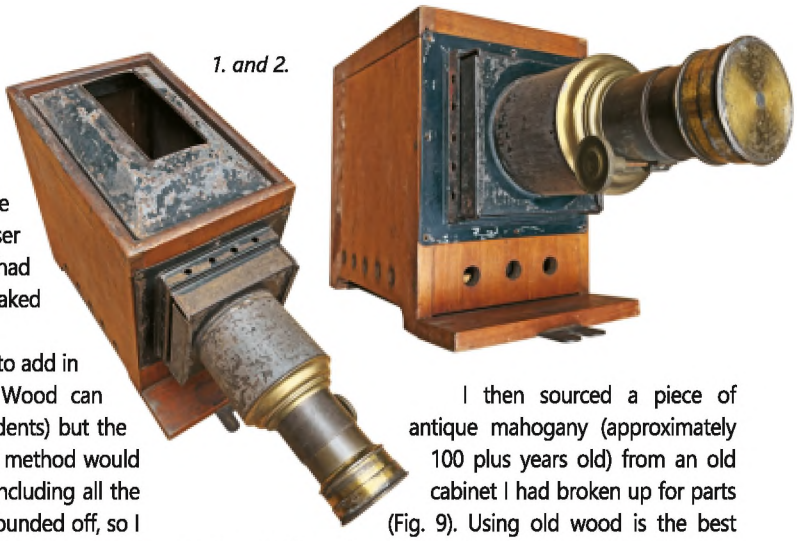
MAGIC LANTERN WOOD CASE REPAIRS

Mike Jones



1. and 2.

I bought this lantern (Figs 1 and 2) in a very poor state. At some point somebody had also shoehorned in a 4½" diameter condenser lens – it would have originally been fitted with a 4" one. The wood had shrunk considerably from the heat generated from the original naked light source (Figs 3–5).

The only way to make this lantern look good again would be to add in sections of wood to match the dimensions of the top rim. Wood can sometimes be steamed to expand it by small amounts (such as dents) but the top of the side panels had shrunk by approximately 1 cm so this method would not work. The first job was to completely dismantle the lantern, including all the wooden sections. The slot on one of the brass fixing screws had rounded off, so I cut a new slot using a mini Dremel-type grinder with a thin cutting wheel attached (Fig. 6). This enabled me to remove the screw easily without any drilling which would have been difficult and would have probably damaged the surrounding wood. I then stripped off all the old French polish on the case sections using industrial-strength paint/varnish remover and coarse steel wool, rubbing in the direction of the wood grain (Fig. 7). Fig. 8 shows all the main sections stripped and separated from the top rim. The front section also broke into two pieces.

I then sourced a piece of antique mahogany (approximately 100 plus years old) from an old cabinet I had broken up for parts (Fig. 9). Using old wood is the best solution as the colour and grain structure will be closer to that used on the lantern – not much wood staining, if any, will be needed. This close-grained Brazilian mahogany was used extensively in Victorian times. Old wood also darkens all the way through with age, so no lighter flecks show through and stand out. Altogether it makes sense to use replacement wood from around the same era as the lantern case.

3.

4.

5.

Next I measured the size of the filler pieces needed and marked them out on the donor wood, then cut them out on my band saw. Approximately 2 mm wide strips were also needed for the front section on both sides (Fig. 10) as this had shrunk too. Without adding these, the whole case would have been too tight against the metal liner, which would make the case look out of shape. I sanded the pieces on a belt sander to remove the saw marks. I also sanded the surfaces on the lantern wood where the replacement sections would go. A joint made with wood glue is actually stronger than the wood itself, providing both surfaces are perfectly flat. A quality PVA wood glue was then used to attach all the new pieces where they were needed and clamps were used to hold everything in place (Figs 10 and 11). Fig. 12 shows the new strip of wood in place (right-hand-side edge) and on both sides in Fig 13. The colour match of the replacement wood was very close and needed only a very diluted water-based wood stain to make it match the original sections.

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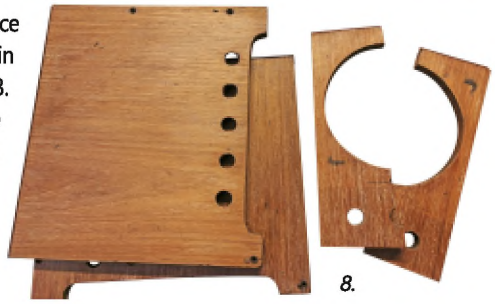

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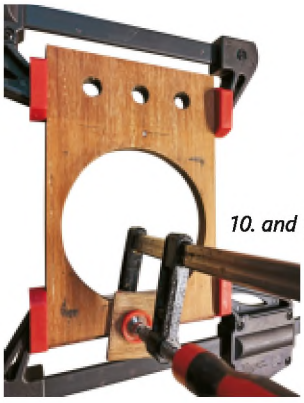
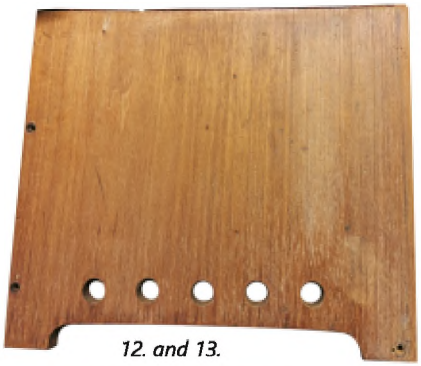


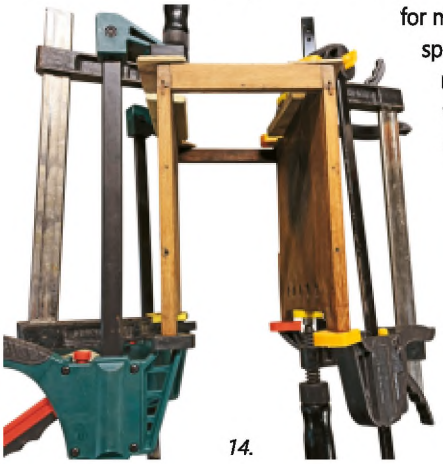
10. and 11.

Fig. 14 shows the repaired case sections glued and clamped together. It's best to use flat waste pieces of wood on the jaws of the clamps where finished surfaces are involved otherwise the clamps can mark the surfaces.

After leaving all the joints to dry for 24 hours, any dried glue residue was sanded off. The case could then be coated with shellac sanding sealer, sanded and French polished (see my article about the Pulman lantern in *TML* 40, September 2024, for more detail on this). The tinware was sandblasted and sprayed; a chimney was made as the original was missing; an LED lighting system fitted and the brass was polished. Everything was then assembled and cleaned. A correct period 4" twin condenser lens unit was fitted. Fig. 15 shows the finished lantern.



12. and 13.



14.

15.

All the replacement sections of wood have blended in really well and are barely distinguishable from the original parts. The lantern now fits together as well as it did when originally made and has a new lease of life for someone to enjoy.

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