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# Miniature Mantle Clock



Sometimes, when I am sitting alone in my workshop, I take up one or more pieces of choice wood and feast my eyes on the various colors that make up the character of the grain. To hold the wood up to the light and see the way the grain shimmers and glows, to see how two pieces of wood look when they are held side by side—and then to imagine how the wood might be used for a special project—these are unique quality-time experiences that should not be missed.

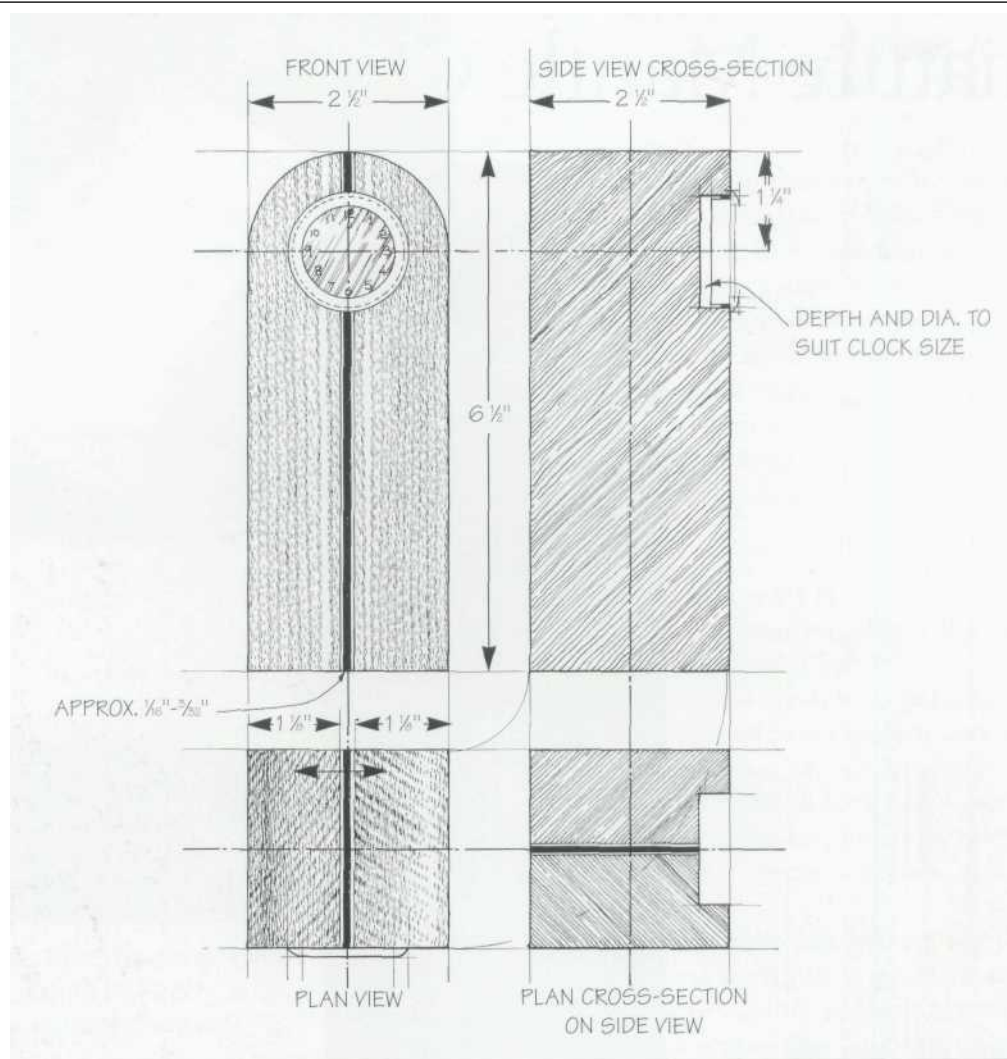
This project draws its inspiration from one of my alone-in-the-workshop musings. The problem was how to bring together three relatively small pieces of choice exotic wood—a scrap of ebony salvaged from an old long-gone piece of furniture, a sliver of silver sycamore veneer left over from a marquetry project, and a short length of dark wood that I've been using to prop open the door. Anyway,

I tossed all sorts of ideas around in my head—a small piece of laminated jewelry? a turning? a handle for a knife? a drawer pull? And then it came to me . . . why not make a small clock case!

