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Classic Project

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- 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.

Heart-Shaped Collapsible Basket

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Heart-shaped Collapsible Basket

You've probably seen baskets similar to this heart-shaped basket at craft stores or fairs. Collapsible baskets, in shapes from ovals to apples, have been one of the more popular woodworking gift items of late. The heart-shaped basket shown is courtesy of Deep Spring Studio, of Petersburg, West Virginia. Deep Spring specializes in collapsible wooden baskets made from attractive laminations of contrasting woods. The basket in the photo is made from red oak and padauk, with wenge accent stripes, but you can use either solid boards or any combinations of hardwoods that you have handy for your basket.

Collapsible baskets are pleasant to look at, but irresistible to watch in action. With nearly magical ease, a flat board rises up to become a vessel, and then folds down to flat once again. Our photos should give a fair rendering of this action, but there's no substitute for actually seeing it work. Needless to say, although the collapsible basket can be used to hold anything from nuts to candy to breadsticks, you'll probably want to leave it empty. That way you'll be able to demonstrate this clever piece to inquisitive guests without first searching for someplace to put the basket's contents. And there's one other great advantage to collapsible baskets. Their fold-flat capability makes storage a snap; several can fit easily in the average drawer.

The ideal band saw blade for making collapsible baskets is a 1/8 in. fine-tooth, but we were able to cut this pattern using a 1/4 in. wide blade. Keep in mind though, that if you do use a wider blade, your blade will probably have more set, which will produce a wider kerf. Also, you'll have a harder time making the tighter curves, and to compensate for the kerf width, you may need to use a steeper angle setting on the band saw table.

This project isn't difficult to make; there are actually only two band saw cuts for the basket itself, but you'll need to take care with your cutting as you follow the pattern. When we tried this technique in our shop, we were successful the first time out. But the folks at Deep Spring tell us that a technique such as this—

where you are making a long spiral cut—is one where practice will really improve your chances of success.

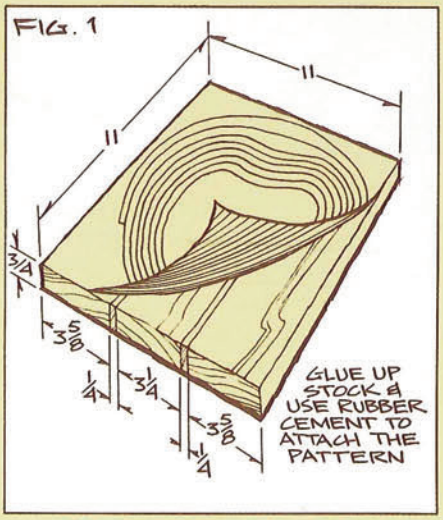
If you make a mistake and are forced to throw out the piece, don't despair. Even the ''pros'' have a certain percentage of failed pieces. And then there are always a few times where, when you open the basket for the first time, a hidden crack or defect reveals itself and the spiral separates. Practice a few times on some scrap stock, and you'll probably be surprised at how simple the technique is. The following step-by-step instructions should make the task easy.

Step-by-Step

1 You'll need a piece of stock 3/4 in. thick by 11 in. wide by 11 in. long for each basket. Laminate the stock from contrasting woods (see Fig. 1), or use a single solid board. But take care to avoid any stock with knots, splits, checks or other defects that could result in a weakness once the basket has been cut.

