

Reproduce an Antique Kitchen Clock Shelf: An Interesting Challenge

by David J. Hagberg (MA)

Kitchen clocks, as they were called by their manufacturers, are interesting, low-cost collectibles. They were made by the millions, and many good extant examples can be found today. The variety of these individual antique pieces is astounding. A good portion of the American horological scene 80 to 130 years ago was the Connecticut 8-day kitchen clock. In my house, it still is.

A period accessory for these clocks is a clock shelf, but good extant examples are not easily found. In this article I explain how anyone with some woodworking skills and a modest workshop can reproduce a clock shelf—and how to make the shelf look “right.”

Through this process step by step, I guide you by using one shelf as an example, but my methods can be used for making a replica of almost any period clock shelf. The original Eastlake-style black walnut clock shelf (Figure 1) that inspired me for this article was at an auction my son previewed. His photographs served as the template from which I copied the design. Using photographs or illustrations in this manner for any clock shelf is a useful guide for reproducing an antique clock shelf.

A scale for the shelf must be established, but not all kitchen clocks have the same base size. I measured the base of the Eastlake-style clock and added about a half inch on three sides of the shelf surface for a comfortable margin. From that measurement I determined the scale.

A copier with a scaling feature is the tool of choice for making the other parts to scale in full size. Adjust the percentage on the copier until the back piece fits the desired measurements of the top. For example, if the measurements do not fit at 125 percent, then increase the size to 150 percent. For the back you only need to make half, that is, one side of a template, because the part is bilaterally symmetrical. The pattern can just be flipped over when tracing, which ensures symmetry. Some shelves have a skirt in front, and that requires a half-template as well. For the brackets—usually there are two—only one template is needed because they are both the same.

After the paper pattern is completed, cut out the outlines with scissors. The outlines should be placed and traced on the wood that will be used for the shelf (Figure 2).



Figure 1. This is the original Eastlake shelf that I copied for this article. COURTESY OF ANDREW HAGBERG.

