14

SHAKER-STYLE PEDESTAL STAND

Cherry, Walnut, White Pine

MAKING THE SHAKER STYLE TWO DRAWER PEDESTAL STAND

After the stock has been dimensioned, glue-up the top panel and set aside to cure. The pedestal is turned next.

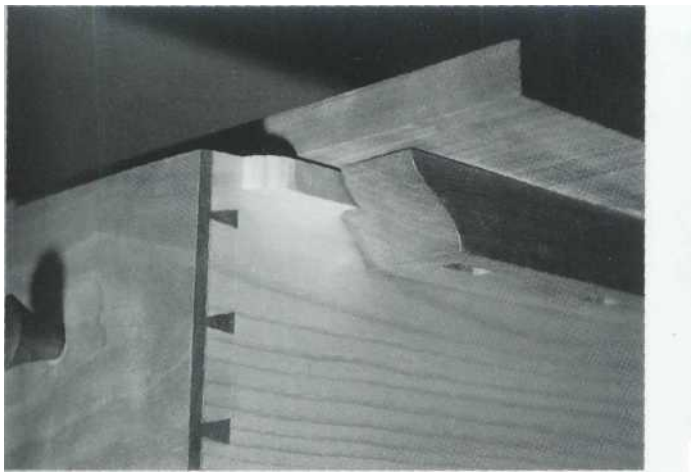
Although the arrangement of coves, beads and vases will be determined by the craftsman's individual tastes, there are two areas along the length of the pedestal that must be shaped to meet the requirements of joinery.

The first of these is the very top section, the one that will eventually become the tenon fitting into a mortise cut into the center cleat. In order to create at this location a joint that would lock more positively than would a round tenon in a round mortise, I decided to cut that tenon into a l"X 1" square. This meant that the diameter of that top section could be turned to no less than 1 7/16″.

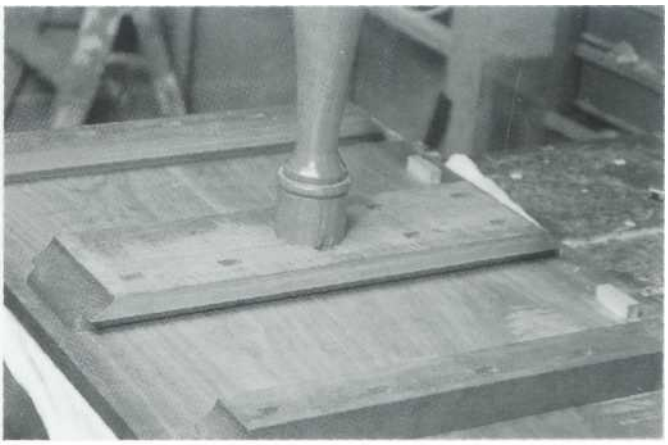
The second area requiring special attention is the base into which the tenons (or sliding dovetails) are fit. The exact diameter of this section is, of course, up to the discretion of the individual craftsman, but it is very important that a consistent diameter be maintained along the full 5 1/4"

The walnut drawer pulls contrast nicely with the cherry drawer fronts.