2 Make a photocopy of the full-size pattern (plus several extra copies for your practice pieces), then use spray adhesive (rubber cement) to fasten the photocopy to your stock, as shown in Fig. 1. You should have little trouble

FIG. 1

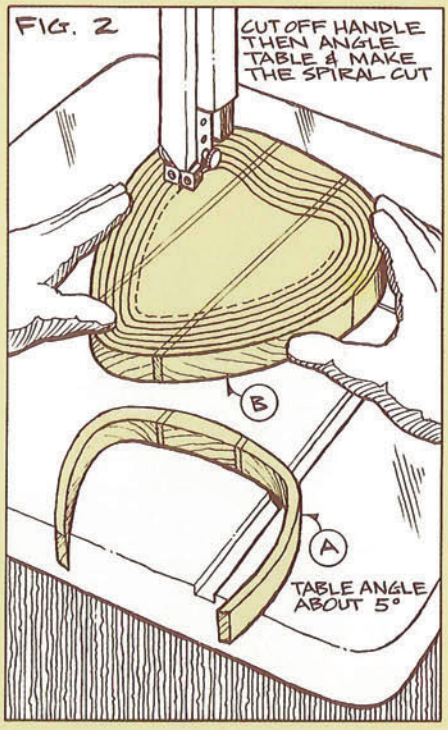


getting a good photocopy by just flattening out the pages, but if for some reason the pattern lines on your photocopy don't align perfectly, you may need to cut and paste to make the correction.

3 Your first cut—the cut to separate the handle section (A) of the basket—is made with the table at 90 degrees to the blade. As shown on the pattern, the handle is cut longer than needed for now; you'll trim the handle ends to lock the basket in the open position once the basket is assembled.

4 Set the handle section aside, then tilt the band saw table over to about 5 degrees to cut the spiral basket section (B), as shown in Fig. 2. But first, make a test spiral in a scrap board, and open the

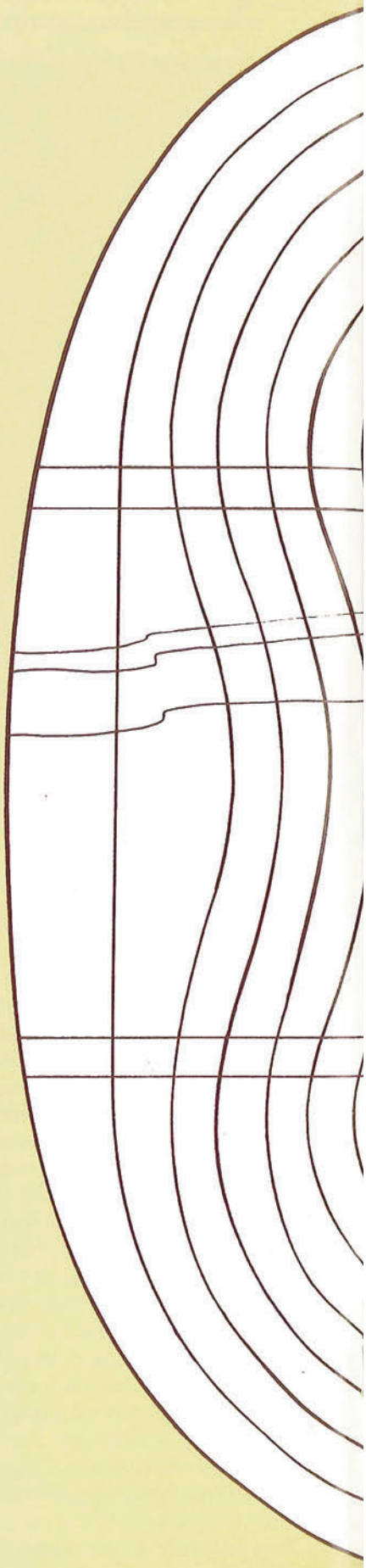
FIG. 2



spiral up. As you open the spiral, the shape should lock open with each spiral about 1/2 in. lower than the one above it. If the spiral doesn't open far enough before locking, decrease your blade angle to 4 degrees. If your blade is cutting too wide a kerf, and the spiral won't tighten up, try increasing the angle or else switch to a smaller blade. If your cut looks rough, or if the kerf is too wide, hold a rough sharpening stone against the side of the running blade. This will yield a smoother cut and slightly reduce the kerf.