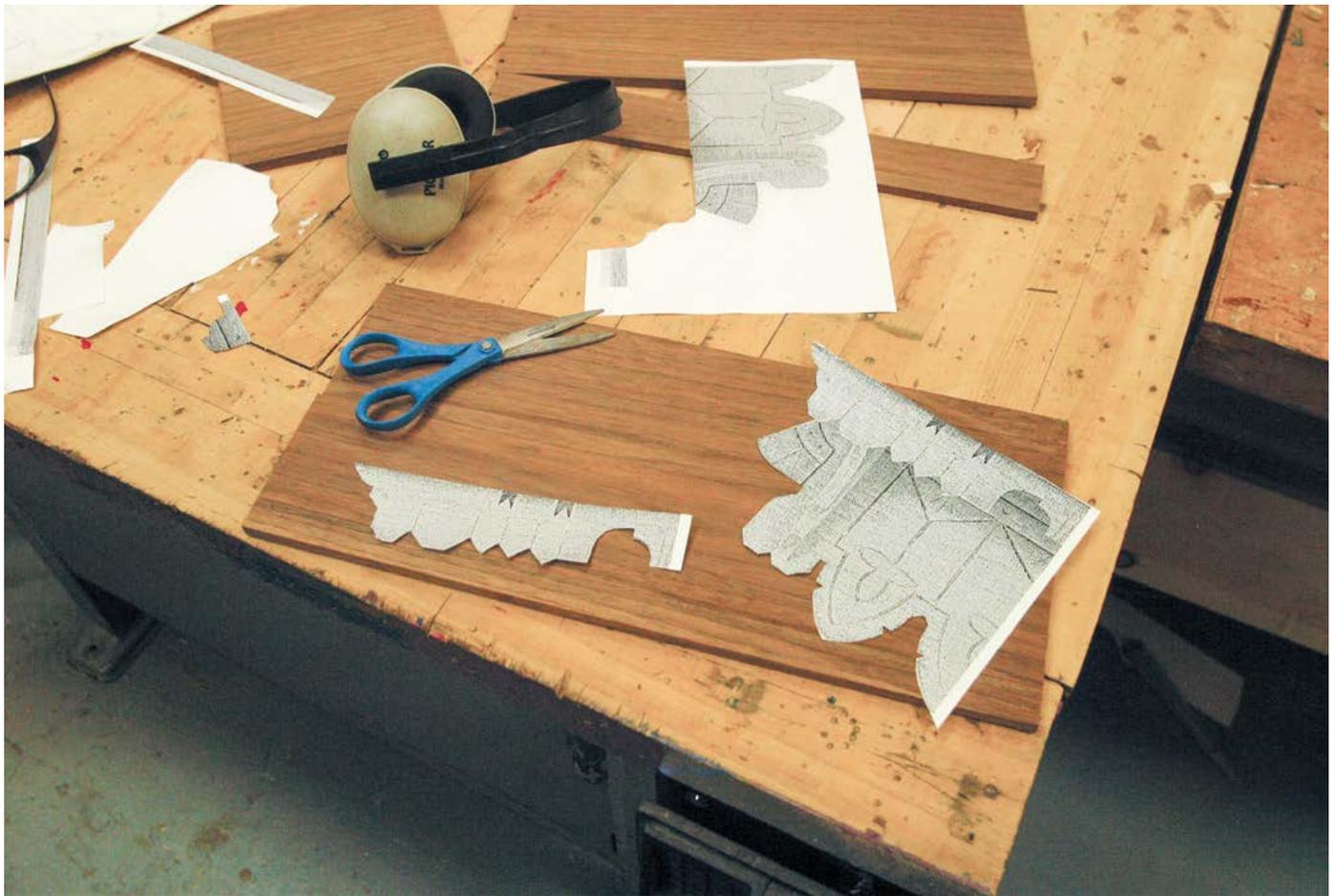


Figure 2. These patterns were enlarged on a copier and are ready for tracing.

A word or two about the wood is in order here. I have determined that 3/8" thickness is just about right in almost every instance. Thicker than 3/8" makes the piece look too "heavy." A portable benchtop planer can be used to bring the wood's thickness to 3/8".

For this shelf I used part of an old solid black walnut desk top. Walnut is a good choice for your first attempt at shelf making because it is easy to carve. Oak, probably the most common wood found in kitchen clock cases, is harder than walnut and has an open pore structure. Those factors make oak more difficult to work, but do not be intimidated by those factors if all your kitchen clocks are oak. I also use old wood salvaged from discarded pieces, which adds to the authentic appearance of the finished product.

After the parts are traced on the wood, they need to be cut out. A band saw (Figure 3) is the best tool for this job, but a handheld jigsaw will work just as well. If you have a jigsaw in good working order and a

sharp blade, turn the oscillating feature to "off." A coping saw also could be used with perfect results.

Once the pieces are cut out, the edges must be sanded so they are free of saw marks. In addition to sandpaper or sandpaper paddles, I have a labor-saving device of my own invention: epoxy a thin strip of wood to each side of a dull jigsaw blade. Then epoxy thin strips of a sanding belt to the wood. Install this sanding paddle in the jigsaw, and sand all of the little detailed surfaces around the edges.

Do not back out at this point; carving is the next step. I assume that every person reading this article has had a little more carving experience than whittling a stick that will accept a marshmallow for toasting over a campfire. My carving methods are easily mastered, at least good enough for a clock shelf, and require unsophisticated tooling.

The supplies needed are a C-clamp, a couple of scraps of wood, a No. 2 pencil, a steel ruler, and a "banana knife." The primary carving tool is a Stanley

utility knife or its equivalent. It would be useful to buy some new blades and practice a bit of carving on a scrap piece of wood.

The image to be carved must be drawn onto the wood using a pencil. Try to make the pencil guidelines symmetrical, but do not get too obsessed with perfection. Extant antique clock shelves have errors too, and they are hard to detect. Trace the lines as double lines, because you will be carving out a vee profile. The distance between the guiding lines will determine how wide the vee channel will be. The details I carved in my clock shelf were about $3/32''$ wide. I just eyeballed it, but for those seeking more precision, use a $3/32''$ drill bit to determine the distance between the carving lines. A ruler or straightedge makes the job easy for straight lines (Figure 4). If a repeating pattern is used, trace out the detail section on paper, cut it out with scissors, and trace the pattern on the wood. For a curved line, bend a strip of sheet metal and trace, and flip it over for the opposite side. That little trick will ensure symmetry.

Now it's time for carving (Figure 5). Clamp the wood to the workbench, placing a scrap between the business end of the clamp and the workpiece. Make the first cut on a short line perpendicular to the grain. Cutting in line with the grain is a bit more challenging, because the blade will try to follow grain lines. Cut with the blade against the ruler.

