

# Preservation Practices



by Hugh Phibbs

## *Extending A Moulding To Create A Shadow Box*

When presented with items that would be best housed in a shadow box, framers may feel hampered by the limited selection of profiles available for this application. Those patterns that are available are usually not very wide. The fact that most of these profiles are rather narrow means

that they will not be suitable for use in framing larger works.

Both of these problems (lack of selection and lack of robust dimension) can be addressed if the framer has access to a table saw, or assistance from someone who does. A table saw can be used to modify a wide range of mouldings so that deep sides can be added to them; enabling them to function successfully as shadowboxes. Before considering the modification of the moulding, we should discuss the material from which the extended sides will be made.

Medium density overlay (MDO) plywood is a material frequently used in

museum displays. It is made for use in construction of poured concrete buildings. The MDO is a phenolic resin coating that gives the sheet of plywood a flat, smooth surface. This tough coating

allows builders to make forms from this material that will come away from the concrete cleanly to leave a smooth surface. MDO has been adapted for construction of exhibition cases in museums because its surface can be painted with minimal preparation.

The coated surface is also useful in diminishing offgassing from the plywood. The end grain of wood emits seven times more acids and peroxides than the side grain does; and a heavily coated side grain, such as that in the MDO, while not completely sealed, should discourage offgassing from the wood. The smoothness of its surface will make it easy for framers to finish with side paint and thus a useful material for extending the depth of frame mouldings. How can this extension be done with relative ease so that a strong shadow box frame is created?

A strategy suggested by frame conservator Steve Wilcox, addresses both issues—ease and strength. First, the  $\frac{3}{4}$ " MDO is ripped into the desired widths (ranging from 1  $\frac{1}{2}$ " to 4") and rabbets are cut along both sides of the moulding. The placement of the second rabbet (on the same or opposite side from the first rabbet) will depend on the method chosen for rabbeting the moulding. The resulting strips will look like one of these profiles in cross-section (see Figure 1).

The moulding is now run through the saw with its back to the fence, and a cut is made that extends from the back of the moulding toward its face. This cut is

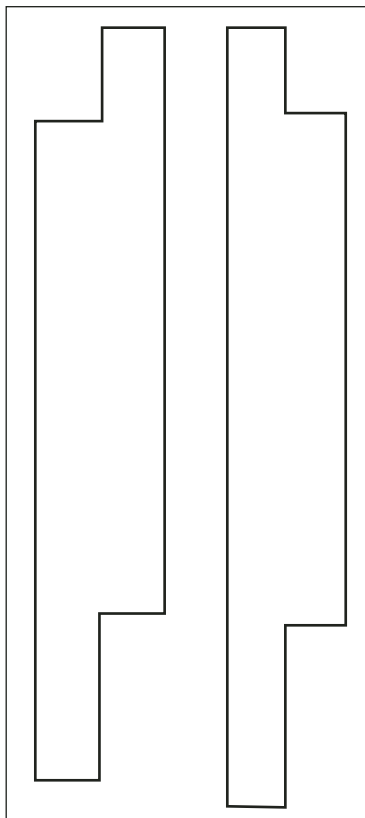
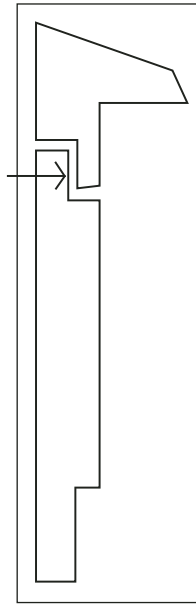


Figure 1: Use MDO plywood to make extensions to moulding profiles.

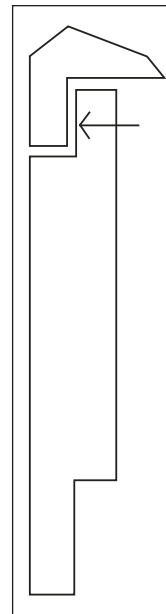
the first part of a new rabbet and the placement of the second, intersecting cut will be determined by the type of moulding being used.

If the moulding is made of soft, easy-to-cut wood, such as bass wood or tulip poplar, and the back edge of the outside of the moulding is not chamfered, the second cut can be made with a utility knife from the inside of the moulding. This saves having to run the moulding through the saw a second time and any further chance that the moulding might be scratched in the process. If the moulding is made of a hardwood, or is chamfered along its outside back edge, it can be laid on the saw with its side on the saw bed and its back touching the fence of the saw. A cut can then be made to finish a rabbet on the outside of the moulding.

When the cuts are made, they should be designed so that the moulding and its side piece will come together on the outside with minimal gapping. If the outside rabbet is used, there should be a slight clearance along the surfaces indicated by the arrows seen in Figure 2. If the inside rabbet is used, these surfaces should have some clearance so that the outside surfaces will come together (see Figure 3).



*Figure 2 (left): The outside rabbet construction will require allowance (indicated here) so that the side piece will meet the outside of the moulding neatly.*



*Figure 3 (right): The inside rabbet construction will also require an allowance (shown here) to ensure that the pieces fit together correctly.*

The moulding and side piece can be clamped and glued with PVA or carpenter's glue. No metal fasteners should be used so that the finished moulding can be safely cut in the saw or chopper. When the glue is dry, the outside surface can be spackled, sanded, and painted. This can be done when the moulding is still in length form or after the frame has been cut and joined.

The creation of a convincing side paint for use on the frame is essential to its aesthetic success. Traditional casein paints that were widely used for this purpose in the past can be hard to find today. Matte acrylic paint can be found in some artists' supply outlets and it will work well here. If none is readily available, matting agents such as rottenstone or ceramic fume silicate can be added to acrylic paint to give it a matte look

that approximates the antique casein.

The traditional colors used for side paint vary, but a mixture of yellow ochre or raw sienna and a small quantity of black should produce a good tone. If the color is brushed on, some water should be added so that the final surface will not look striated (grooved or ridged). A foam roller can be used to apply this paint and light sanding can remove surface blemishes.

If the shadow box is housing a large item, it will need more depth to accommodate both its item and the strainer that will be needed to strengthen the frame. The presence of a strainer will necessitate the cutting of a deeper rabbet along the back of the MDO strip so that the strainer will fit.

This sort of modification of existing materials will involve significant time and should be priced accordingly. Specialized frames like this are unlikely to become a common fixture in the shop schedule, but the arrival of a large work that requires a shadowbox frame may justify the extra labor. ■