

# WORKING WITH VENEERS



*The lid of this Huon Pine box is exotic Bubinga veneer with 9 mm plywood substrate - by Geoff Birtles.*

**Produce beautiful box tops and feel smug about conserving our natural resources.**

**By Geoff Birtles Don McLean Reg Orr.** Evening box makers group

Ever wondered how to achieve those beautiful box lids you see in galleries or woodworking magazines? Almost certainly they are veneers, on plywood or mdf substrates, with the lid design masking the edges. These same veneers are available to all of us at minimal cost (see side bar sources) and the processes are very simple.

## HOW VENEERS ARE MADE

In Australia logs for veneer are sourced mainly from plantation sites and fallen trees recovered from the forest floor. Fallen trees provide the most interesting grain and the rarer veneers.

After the log has been debarked and cut to the desired length it is cut into flitches and "cooked" in hot water for between 24 and 36 hours, to make the fibres softer and easier for slicing. Woodworkers discovered the true potential of veneering with the advent of the veneer slicers in the early 1900's.



*G.L. Briggs and Sons' logging locomotive in the early 1900's*

Slicing has been refined over the decades and today there are four primary systems used:

- Rotary slicing or peeling
- Longitudinal slicing
- Crosscut slicing
- Staylog Lathe Slicing

As veneer leaves come off the slicer they are stacked into bundles, in the exact order that each leaf comes off the flitch. The veneer leaves are then fed into a drier taking about 2-3 minutes to pass through the drying



*Myrtle veneer lid with a butted lipping from Fiddleback Blackwood - by Reg Orr.*

chambers, reducing the moisture content to approximately 10%. Shrinkage is around the same, at 10%. Finished veneers, usually about 0.6mm thickness, are then graded ready for the woodworker

The numbered bundles are kept in order during this entire manufacturing process, so that entire logs, or sections of logs, can be sequentially laid out in slices of veneer. This allows furniture manufacturers and shop fitters to book match, slip match, reverse slip match, diamond

match and quarter or four way match for harmonious or contrasting effects, sometimes with stunning results.

These same benefits are available to box makers when purchasing in small lots from speciality suppliers (refer side bar on Veneer Sources - next page).

## INFORMATION SOURCES

### Veneer production

<http://sres-associated.anu.edu.au/fpt/plywood/gun.html>

### Examples of species

[http://www.brims.com.au/current\\_species.htm](http://www.brims.com.au/current_species.htm)

<http://www.briggs.com.au/veneer.php>

### Matching and cutting

[http://www.briggs.com.au/tech\\_natural.php](http://www.briggs.com.au/tech_natural.php)

### Introduction to veneering

[http://www.rockler.com/articles/display\\_article.cfm?story\\_id=77](http://www.rockler.com/articles/display_article.cfm?story_id=77)

### About veneer

<http://www.joewoodworker.com/veneering/why-use-veneer.htm>

### Tools

<http://www.schurchwoodwork.com/tools/index.html>

### Free book on the topic on the net

83 pages – courtesy the Prime Minister

<http://www.fwprdc.org.au/content/pdfs/PN03.2303.pdf>

### Free veneer pack

<http://www.tastimber.tas.gov.au/promotions/veneer.asp>

*Courtesy Don McLean*

## VENEERING WOOD

### GETTING STARTED

Reams of beginner's and advanced material is available through web sources, see first page side bar "Veneer Information Sources." It can be confusing, contradictory and intimidating. But ...it is not rocket science for small box lids, with minimal equipment and technique required. So let's keep it simple. These techniques have worked well for us.

### MATERIALS

1. Two pieces of veneer: Ideally the veneer for top and bottom will be a reasonably close match (not different species!).
  2. Substrate, about 20mm oversized for the job. The substrate can be 8 - 12mm ply, or 6 - 9 mm MDF. MDF is more stable but do not depend on edge gluing for strength.
- We'll assume a working size of 200 x 300mm. We'll also assume the veneer is crinkled, all the best pieces are!
3. Two pieces of 16mm Melamine (cawls) about 250 x 350mm.
  4. Water mister and paper towel (from the kitchen).
  5. Five clamps, (or cramps, if you prefer).
  6. Yellow glue. Serrated edge card scraper (Laminex sample notched with file).



