

# A Method for Producing Seymour Line-and-Dart Banding

*Take advantage of the modern shop to create a time-honored inlay banding.*

Often referred to as arrow or line-and-arrow banding, this embellishment was featured on furniture of the Federal Period. It is prevalent, but not exclusive to the work of John and Thomas Seymour of Boston. In 1959, Vernon Stoneman<sup>1</sup> named the various Seymour patterns, calling variations of this form *dart*. In 2003, Robert D. Mussey Jr.<sup>2</sup> continued with Stoneman's nomenclature for the Seymour patterns.

It boggles the mind to imagine how 18th-century craftsmen fashioned this banding repeatedly, accurately, and in volume with the tools and materials of the time.

The core of this banding is made from alternating solid and laminated chevrons. The veneer thicknesses must be precise, and the V-cut on one end of the chevron and the point on the other have to be made across the end grain so that the finished pattern shows face grain only.

An excellent article, "Making an Arrow Banding; A Seymour Detail Explained," by Philip C. Lowe and Austen Winters, appeared in the 2005 issue of *American Period Furniture*. In that article, the authors create the banding using hand tools that would have been available in the period.



By Frank Vucolo



Seventeen pieces of banding were sliced from the 1½" pack. Chevrons, material-handling tools, and the cutter are shown in the foreground.

## A method for a modern shop

My technique uses 21st-century woodworking shop tools to achieve the desired result. The veneers are sliced from solid stock on the tablesaw and brought to final thickness on a drum sander mounted in a drill press.

Blanks for the chevrons are cut to exact length on the bandsaw with the aid of a simple, shop-made sled. A vertical router table makes easy work of creating a V-cut on one end and a point on the other. You can assemble this specialized table in an hour or two with materials most members already have in the shop.

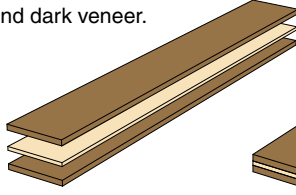
The challenge of using a router

to create the chevrons has always been in finding a way to do it safely, accurately, and repeatedly with small pieces of stock. The shop-made router table and a handful of work-handling devices dispatch those concerns.

The anatomy of this banding appears complex at first glance, but it is actually quite simple. The banding is made from an inner core of alternating chevrons—the shorter ones are solid and light; the longer ones are a lamination of dark-light-dark. This forms the series of lines and darts. The inner core is then sandwiched between two pieces of dark veneer to complete the banding.

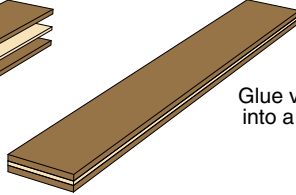
**STEP 1**

Prepare light and dark veneer.

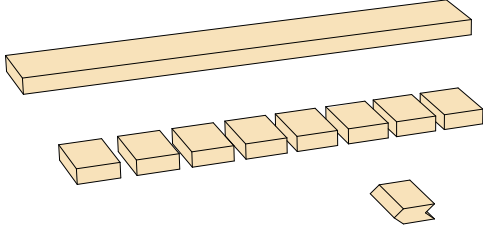


**STEP 2**

Glue veneer into a pack.

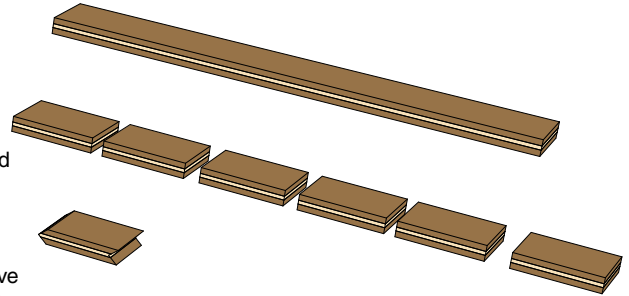


**STEP 3** Plane solid stock the same thickness as the pack.



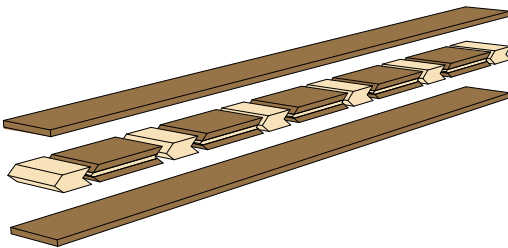
**STEP 4**

Cut the pack and solid stock into blanks.