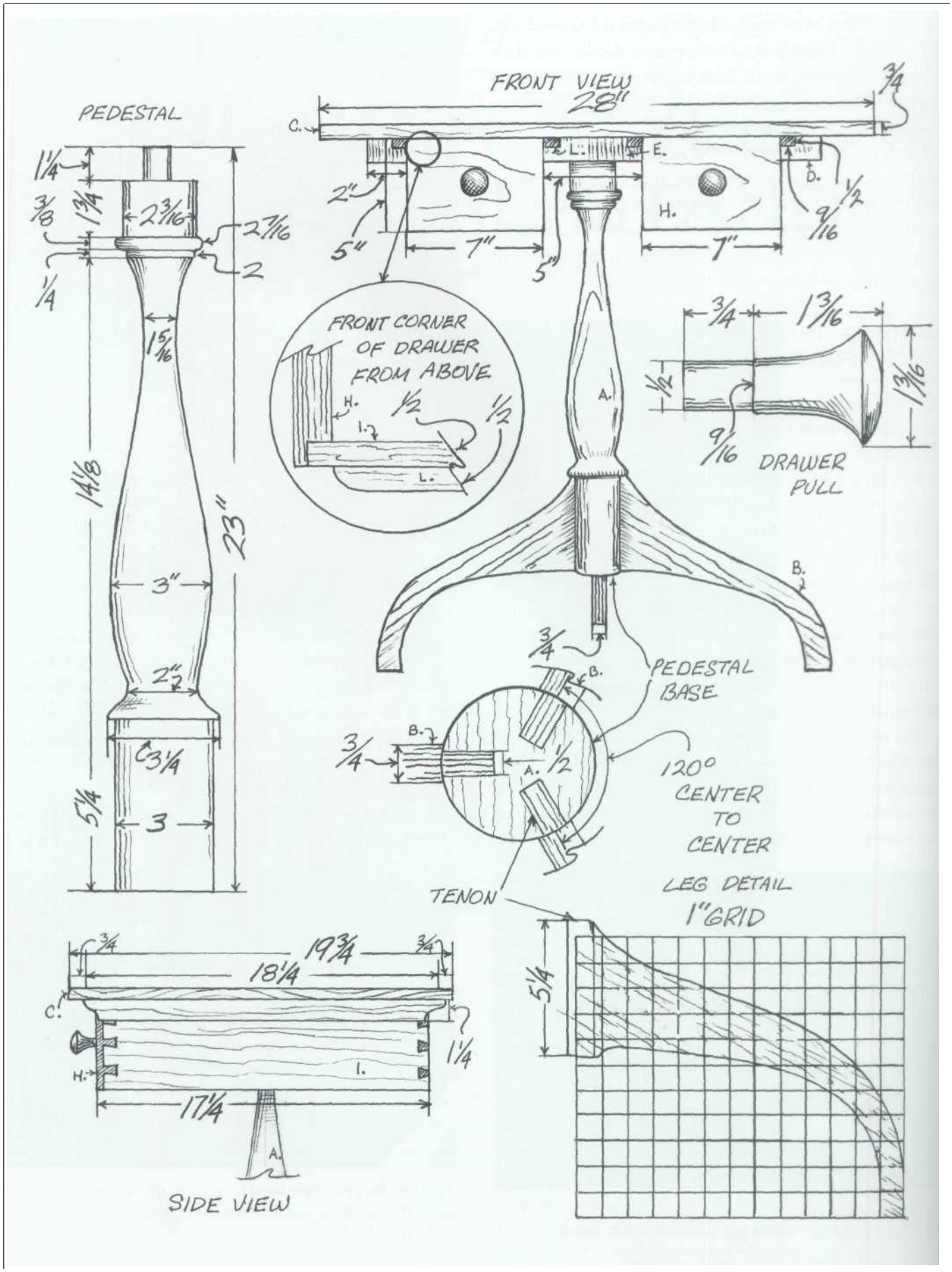
length of this section because the shoulders of the three legs will be fit tightly against this turned face, and any variation in diameter will result in gaps at those shoulders. The next step, which is taken before the work is removed from the lathe, is marking leg locations on the base of the pedestal. This can be done by using the lathe's indexing head. Briefly, an indexing head is a disk centered on the lathe's axis that is divided into thirty-six sections, each representing 10° of the disk's circumference. On my lathe, there is a spring-loaded peg that can be set into any of thirty-six holes marking these divisions. To locate the centerline of the first leg, I release the peg into any of the holes, locking the work into that position. Then, with the tool rest snugged against the base of the pedestal, I draw a line along the 5 1/4" base. This line marks the centerline of the first leg. To find the second line, I remove the peg, rotate the work, allowing the peg to slide into the next



1 Here, a drawer runner can be seen sliding into its rabbet.



2 After the cleats have been fastened to the top, glue the tenon at the top of the pedestal into the mortise cut into the center of the middle cleat.


PEDESTAL
FRONT VIEW
28"
3/4
C.
L.
E.
D.
H.
2"
5"
7"
5"
7"
1/2
9/16
1 1/4
3/8
1 3/4
2 3/16
2 7/16
2
1/4
1 5/16
14 1/8
23"
3"
2"
3 1/4
5 1/4
3
FRONT CORNER OF DRAWER FROM ABOVE
H.
1/2
1/2
I.
L.
A.
3/4
1 3/16
1/2
1 3/16
9/16
DRAWER PULL
B.
3/4
B.
PEDESTAL BASE
3/4
B.
A.
1/2
120°
CENTER
TO
CENTER
TENON
LEG DETAIL
1" GRID
5 1/4
3/4
19 3/4
3/4
18 1/4
C.
1 1/4
H.
I.
17 1/4
A.
SIDE VIEW

hole. This process is repeated until I have worked my way to the twelfth hole. Here, I draw another line along the tool rest, marking the centerline of the second leg. Then, counting out twelve more stops on the indexing head, I arrive a: the centerline for the third leg.