Once you are satisfied with the cut produced on your scrap stock, cut the spiral. Work slowly and carefully, staying on your pattern line. Stop the cut at the end of the spiral cut and immediately turn the saw off. Now carefully back the blade out.

The back side of the spiral will have a little fuzz that must be sanded off. But don't just flip the spiral over; if you



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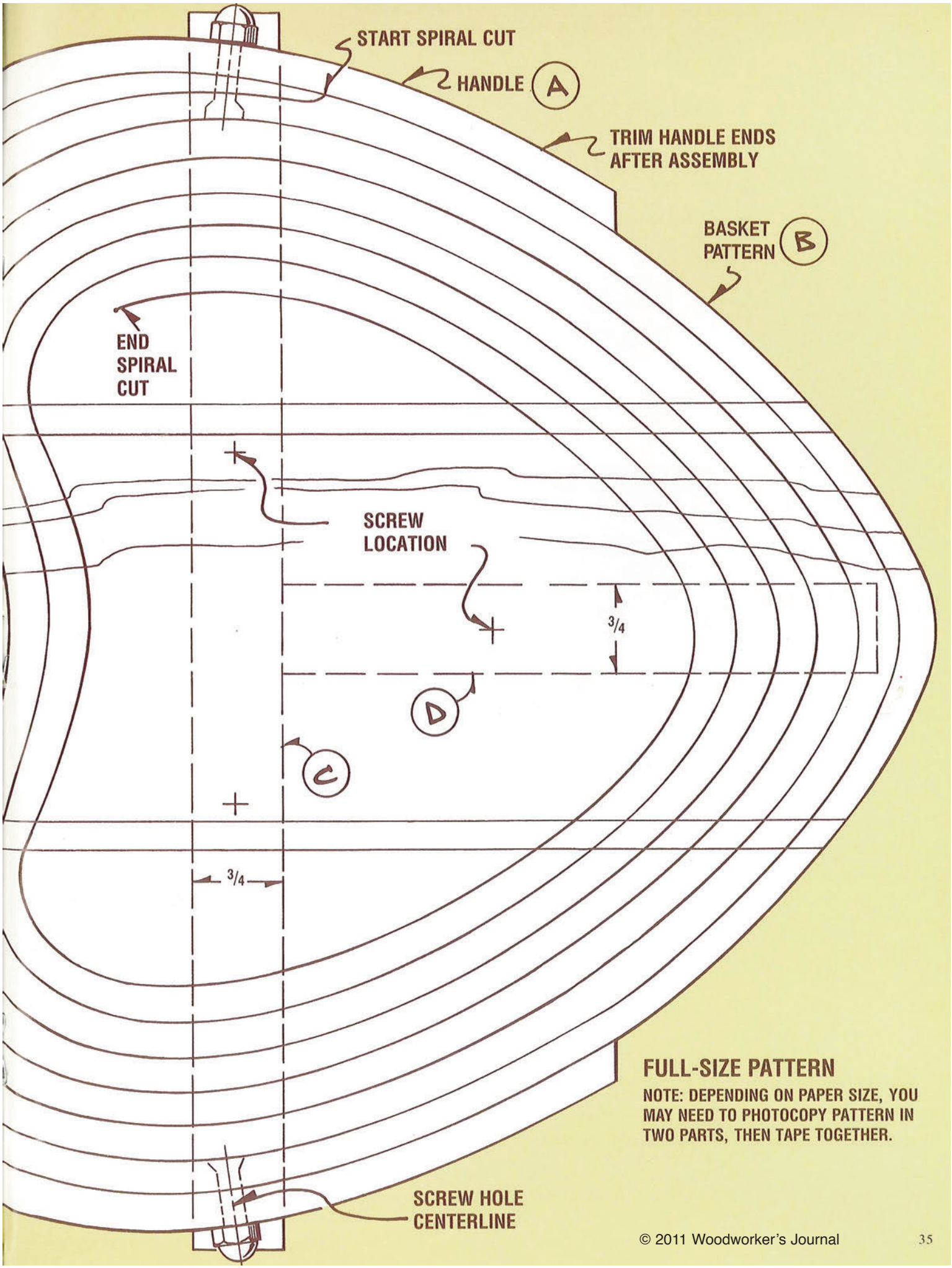

FULL-SIZE PATTERN

NOTE: DEPENDING ON PAPER SIZE, YOU MAY NEED TO PHOTOCOPY PATTERN IN TWO PARTS, THEN TAPE TOGETHER.

