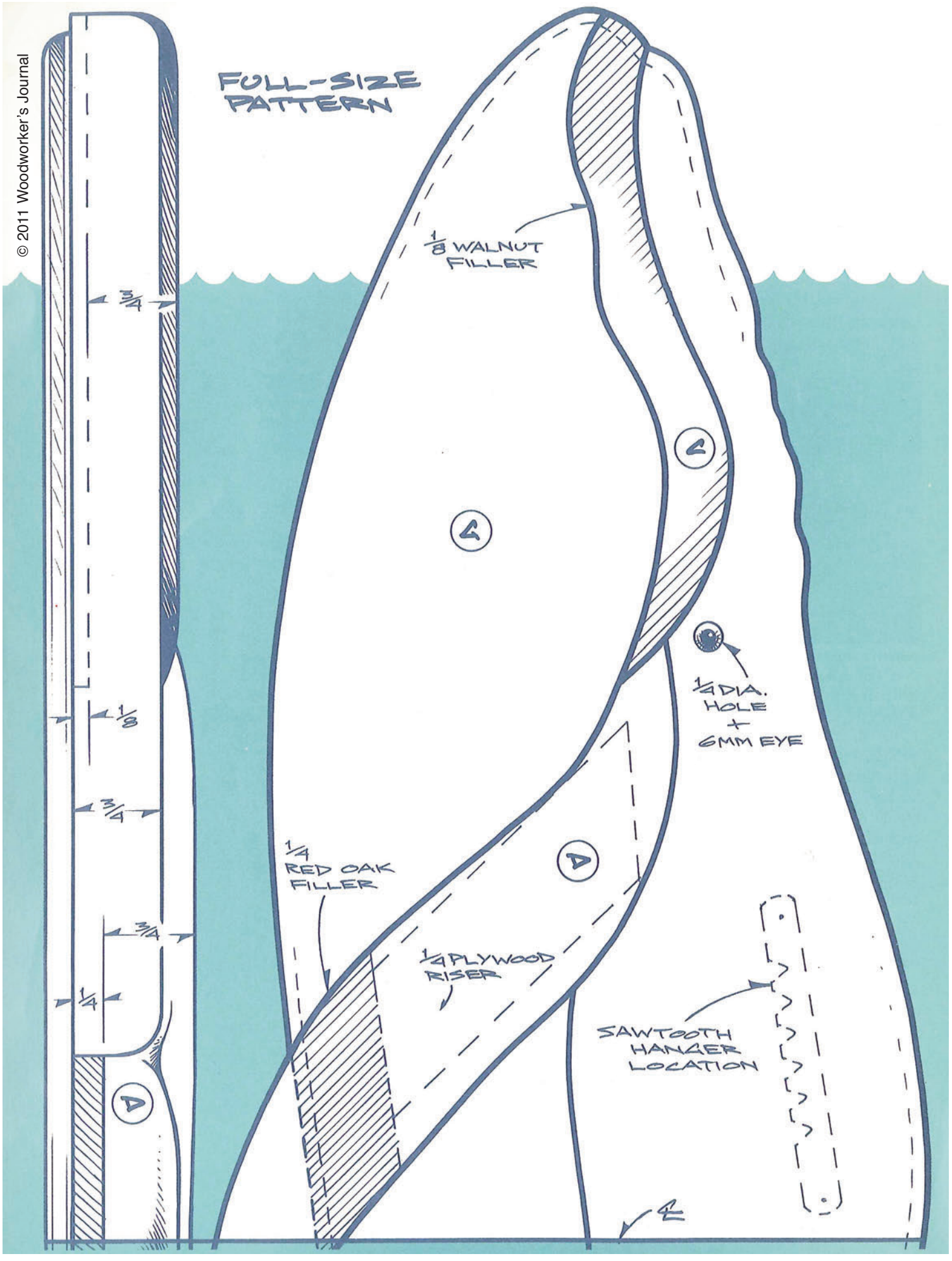
6 Parts C, D and F are rounded down to meet the parts they butt up to. To determine where the rounded section on these parts starts, dry assemble the remaining pieces to parts A and H. Your whale should look like the one shown in Fig. 3. Now take a sharp pencil and scribe a line around the edges of all the parts that rise above the contour of the whale's body. This scribed line is your guide as you sand and contour parts C, D and F. Dry fit the parts as you work, checking that everything looks right. Also, drum sand the back of part F as shown in the side view of the pattern, contour parts B and E, and drill a 1/4 in. diameter hole deep enough to accommodate the 6 mm glass eye,