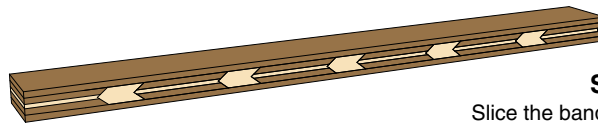
**STEP 5**

Cut positive and negative V's to form the blanks into chevrons.



**STEP 6**

Align alternating chevrons between two pieces of dark veneer.

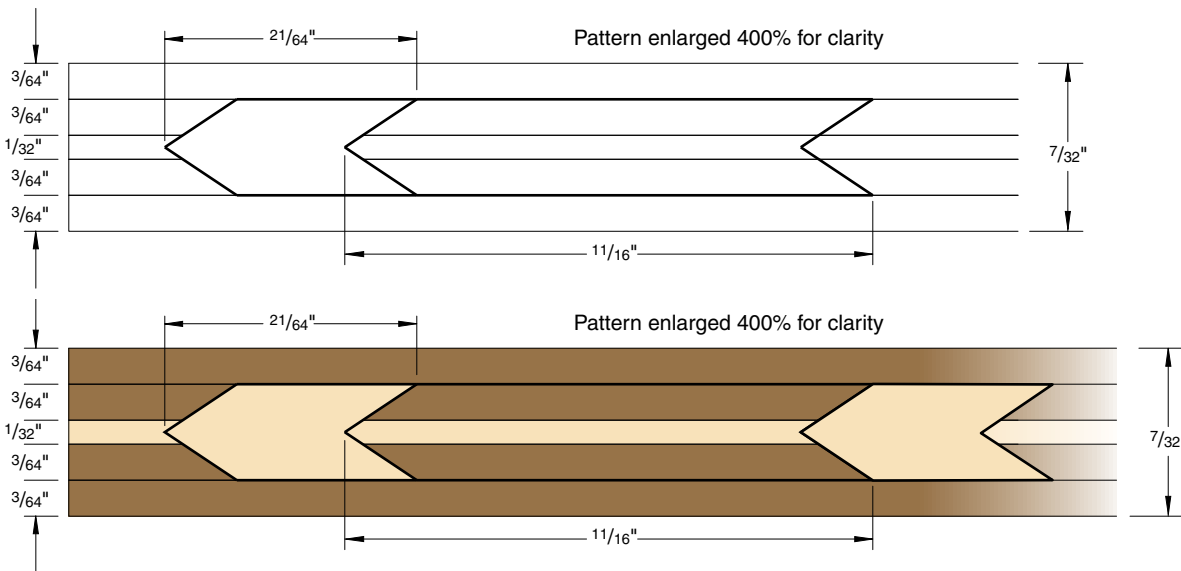
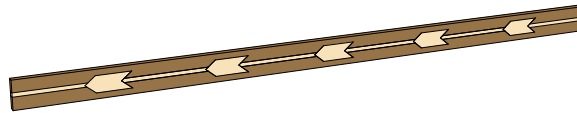


**STEP 7**

Glue up the chevrons and veneer onto a pack.

**STEP 8**

Slice the banding from the pack.



The banding described in this article is scaled to a particular variation. The Seymours scaled individual bandings for different applications. If you are considering a reproduction banding, be sure to find a photograph suitable for scaling.