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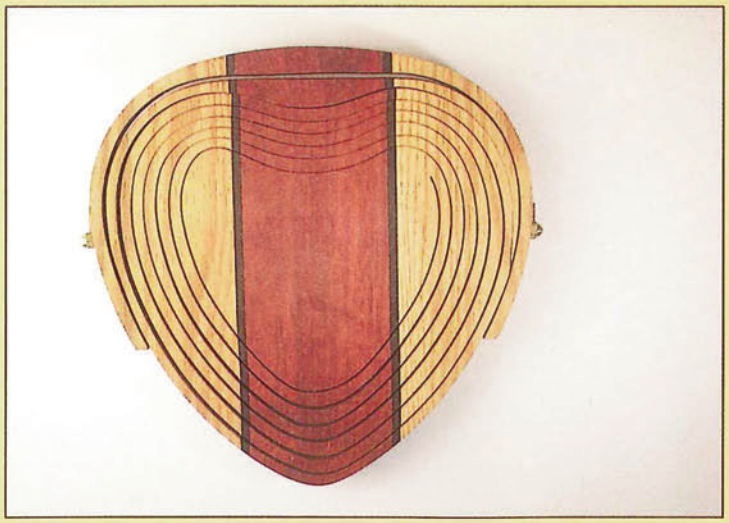


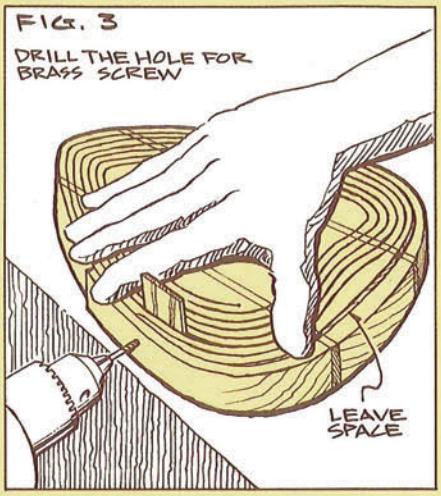
Here is the basket shown in the flat position. Note the slight space left between the handle and the basket.

To open or close the basket without damage, grasp each end of the handle and slide them onto or off the long base strip at the same time.

don't support the upside down spiral with your hand, the weight of the center section will likely cause the spiral to break. You'll also need to sand to remove a little stock at the bottom edge of the outermost spiral, on either side of the area the handle will mount to. If you don't remove this stock, the handle will catch on the edge as the basket is opened (this is somewhat difficult to explain, but you'll understand immediately if you assemble the basket without first making this adjustment).

5 Next up is drilling the holes for the brass screws that mount the handle to the basket. You have several options here but the easiest is to hold the basket on a flat surface, as shown in Fig. 3, insert a thin slip of scrap wood between the spirals as a backing piece, and then drill very carefully through the handle and into the outside spiral. In Figure 3 we're drilling through the right side of the basket, so you'll be drilling through the handle and *two* layers of the spiral. For the hole on the left side, you'll drill through the handle and *one* layer of spiral, so locate your backing piece appropriately.

Note, as also shown in Fig. 3, that there's a slight space between the handle and the top edge of the basket. If the handle is too tight against the top of the basket, it won't be able to pivot easily up or down (the handle will bind or catch



against the top edge of the basket). To eliminate this problem, you'll need to either move the handle up slightly in relation to the basket before drilling the holes, or sand the top edge of the basket. Either way, the idea is to have that slight space between the handle and basket, once the basket is assembled. The photo of the basket in the flat position shows the proper orientation.