## MAKING THE CLOCK CASE

First things first. Before you do anything else, you need to search out a miniature watch-clock and a Forstner drill bit sized to fit. For example, as my clock (described in the catalog as a "watch-clock miniature suitable for block and drilled recess mounting") measures slightly under 1 5/16" diameter across the span of the back and about 1/4" in depth, I reckoned that I needed a drill size of 1 3/8".

When you have obtained the clock-watch and the drill size to suit, take your chosen pieces of wood and plane and sand the mating faces down to a true finish. This



done, smear white PVA glue on the mating faces and clamp up.

Having waited for the glue to cure, set the compass to a radius of  $1 \frac{1}{4}$ " , spike it on the center veneer at a point about  $1 \frac{3}{8}$ " down from top-center, and then strike off a  $2 \frac{1}{2}$ "-diameter half-circle. When you are happy with the way the lines of the design are set out on the wood, move to the band saw and cut out the curve that makes the top of the case.

Use a square to mark out the baseline, double-check that it is absolutely true, and then cut off the waste with a small-toothed backsaw. It's important that the baseline is square to the center line of the block, so spend time getting it right.

When you are sure that the block sits square and true, move to the drill press and bore out the recess for the clock. Bore down to a depth of about  $\frac{3}{8}$ " .

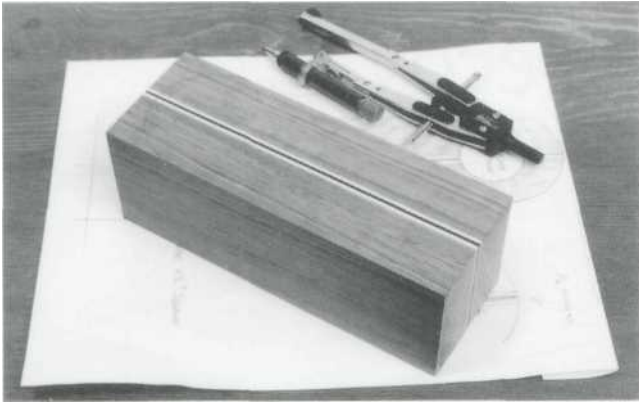
Having bored out the recess, take a scrap of sandpaper

and rub down the inside of the recess, so that the clock-watch is a tight push fit. If necessary, use a straight gouge to cut a little scoop for the hand-setting knob that sticks out at the side of clock case. When you have achieved a good fit of the clock-watch in the recess, rub the whole block down on a sheet of fine-grade abrasive paper. Finally, burnish the block with beeswax, slide the clock-watch mechanism in place, and the project is finished.