Although the indexing head simplifies the process of dividing the circumference of the pedestal base into three equal sections, there is an alternative requiring only a compass, a pair of calipers and a rule. First, with the calipers and a rule, determine the diameter of the base. Then, multiply half of that diameter by 1.732. Separate the points of the compass by this distance, and position the stationary leg of the compass at any point on the cylinder's circumference. Make a line along the tool rest at that point. Then, make a second line at the point at which the opposite leg of the compass is farthest from the first line. Then advance the compass so that its stationary leg rests on this second line. Finally, draw a third line along the tool rest where the opposite leg of the compass is farthest from the second line, completing the process of dividing the circumference of this cylinder into three equal sections.

Fit the three legs of this stand into $5^{1/4}$" long sliding dovetails cut into the base of this pedestal. To this point, I've cut the joints on every pedestal table I've made by hand, and it is inevitably a laborious process. To cut the dovetail mortise, I place the pedestal between 1 "-thick blocks of Styrofoam held in place by a towel wrapped in tape, securing the entire, awkward assembly in my vise. This method works but it is slow and a bit clumsy.

The dovetail tenons are even more difficult to cut. I begin these by scoring lines which mark the shoulders on the faces of the 3/4"-thick legs. Then, crowding the teeth of a fine-toothed backsaw against the waste side of this line, I cut the shoulders. Complicating this process even further is the fact that the shoulders have to be undercut so that they form a sharp knife-like edge. This is necessary so the shoulders make tight contact with the round base. Maintaining an accurate alignment along the full 5 1/4" length of these shoulders is very tricky, but not as tricky as cutting the face of the dovetail. This cut begins on the end grain of the leg and, like the shoulder, was a full 5 1/4" long. The saw delights in wandering to one side.

After having made several of these stands with hand-cut sliding dovetails, I'm ready to suggest some alternatives. First, if I were to make another with the dovetail joints, I would take the time to build a fixture that would allow the dovetail mortises to be cut with a router while the pedestal is still mounted on the lathe. A reeding or fluting fixture would work nicely for this purpose. The tenons, of course, could be readily cut on a table-mounted router.

But I really believe that, if I were to make another of these stands, I would drop the dovetail joints and switch to mortise-and-tenon construction. Not only would this be much easier to cut, it would, I think, result in no loss of strength since it would provide an equal amount of glue surface and, at least in this particular application, there is little mechanical advantage to the dovetail joint

MATERIALS LIST

Table			
A	Pedestal	1 pc.	3¼×23
B	Leg	4 pcs.	¾×5¼×18
C	Top	1 pc.	¾×19¾×28
D	Outside cleat	2 pcs.	1¼×2×18¼
E	Middle cleat	1 pc.	1¼×5×18¼
F	Drawer stop	2 pcs.	½×½×¾
G	Screws	various	
Drawers			
H	Front	2 pcs.	¾×5×7
I	Side	4 pcs.	½×5×17¼
J	Back	2 pcs.	½×5×7
K	Bottom	2 pcs.	½×4½×17
L	Runner	4 pcs.	½×½×15¾
M	Pull	2 pcs.	1 3/16×1 5/16
N	Screws	various	

**These are net measurements. A surplus should be added to dovetailed parts to allow them to be sanded flush.*

After profiling the legs on the band saw and fitting their tenons into the mortises cut into the pedestal, flatten and smooth the tabletop (see chapter five) and cut to its final length and width. Then, profile the ends of the cleats on the band saw, and cut rabbets for the drawer runners.

Using a backsaw, cut the tenon at the top of the pedestal to its 1"X 1" final size. Cut a matching mortise into the center of the middle cleat. Dry-fit this to the tenon.

At this point, fasten cleats to the bottom of the tabletop using no. 12 wood screws passing through oversized holes (holes that will allow the top to expand and contract in response to seasonal changes in humidity) in the cleats.

Build the drawers with through dovetails at the back and half-blind dovetails at the front. Screw drawer runners to the tops of the drawer sides and fit them to the rabbets in which they will slide. Turn and install pulls. Fasten drawer stops (two blocks of wood screwed to the underside of the top) into place. The piece is ready to finish.