Above Maple veneer lid segments with mitred Walnut lipping - Reg Orr.

Top of page - Curly Maple veneer set into a rebated landing - Reg Orr.



### What you will need.

Two pieces of veneer and substrate, Two pieces of 16mm Melamine, Water mister and paper towel, at least five Clamps, Yellow glue, Serrated edge card scraper.

### PREPARATION

Cut the veneer to size using a low cost veneer saw against a steel rule. A "Stanley" type knife, or chisel edge works well for cross cutting, as long as you use lots of scoring cuts. Do not try for one cut, the Veneer will splinter: Long grain cuts are more difficult without a veneer saw and not within the scope of this article (best to veneer; then rip on the table saw, its easier).

Hold the veneer pieces on one end and mist spray with water until soaked. Then make a sandwich of (from bottom up) melamine cawl, paper towel, veneer, paper towel, veneer, paper towel, melamine cawl. Place a couple of bricks on top. After 30 minutes replace the soaked paper towels with dry ones, repeat in 10 minutes and again in 5 minutes and again if you feel the need. Your veneer is now reasonably flat (it does not have to be perfect), the veneering process will look after the remaining flattening process.

Good news: Skip the foregoing step if your veneer is reasonably flat to begin with! Now, get ready for the glue-up.

### The glue-up, be prepared!

MDF substrate cut to size, yellow glue, notched card scraper or brush and at least five clamps.

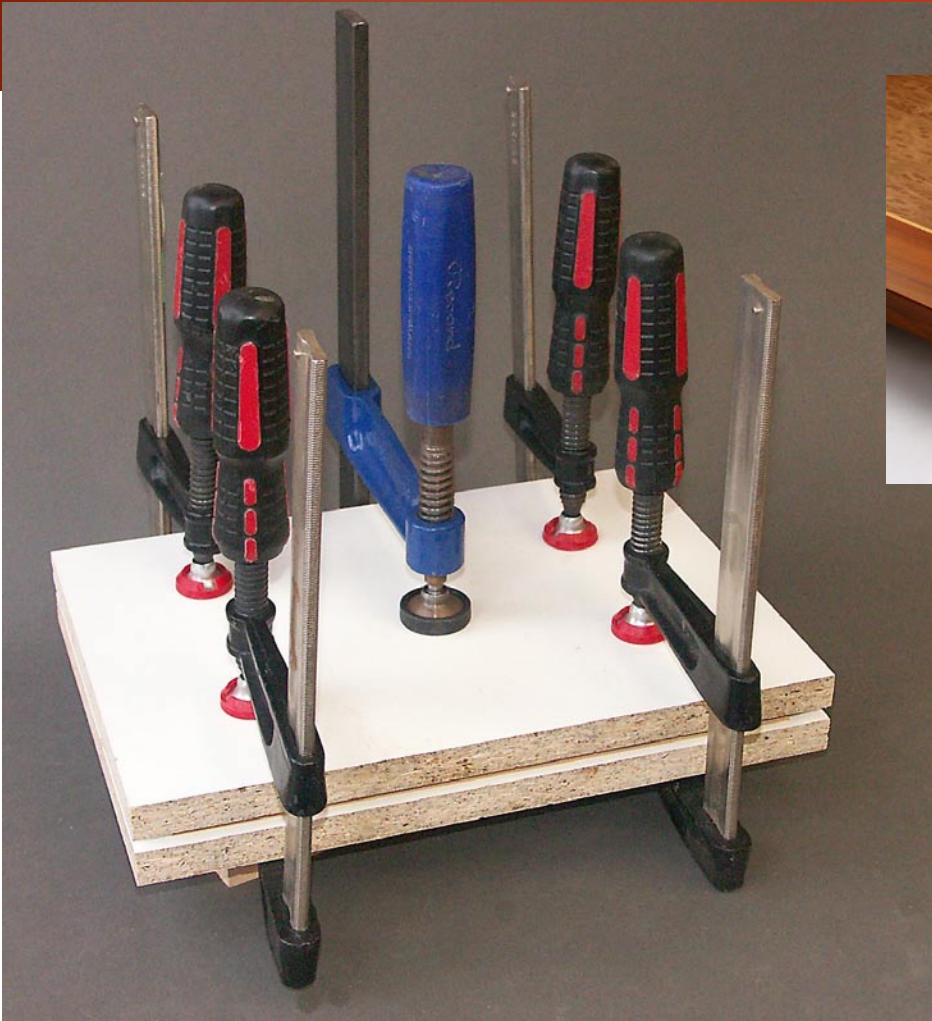
Hot tip - turn the phone off.