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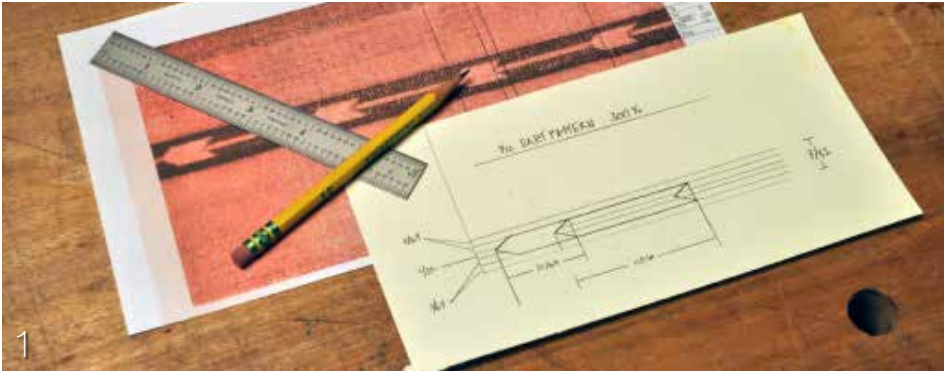
**Prepare your stock**

Proportions are important. This banding takes on different looks as the relative size of the components changes. To begin, I took a photograph of a known line-and-

dart banding and scaled it to come up with a finished banding that is  $7/32''$ . This meant I needed four pieces of dark veneer at  $3/64''$ , and one piece of light veneer at  $1/32''$ . The setup also requires a piece of

$1/8''$ -thick light-colored stock for the solid chevrons. I chose rosewood for the dark veneer, and holly for the light. The rosewood I had was about  $1\frac{1}{2}''$  thick and  $24''$  long, yielding  $3/64''$ -thick veneers





that were 1½" wide (**Photo 1**).

Slice the veneers slightly oversize on the tablesaw. I sliced extra veneers for the rosewood and holly, giving me material to test the setups. Complete final dimensioning on a drum sander, which also removes saw marks. I held off dimensioning the 1/8" holly at this point (**Photos 2, 3, and 4**).

With the veneers ready to assemble, glue up a three-part lamination—a piece of 1/32" holly sandwiched between two pieces of 3/4" rosewood. This produces the stock required for the longer chevrons (**Photos 5 and 6**).

After the glue dries, plane an edge true and scrape off any extra glue from the three-ply lamination. Then reduce the 1/8" holly to match the thickness of the lamination. It is critical that these two pieces are exactly the same thickness. Next, rip the other edge of the lamination and rip the holly to the same width (**Photos 7 and 8**).

### Cut chevron blanks

I prefer to crosscut small pieces on the bandsaw. For this step, I built a simple crosscut sled. The sled starts out as a hardwood runner—sized to the miter slot—and screwed to a piece of plywood. I cut a kerf in the sled