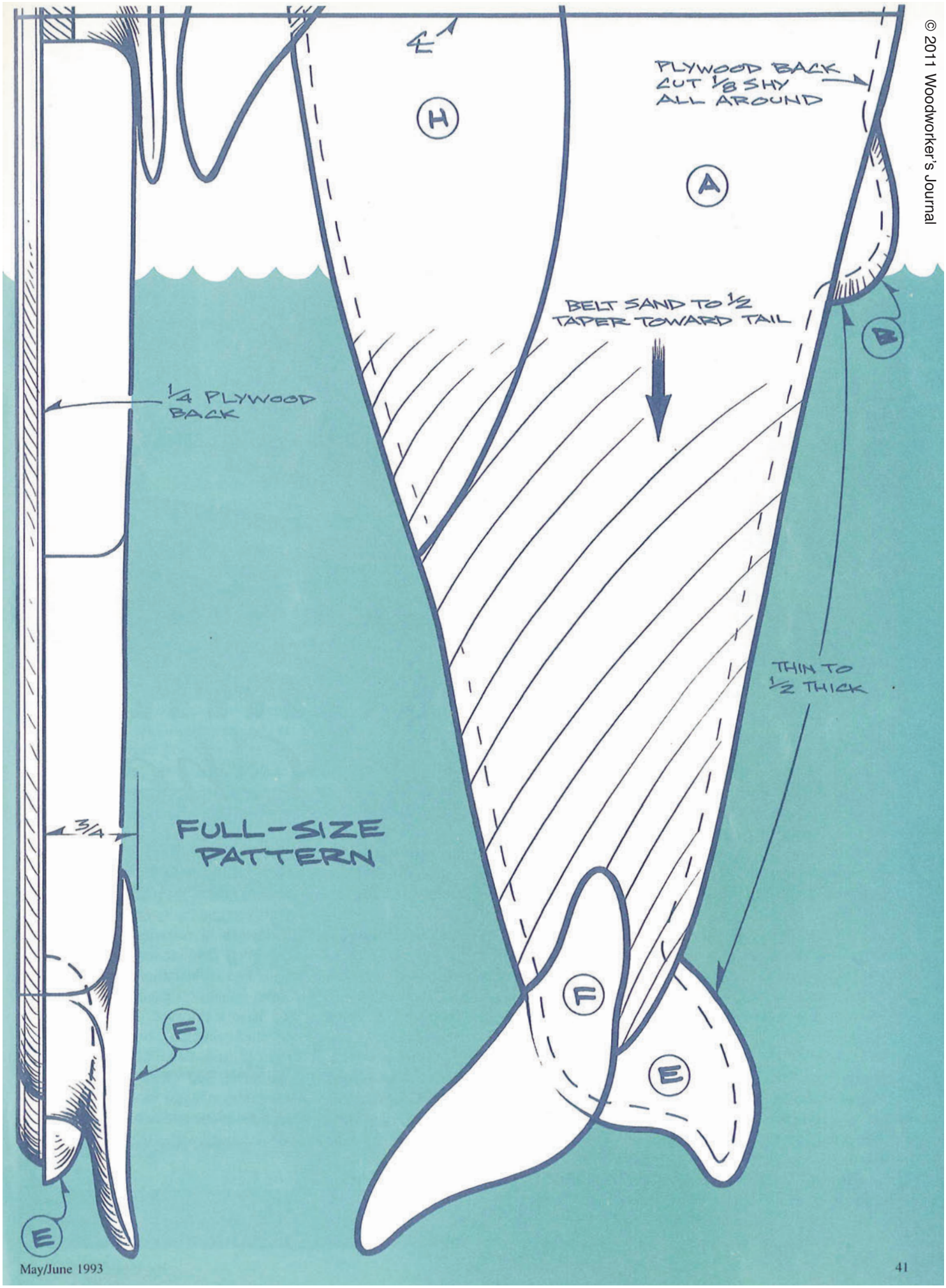
7 Still working on the waxed paper, glue the remaining pieces of the whale together. Regular wood glue is fine, but if your pieces have any gaps, use an epoxy instead. The epoxy will fill the gaps. When dry, peel off the wax paper, and trace the outline of the whale onto a piece of 1/4 in. thick by 6 in. wide by 20 in. long plywood, which will serve as the backboard. As the full-size pattern shows, you should cut the backboard so it's slightly smaller than the whale. Note that parts of the flipper (D) and the lower fluke (F) overhang the backboard.

8 All that remains is to glue the whale to the backboard, spray on the clear Krylon finish, attach the sawtooth hanger and epoxy the eye in place. Now, find an appropriate wall to show off your work, hang the whale, step back and . . . admire!

Materials List

- Walnut 3/4 in. x 6 in. x 20 in.
- Red Oak 3/4 in x 4 in. x 16 in.
- Plywood 1/4 in. x 6 in. x 20 in.
- 6 mm glass eye
- Sawtooth hanger
- Krylon no. 1311 Matte Finish Spray Coating





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