Using Biscuits To Make Your Gravy

An Option for Joining Wide Mouldings

by Paul J. Reis

"Work smarter, not harder"…How many times have we heard that saying? What about not sacrificing quality for speed? Well read along and you'll learn about a tool that is well known in the woodworking world but not much more than a whisper said about in the picture framer's world. The machine is called a biscuit, or plate, joiner. It has been very useful in my framing shop in the area of saving time and achieving quality joins.

I started using the machine after seeing a nearby cabinetmaker use one in his shop. I immediately had bells going off thinking of all the time I've spent trying to achieve quality joins on large, heavy, wide profiles. There are vices available on the market with a large enough top to accept profiles up to 6". And I would use a vice like this, then one of the two underpinners in my shop to join. There are also some thumbnail joiners on the market for joining moulding up to certain widths, but the biscuit joiner has become an alternative for me when I am working with a large, heavy profile.

As a rule, I use the biscuit joiner for any flat faced profile larger than 3" in width, any moulding 4" in width and up, and any frame size larger than 40"x60" with a 3" wide profile or larger.

The biscuit joiner comes in two different sizes—a full size joiner and a detail joiner. Each machine has a variable setting that allows the use of several different size biscuits with the same machine. The biscuits are tiny football shaped pieces of soft wood (see Photo 1). They range in size from ¼"x ½"x 3/32" thickness up to 1"x 2⅜"x ⅛"thickness. The smaller biscuits are used in the detail joiner and are labeled as size R1, R2, and R3. These biscuits are very small and are used on smaller frames but the R3 size biscuit is large enough to handle some larger profiles. The larger biscuits are used in full size joiners and are labeled as size #0, #10, and #20. These larger biscuits are the ones I use for the wide mouldings discussed here.

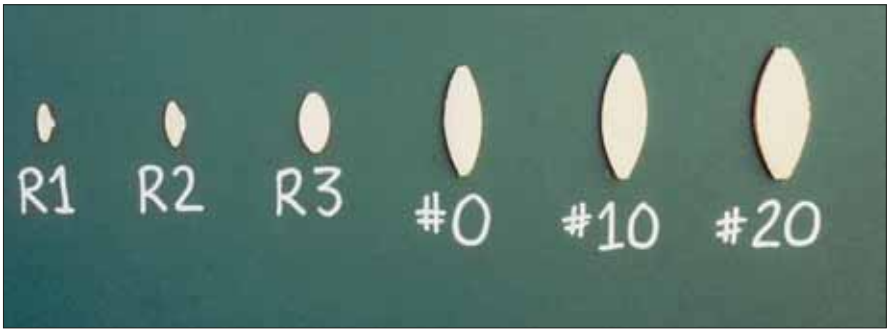


Photo 1: Six biscuit sizes

Photo 2: Operating the detail joiner. This joiner works similarly to the full-size joiner, which is the one used for wider mouldings.

The biscuit joiner functions by cutting a thin groove on each side of the worksurface to be joined into which the biscuit is inserted with glue. The first step to its use is determining the size of the biscuit you wish to use and then determining the depth and placement of those biscuits so you can plot your cuts.

The size of biscuit you should use is based on how large the frame is. The depth and placement of the biscuits is determined by where on the surface of the miter cut does the frame need the most securing strength. (That comes from knowledge and experience of joining frames and calls for the same consideration as where to place your nails for the most strength.) The depth adjustment on the joiners allows the biscuit to be placed anywhere on the miter cut. Once you have determined your biscuit size and placement, mark across the backsides of the corners about to be joined with a pencil line showing where down below within the miter the cut will

be made (see Photo 3). The logic is that if the same pencil line is drawn across the back of both sides, then the cut will be exactly the same on both sides.

Now the joiner depth setting needs to be set to the depth you want and the correct biscuit size must be selected as well. The machine is handheld and trigger operated (see Photo 2). The fence on the front of the joiner has a clear center mark which needs to be aligned with the pencil marks made across the back of the adjacent corners to be joined. The trigger activates the blade that does not begin cutting into the wood until you press forward on the handle. The blade slowly will cut a precision groove into the side of the miter cut.

When all your selected cuts are made on all the miters, the frame is then ready to be joined up (Photo 4). Because the cuts are all the same depth and size, once the biscuit is placed into the groove (see Photo 5) with glue and the sides are pushed together, it begins to swell up from the moisture of the glue and aligns and sets the corners together. Keep in mind that the biscuits waste no time in swelling and hardening so you've got about 30 to 60 seconds to assure proper alignment. Hold both sides together for several minutes. (I use either Corner Weld glue or Elmer's Probond for this.) Larger mouldings (6" and up) usually require two to three biscuits in the same corner for added strength.

The detail joiners are priced at about $70.00 to $80.00, with replacement biscuits running about $6.00 per 100. The full size joiners (best for larger mouldings) can cost between $125.00 up to $600.00.

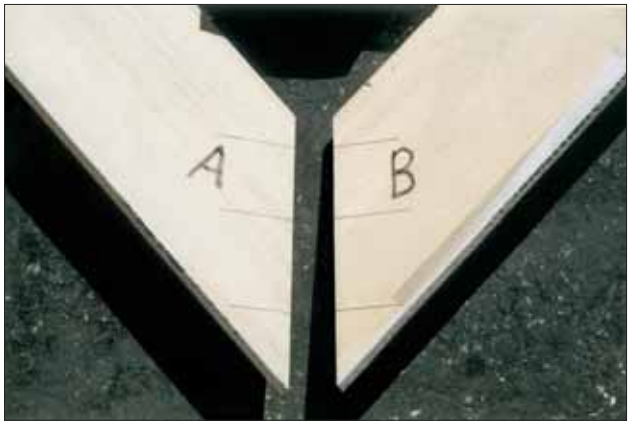
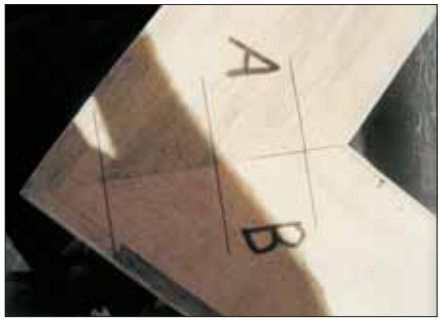


Photo 3: A sample of a 6" wide moulding with markings made, ready for cutting

Photo 4: Ends of miter cuts showing the biscuit grooves, their depths, and placements

Photo 5: Miter edge showing biscuits in their grooves (Biscuits were colored black for better definition in this photo.)



Photos 6 & 7: Shown here is the completed, joined corner from both the front and the back.

Any of the three larger biscuit sizes run about $20.00 per 1000 pieces.

Something to note is that the blades for the detail joiners dull frequently and cost about $10.00 to $15.00 to replace. The blades for the larger joiners run about $50.00 to $60.00 to replace but last longer and keep their sharpness due to the carbide tipped teeth.

For the low cost, efficiency, and accuracy that biscuit joiners provide, any picture framer who works with large profiles and large, heavy mirror frames owes it to him or herself to consider this tool as a possible addition to their joining equipment. ■

Paul J. Reis has been picture framing for the past 10 years and, currently, with his wife, Maria, owns John Paul's Designs, Inc., in Torrance, CA. Specializing in high-end picture framing, Paul is currently exploring the integration of carpentry techniques and tools into the picture framing discipline. He enjoys the usage of fine mouldings in interior, furniture, and cabinetry design.