Try to imagine the proper angle of the knife blade, so the vee channel is the desired depth. Then cut on the opposite side of the line just cut, trying to make the tip of the knife intersect at the bottom of

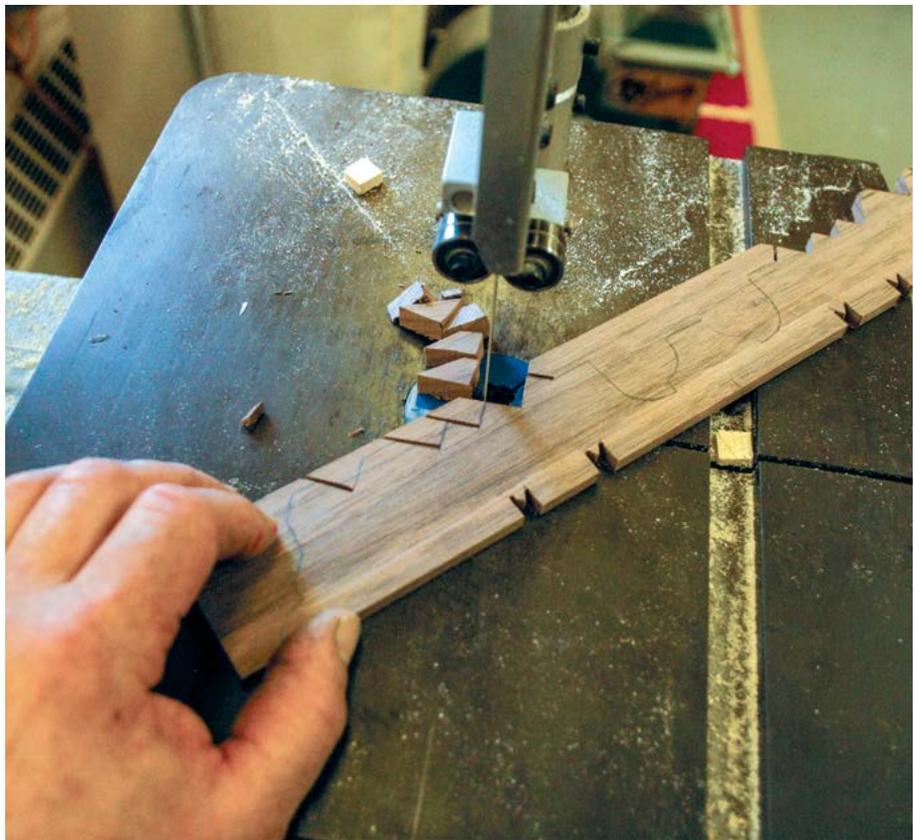


Figure 3. The sawtooth design is cut into walnut using a band saw.