After your holes are drilled, remove the handle and countersink the holes on the *inside* of the spiral so the heads of the machine screws that mount the handle will be slightly recessed. Making these countersinks is a bit fussy, since you need to open the spiral to get clear access. If you have a hand countersink, it's ideal, but even with a hand drill, you shouldn't have a problem. Don't worry if the countersink isn't straight—the goal here isn't perfection, just a sufficient recess so the screw head doesn't catch on the spiral that faces it.

Mount the handle with a pair of 8-32 by 3/4 in. long brass flathead machine screws (E) and acorn nuts (F). Most hardware stores carry these items. Test the action of the handle; if everything works as planned, remove the acorn nuts, place a dab of epoxy inside them and reassemble. By locking the screws to the acorn nuts you'll avoid the problem of the nuts gradually working loose.

6 Next make the base. Rip sufficient stock for the long and short strips (C, D), then cut to length. Using the full-size pattern as a guide, mount the strips to the bottom of the basket with three 3/4 in. long by no. 6 brass flathead wood screws (G). You'll need to coun-

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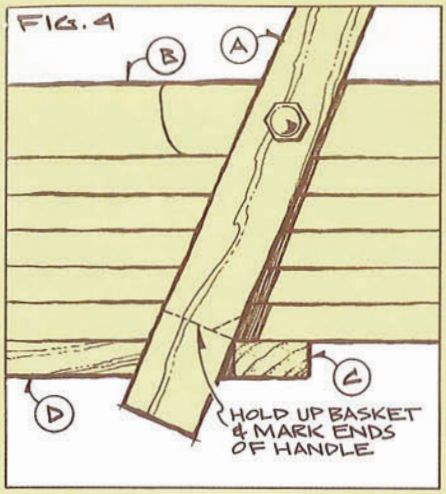
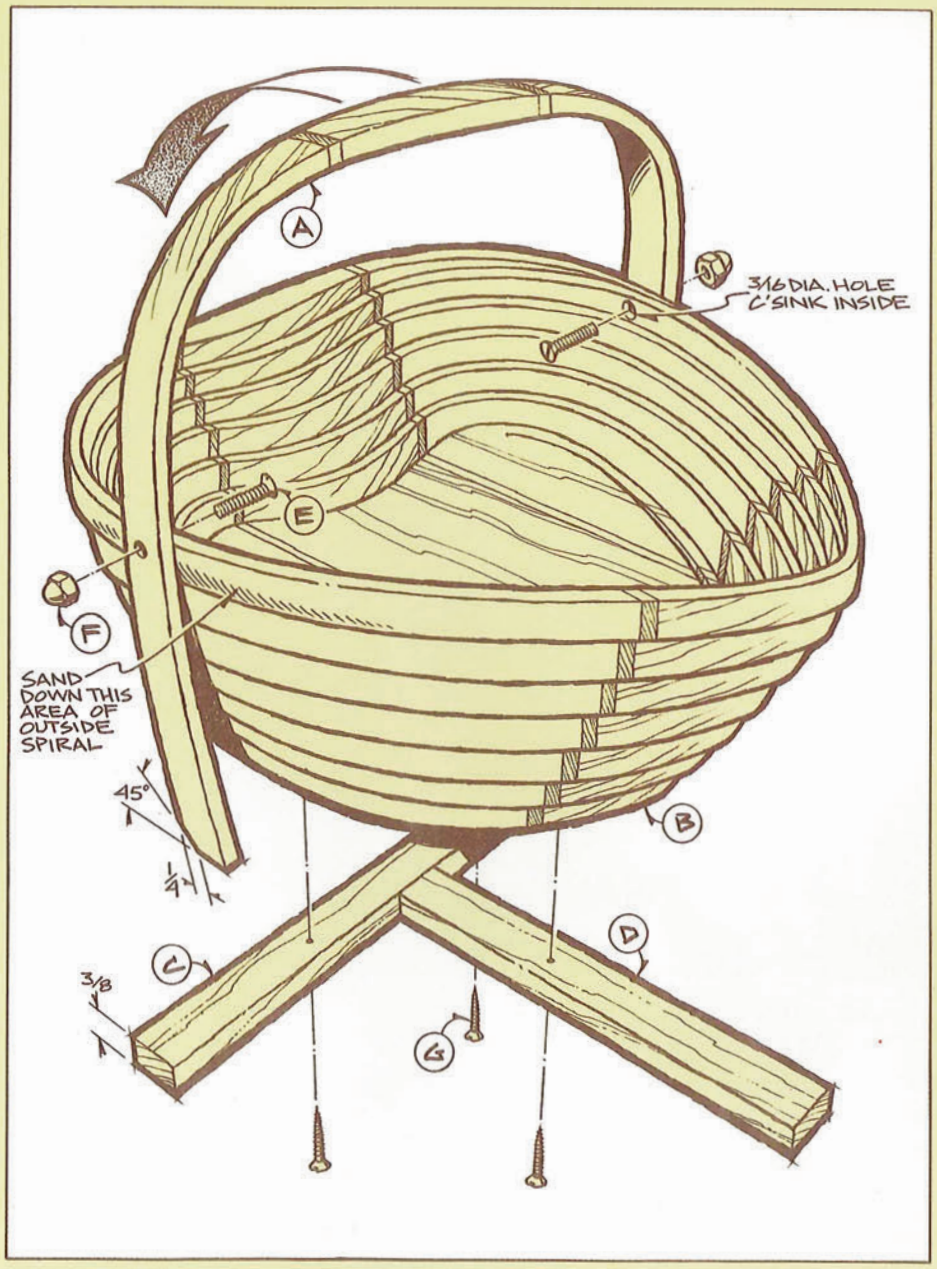