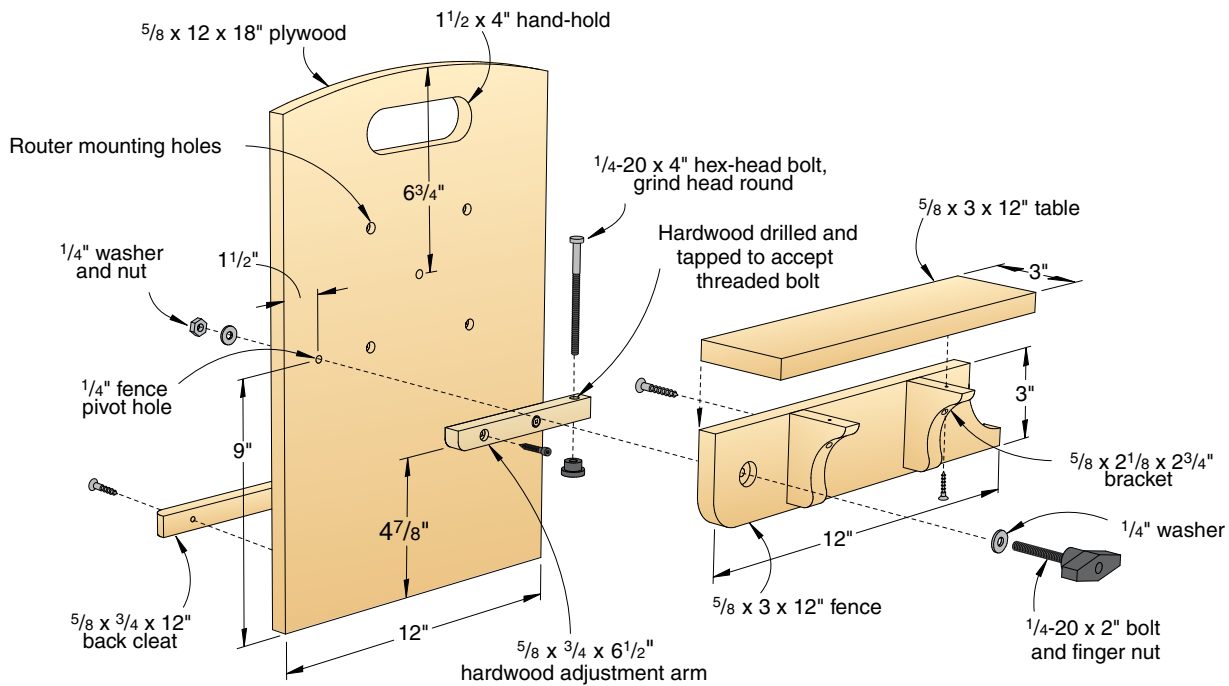


one-third to one-half through, then align a fence to the sled at 90 degrees to the kerf. Position the stop at 1/16" to cut the longer, three-ply chevron blanks, then reposition the stop at 2 1/4" to cut the shorter,

solid chevron blanks (**Photos 9, 10, and 11**).

### Build a router table and material-handling devices

With your blanks ready to go,



it's time to cut a V into the end grain on one end and a point on the end grain of the other end to turn the blanks into chevrons. To perform this operation precisely and safely, I devised a tombstone vertical router table. The table section is nothing more than a piece of 5/8" Baltic birch plywood, drilled through to accommodate a trim or palm router (I use a Bosch Colt router). Round the top and add a handle hole for ease of handling and storage. The table mounts in a face vise.

The fence, which is horizontal, pivots on a bolt with a finger nut on the left side for adjustment. I also added a simple fine-adjust feature by tapping a hardwood block to accommodate a bolt. Once the fence position is established, lock it in place with a C-clamp (**Photos 12 and 13**).

The setup requires a 60-degree V-cut bit. (I used a Whiteside #1541.) To safely cut small pieces, I devised some work-handling devices. A *push-in stick* holds the blank tight to the table.







A hold-down hammer holds the blank down on the fence. A push-through stick runs the stock past the cutter (**Photo 14**).

First, adjust the fence height and the router's depth of cut for the V-cut. The dark/light/dark variation helps you find center more easily. Do a trial set-up on a test piece from the lamination. When you are happy with the setting, begin cutting the Vs on all of your blanks.

To do so, place the blank against the table and push it toward the table with the push-in stick. Use your thumb and middle finger in the notches to get a firm hold. Place the hold-down hammer on top of the blank and use your index finger to push down. Now push the stock through the cutter with the angled push-through stick. Repeat the process to cut Vs in the 60 or so chevrons



needed for a 24" pack (**Photo 15**). Cut a few extras.

With all the Vs cut, reposition the fence to cut one half of the point on the other end. You will

need two passes to finish the point. With the fence set and before you start cutting your blanks, make two passes on your push-in stick so that it will cope the V groove as you work the stock (**Photos 16 and 17**). After cutting all the chevrons, lightly sand them to remove any fuzz.