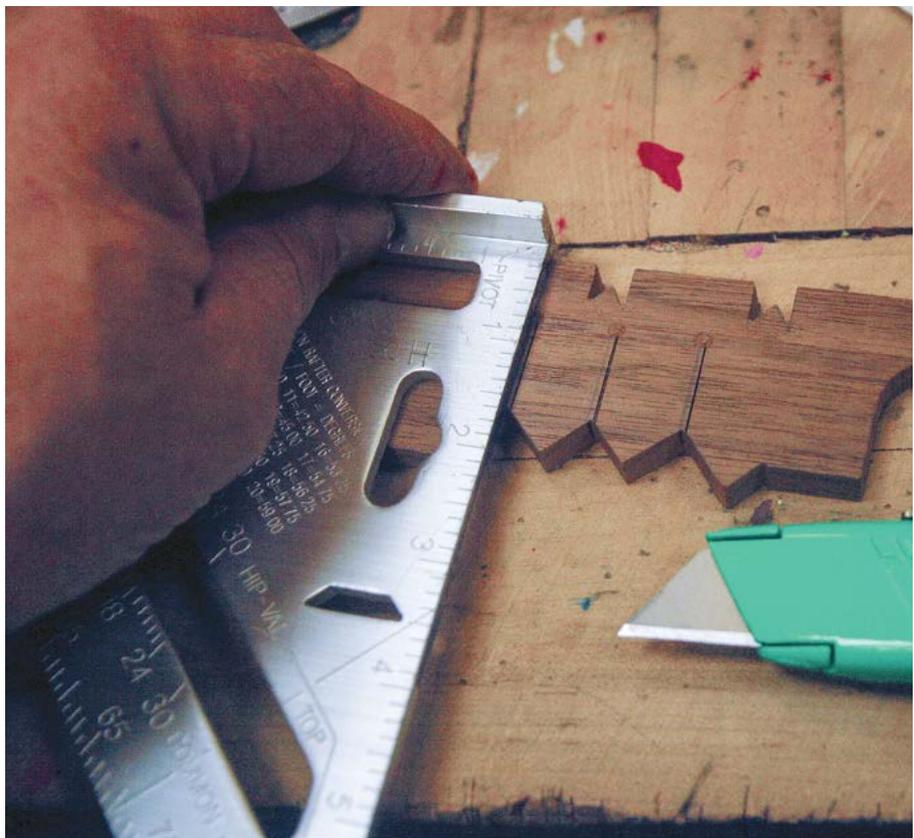


Figure 4. A straightedge and utility knife were used to establish the carving lines.



Figure 5. A C-clamp and utility knife are used in the carving process.

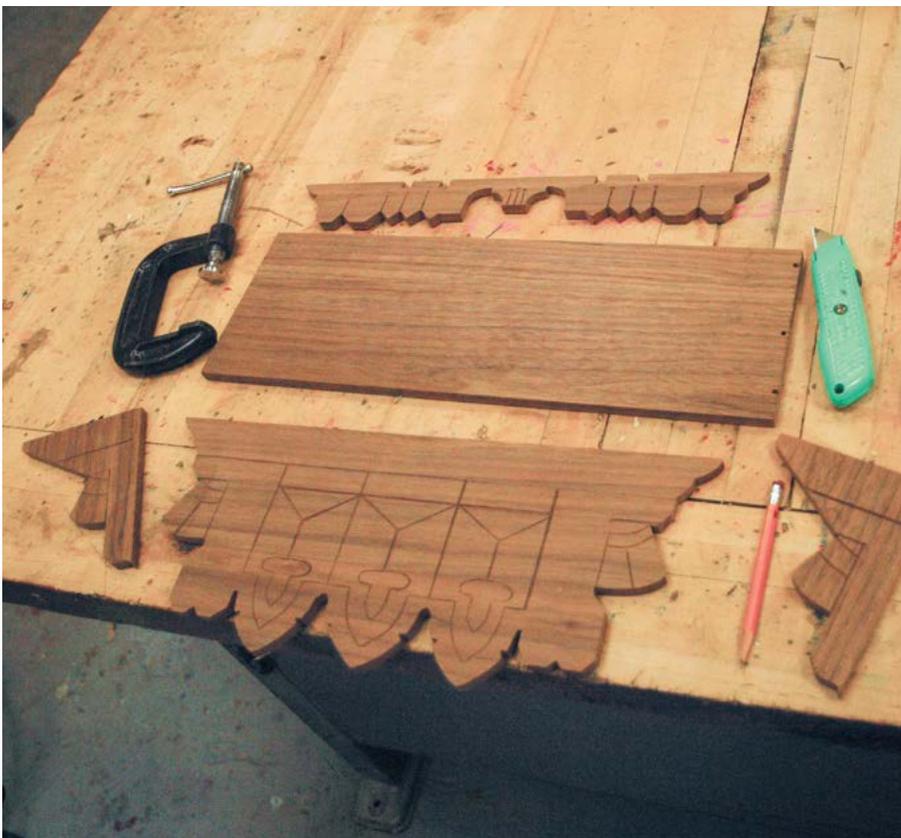


Figure 6. These are some of the parts after they were sanded.

the vee of the previous cut. With luck, you will have cut a perfect channel and there will be a little strip of wood triangular in cross section that just lifts up out of the vee. Once some straight lines have been carved, try making clean corners where lines intersect. Then it's time to go around curves.

For a tight curve, just go a little ways. Move while pulling the knife along the curve with your body in a comfortable position so you can follow the curve. If you are doing a repetitive pattern, make all similar cuts while standing in the same place. I believe that's what the carvers did when those shelves were being produced back in the day, and if it worked for the old masters, it will work for you.