tersink for the screw heads and, as with all screws in hardwood, predrill for the shanks to avoid splitting.

7 Next up is trimming the handle ends so the handle will lock in against the long base strip with the basket in the open position. As shown in Fig. 4, open the basket to its maximum height, pivot the handle up, and mark where the handle contacts the long base strip (the distance from the acorn nut to the scribe mark should be the same on both handle ends, if the basket is to look right in the open position). Trim the handle ends at the scribe marks, and make a 45-degree cut at the corner, as shown in the exploded view. The 45-degree corner cut helps ease the handle ends up onto the long base strip as you open the basket.

At this point, we should point out that there is a proper way to open and close the basket. If you attempt to lock one end of the handle in first, and then the other end, you risk torquing the basket—and possibly breaking it. The proper technique is demonstrated in the photo on page 36. With one hand grasping the handle at each end, slide both handle ends up onto the long base strip simultaneously. Reverse the procedure for closing the basket.

8 All that's left is removing the paper pattern and applying the finish. Lacquer thinner will take off both the paper and the spray adhesive. Once removed, final sand the basket. The outer perimeter of the handle and basket are sanded, but don't attempt to sand between the spirals. Our basket was finished with several coats of penetrating oil. WWJ



Bill of Materials
(all dimensions actual)

Part	Description	Size	No. Req'd.
A	Handle*	See Full-size pattern	1
B	Basket*	See Full-size pattern	1
C	Long Base Strip	3/8 x 3/4 x 10 1/4	1
D	Short Base Strip	3/8 x 3/4 x 5	1
E	Brass Machine Screw	8-32 x 3/4 long	2
F	Brass Acorn Nut	8-32	2
G	Brass Wood Screw	3/4 long x no. 6	3

* Handle and basket are cut from same 3/4 x 11 x 11 source piece.

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Internet Production Coordinator

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