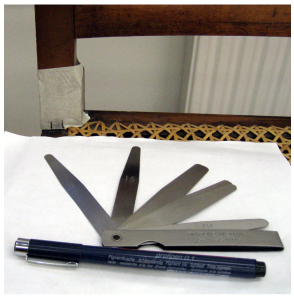
An early 19th Century Satin Birch Beidermeier salon chair with caned seat, ebony stringing and turned front legs

Contents

1. Consolidate PR rear stile Mortise and Tenon joint



The tenon was “found” and marked using feeler gauges and a 0.5mm diameter hole drilled from above and below to allow glue injection. The hole was carefully drilled into an unobtrusive area under the rail, and through a caning peg on the top, leaving no evidence.

The joint was then glued with fish glue and allowed to cure un-disturbed overnight.

A small area of fish glue was left as a control to help estimate curing time.

2. Consolidate PL stile short grain break at dowel point

The dowel joint was loose assembled without the dowels to check alignment and then new dowel was turned from sycamore on the lathe and loose assembled. The parts were then glued with fish glue using Sellotape as

a cramp. I masked the 2nd dowel to allow removal after curing for treatment of the split.

A small area of fish glue was left as a control to help estimate curing time.



After the fragments had cured the 2nd dowel was removed to allow the split to be kerfed out with a small backsaw to create clean gluing surfaces for consolidation.

A shaped sliver of Satin Birch was then glued in along with the second dowel using fish glue.

A small area of fish glue was left as a control to help estimate curing time.

After curing the veneer was trimmed and fitted using chisels and a cabinet scraper, and stained in using water-stains. A final coat of shellac and earth pigment completes the blending in.

3. Consolidate PR stile short grain break at dowel point

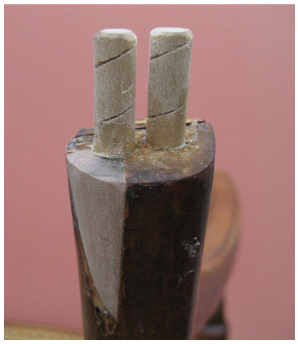


The small existing fragment was loose assembled without the dowels to check alignment and then new dowel was turned from sycamore on the lathe and loose assembled. The fragment was then glued with fish glue using Sellotape as a cramp.

A small area of fish glue was left as a control to help estimate curing time.

Once this joint had cured, the missing area was trimmed to 2 flat planes to allow a load bearing splice to be inserted. The carved piece of Satin Birch was tested for fit after the dowel hole was carved in and then glued into place with Hot Hide glue.

A small area of Hot Hide glue was left as a control to help estimate curing time.



The spliced in piece of Satin Birch was then trimmed in with chisels and finished with a goose-neck cabinet scraper. The fragments of the original dowels were removed from the holes on both sides by drilling out with an undersize drill, then collapsing the remaining timber into the void created.

The cresting rail was glued into place, supported by the replaced dowels using Hot Hide Glue. A final coat of shellac and earth pigment completes the blending in.

4. Consolidate natural split in Splat



The splat was held in the vice and the debris from along the edges of the split - visible here as a dark edge - was removed using a fretsaw carefully eased through the split from front to back. Coloured stopping wax was worked into the front face of the crack using a Perspex spatula to stop glue from seeping through to the front surface. The cleaned join was then glued with fish glue applied from the back and clamped into place using the jig shown above. A length of Linen was glued across the tenon to strengthen the repair.

The splat was only glued by an area around 2cm wide centred on the crack upon re-assembly, so as to allow any future expansion and contraction to take place without stressing the repair.

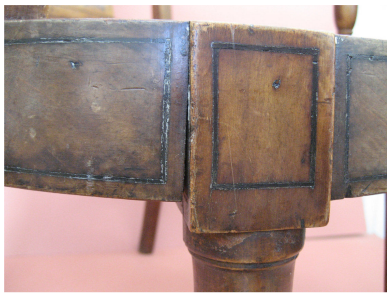
5. Replace ebony stringing at point of old repair

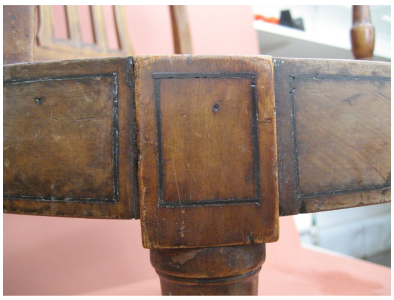


The old hide glue was cleaned out of the grave using dentistry tools and a magnifying visor at 2.7x magnification. A small section of replacement ebony stringing was cut to fit the original surface of the existing veneer and glued into the grave with fish glue. Perspex was used as a glue block to allow a clear view of the joint as pressure is applied from the G-clamp.