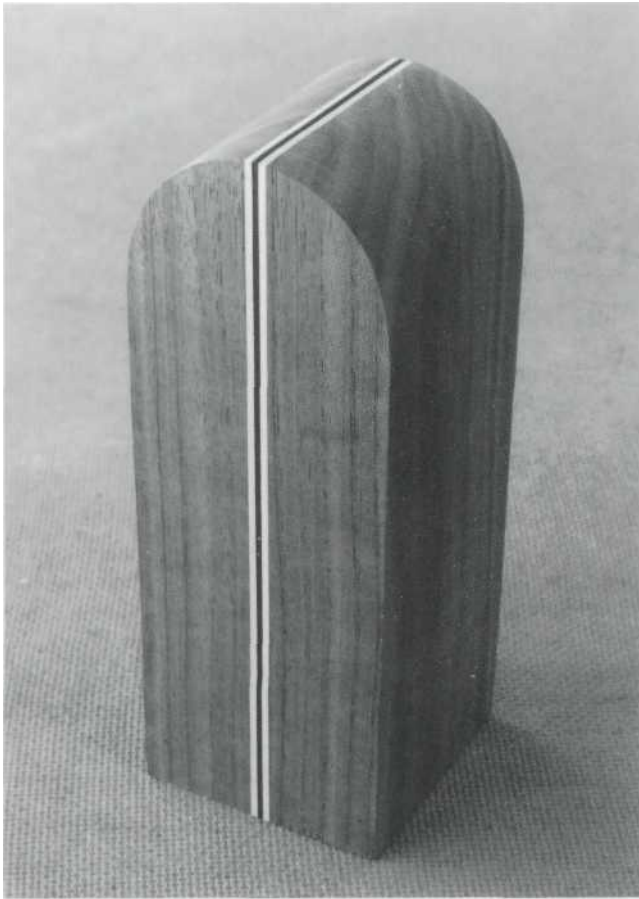
### SPECIAL TIP: LAPPING

The best way of rubbing the faces of the block down to a smooth, true finish is to use a technique known as lapping. All you do is mount a sheet of medium-grade abrasive paper to a slab of  $\frac{1}{2}$ "-thick plywood so that the grit side is uppermost. Then clamp the slab in place on the bench. In use, the workpiece is rubbed in the direction of the grain, backwards and forwards. The procedure is rerun with finer and finer grades of paper.

## STEP-BY-STEP STAGES



1. pass radius to 1 1/4" and strike off the arc that makes the top of the case. Make sure that you spike the compass point on the middle of the fine black laminate.



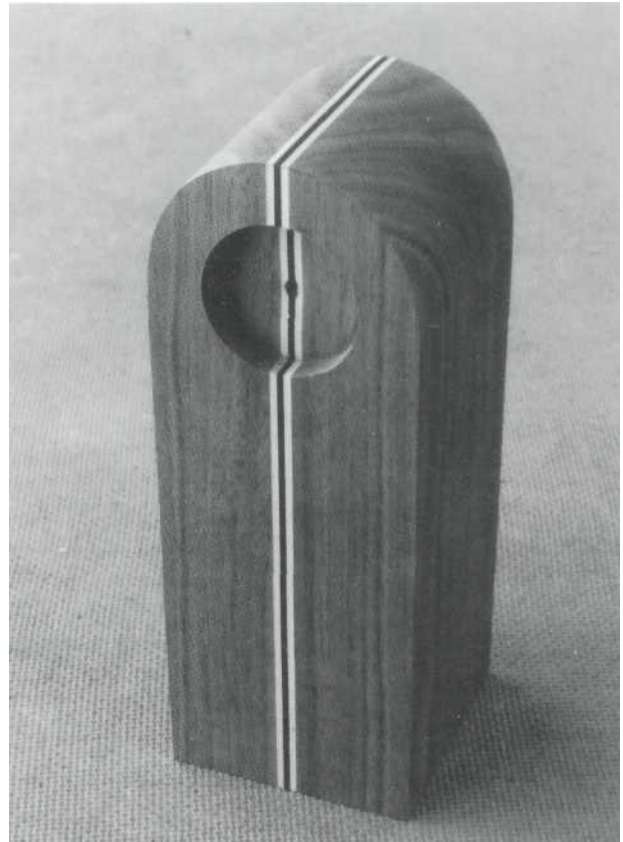
2. Having cut the curve on the band saw, run the faces of the block down on a series of lapping boards. Work through the grit sizes, from a medium-fine through a super-line flour grade. Only work in the direction of the grain, and be careful that you don't blur the sharp corners.

## MATERIALS LIST

A Outer faces (2)	1 1/8" × 2 1/2" × 7"
B Central lamination (1)	1/16" - 3/32" × 2 1/2" × 7"
C Side-of-center laminations (2)	1/16" - 3/16" × 2 1/2" × 7"

## HARDWARE AND EXTRAS

D Quartz clock-watch, 1 7/16" diameter—best if it has a push-fit rubber band friction fitting



3. Having selected a Forstner bit sized to fit the diameter of your clock, sink a recess to the appropriate depth. The success of the project hinges on the hole being perfectly placed, so spend time getting it right.