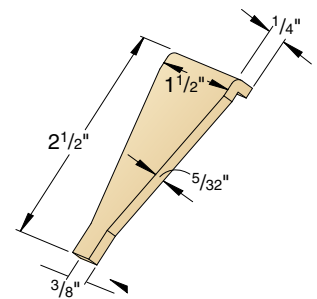
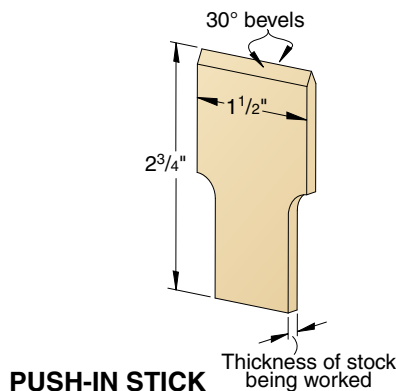
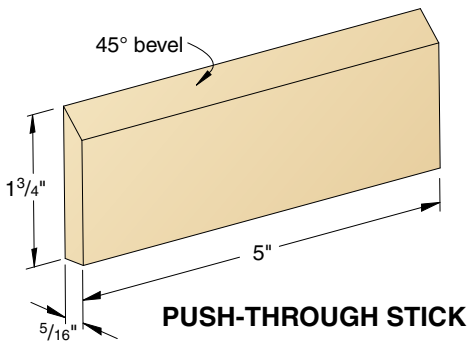
### Assemble the banding

I like to glue up the pack in two phases to ensure that the core—the chevrons, aligned point to V—remains gapless. Here's the technique I developed after several assembly projects:

Lay a piece of masking tape adhesive side up on a board coated with packing tape. I put a little glue on the point end of a chevron, press it into the V of the adjacent chevron and then press it down on the tape. Every few chevrons, add a piece of tape across the top to hold things tightly (**Photo 18**).

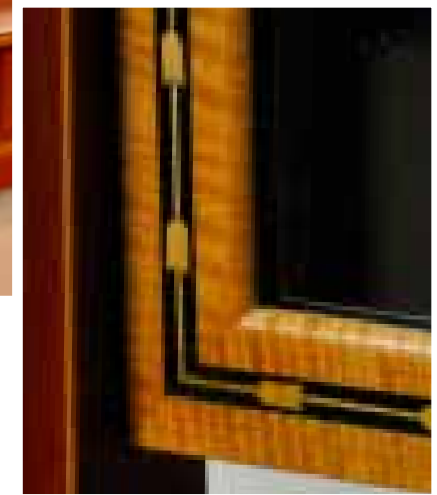
When the core glue-up is ready, scrape away any glue squeeze-out and laminate the core between the remaining two pieces of  $\frac{3}{64}$ " rosewood veneer to make the final pack. When the pack is dry, plane an edge true and begin slicing off your banding on the bandsaw.

Clamp a piece of  $\frac{1}{4}$ " plywood to the bandsaw table to create a





zero-clearance surface for slicing off the banding. Then re-plane the pack's edge between slices (**Photos 19, 20, 21, 22, and 23**). I sliced the banding  $\frac{3}{4}$ " thick, yielding 17 pieces of banding (34 linear feet) from my  $1\frac{1}{2}$ "-thick pack.



Line-and-dart banding wraps around the author's reproduction of a c. 1798 Seymour dressing-box with glass; reproduction based on a Mario Rodriguez plan.

**Bonus points for vertical router**  
Use the tombstone vertical router table to produce other elements of period or contemporary banding. It may also be repurposed for operations on small stock—think

dadoes, rabbets, and sliding dovetails in letterboxes and drawer partitions. While the setup in the drawing is for small adjustments, drilling an additional pivot hole or holes for different operations. For that reason, I left the fine-adjust block a few inches below the fence. ♦

## End Notes

1. Stoneman, Vernon C. *John and Thomas Seymour, Cabinetmakers in Boston* (Boston, MA: Special Publications, 1959) p 387.
2. Mussey Jr., Robert D. *The Furniture Masterworks of John and Thomas Seymour* (Salem, MA: Peabody Essex Museum, 2003) p 92.