The replaced ebony stringing was sealed with a coat of shellac.

6. PR front leg - Consolidate Joint





There was some slight movement in the PR front leg, and a tapered gap at tenon shoulder that could not be cramped out. It was decided that the least invasive consolidation method was to insert a piece of Satin Birch carved to fit the opening. The piece was glued in with Fish Glue, using masking tape to control glue application. A final coat of shellac and earth pigment completes the blending in.

7. PL arm - Chip missing Decorative 1/ Item 3



There was some natural splitting in the PL arm, and a section has been lost, judging by the patination of the cleaved surface this happened some time ago. It was decided to fit a splice onto the old surface without disturbing this patination.

A piece of Plasticine® was pushed into the cavity and used as a guide for carving the inside mating surfaces of our “conservation splice”. A piece of Satin Birch was carved to this shape and glued into place using Fish Glue and cramped into place with Sellotape®
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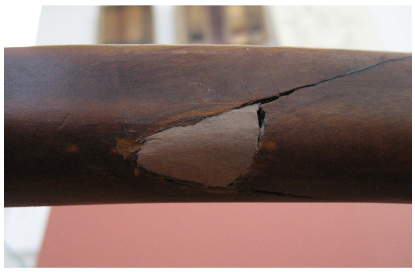

The section was then trimmed in with chisels and finished with a goose-neck cabinet scraper. The new timber was stained with water stains, the small gaps were stopped with wax, and a final coat of shellac and earth pigment completes the blending in.

8. Preparation for replacing missing leg sections



The chair has been cut down at some point, and after research and measurement, sections of pine were turned to simulate how the leg would have looked if the taper had continued to the correct height. The sections were then quickly coloured in to show visually how that would have looked.

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9. Replacing the missing leg sections



The chair has been cut down at some point, and after research and measurement, sections of pine were turned to simulate how the leg would have looked if the taper had continued to the correct height. The sections were then quickly coloured in to show visually how that would have looked had the taper continued.

Clearly this is incorrect and research will now guide the choice of replacement foot at the front – the rear legs will continue as they are simply oval in cross –section.

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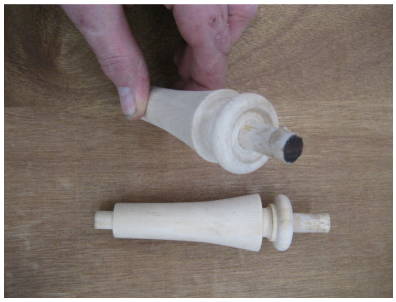
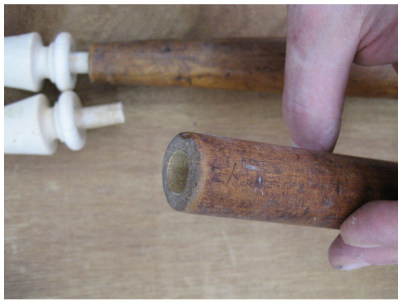
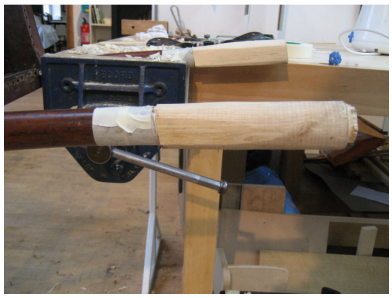
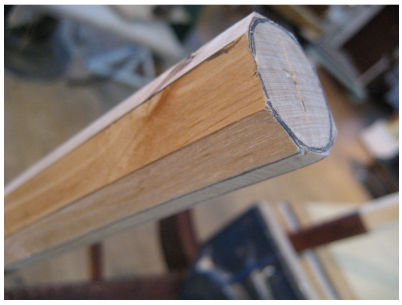



Starting from “green” Birch, a log was cleaved into billets before rough turning to size to facilitate rapid seasoning. Once the moisture content reached 12% the front feet were turned with tenons and a recess to allow the original surface to be retained on the base of the remaining front legs. This surface was treated with a barrier coat of hide glue before being set into a bed of epoxy consolidated with micro-balloons, and the tenon joint was glued with hide glue.


The rough turned birch, was carved to fit the existing rear leg surface which was treated with a barrier coat of hide glue before being set into a bed of epoxy consolidated with micro-balloons, and finally the tenon joint was glued with hide glue. After marking out the new timber was squared – octagonalised and then carved into shape. The final colouring on all 4 feet was completed using water stains, shellac and earth pigments.

Caning and Final Waxing Decorative 3/ Item 2

The chair was re-caned using a suitable pattern by a local caner and the whole surface was treated with a proprietary beeswax based polish applied with a cotton rag and buffed with mutton cloth.