Of course, you will make a mistake. I certainly did, scratching a deep line across the grain with my knife in the wrong place. I sighed, gathered up some fine walnut sawdust, mixed up some five-minute epoxy, stirred in the sawdust, and slapped it on over my mistake. Then I went to lunch. After lunch I took out the sander and sanded off most of the epoxy. My repair looks no more offensive than a light pencil line that someone forgot to erase.

After all parts are carved, the pieces must be sanded (Figure 6) and then assembly begins. If you want to make your clock shelf authentic, simply nail it together. All extant examples I have seen are nailed, and the craftsmen were not any too careful about it either. For this shelf I used brads supplemented by glue (Figure 7). The brackets are simply nailed, because gluing a bracket across the grain of the back piece will not allow seasonal wood movement.

Brads are strong enough and will bend slightly as the wood swells and shrinks with variations in humidity.

Finish with the products of your choice. Figure 8 shows the original and the duplicate. The best you can hope for is someday an antiques authority will look at your clock shelf and say, "Well, that's a really nice antique clock shelf. If it still had the original finish, it might be worth more than the clock!"

Hopefully, I have encouraged a few readers to try this project. Figures 9–12 show examples of other reproduced shelves in various styles. A room full of kitchen clocks all paired with appropriate shelves would certainly add interest to your collection.

About the Author

David J. Hagberg's first career path was as a clockmaker for the Cheney family of Worcester, MA. He holds a bachelor's degree in music as well as a master's in education. For the past 15 years he has been the technology/engineering (woodshop) teacher at Gibbons Middle School in Westborough, MA.

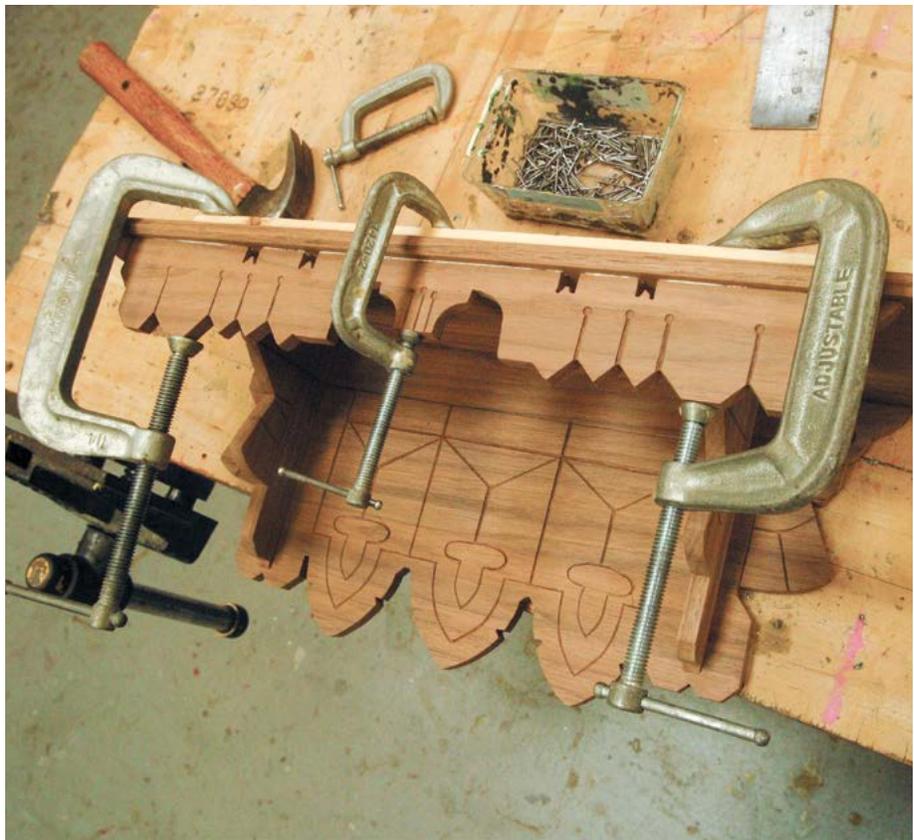


Figure 7. The parts were glued and nailed together to create the clock shelf.



Figure 8. The original shelf is on top and the duplicate one is on the bottom.



Figure 9. Duplicate piece made from an online photo of an antique clock shelf.



Figure 10. Duplicate Ingraham cabinet clock.



Figure 11. A duplicate in oak.

Figure 12.
Ansonia clock
on reproduced
oak shelf.