### VENEER SOURCES

- <http://www.gunnsveneers.com.au/woodcrafts/starter.htm>
  - <http://www.gunnsveneers.com.au/woodcrafts/craftsman.htm#>
  - <http://myworld.ebay.com.au/finewoodfromus>
  - <http://www.tasmaniantimbers.com.au/>
  - <http://www.gfethers.com.au/veneer/veneer.htm>
  - <http://www.kerriebearveneers.com/rawmaterials.html>
- Peter Scott Young, Ringwood (03) 9870 8733
- <http://www.cummingtimbers-veneers.com/>

Courtesy Don Mclean





*Tasmanian Oak Burl veneer with mitred Blackwood lipping - Geoff Birtles.*

more porous, or open grained veneers such as burl, will allow a lot of glue to bleed though. Scrape the glue off (before sizing and assembly) with a card scraper (rather than sanding), because you will see what you are removing ie glue peelings, not veneer. But sanding works with care. Its important to keep in mind how thin veneer really is when sanding. Coarsest grit #180, then #230, then #320 and not too long with any! Rely on your wood sealing/sanding process to fill grain, not sanding heavily before sealing.

## The Veneer sandwich.

From bottom up - Melamine clamping cawl, veneer, substrate, veneer, clamping cawl.

## THE PROCESSES

1. Remove your damp (but not dripping) veneer from the brick press and lay to one side. Clean the melamine cawls.
2. Lay the first veneer piece on top of one cawl.
3. Apply a liberal but even coat of yellow glue to both sides of the substrate. You can brush it, or preferably spread it with a notched card, as you would for tiling in

the bathroom. If the veneer is damp you need only apply glue to both sides of the substrate. (If the veneer is dry, apply glue both to the substrate and inside surface of each veneer leaf).

4. Place the glued substrate on top of the bottom (first) veneer and then lay the second veneer piece on the upward facing glued substrate. Place the second melamine cawl on top of this to create a melamine, veneer, substrate, veneer, melamine sandwich (Dagwood would have been proud!).

5. Apply lots of clamping pressure to the sandwich (minimum six clamps). Even strong clamps have only a small clamping spread - about 100mm. (For larger pieces you will need additional cawls or long reach clamps - but 16mm melamine works just fine for small tasks, like lids).

6. Leave for at least two hours (better overnight) and disassemble. Your ready to go!

7. Finishing your veneer is much the same as the rest of the box. However many



*Walnut with Silky Oak mitred lipping and corner posts to conceal veneer edges - Reg Orr.*

## BOX CONSTRUCTION FOR VENEER LIDS

The edges of veneer lids have to be masked. However, these processes are already familiar to most box makers as enhancement techniques for solid wood lids.

These processes include:

- Glueing into a rebated frame
- Solid wood lippings
  - Mitred
  - Butted
  - Rounded
- Edging with right angle timber strips

Particular care is required when sanding the adjacent edges of veneer tops and box sides.



*Tool box with right angle timber strips and flat straps to conceal veneer edges - Don McLean.*