

Restoration

WMMF Ph 6

Furniture Restoration

- The repair of modern everyday furniture usually calls for cutting out and replacing broken parts.
- Fixing false tenons or dowels to fractured joints, strengthening joints with metal straps or renewing whole members where necessary.
- In general, applying normal cabinet-making skills.
- Antique restoration calls for a bit more care and attention. **Why?**
- Trying to preserve the integrity and patina of the piece. **What is patina?**
- Patina is the natural, aged surface layer on antique furniture, developing over decades or centuries through daily use, oxidation, wax buildup, and exposure to light. It can be all the dents and scratches the show the age of the piece.

Furniture Restoration

- **Why is Antique Furniture Restoration carried out?**
- Monetary value
- Heirlooms
- Investment
- Sentimental value
- It is important to preserve antique and vintage furniture for future generations to enjoy.
- Furniture restoration can also be a frugal way of saving money.
- Contributing to sustainability by prolonging the use of the furniture.
- Quality of older furniture compared to factory made or flatpack furniture:
Discuss

Fundamentals of Antique Furniture Restoration

- Repairs on Valuable Antique furniture requires **expert know-how** with carefully matched old timbers, old saw-cut veneers. Antique furniture made from mahogany in 1800's would have been from Honduras or Cuba, very dark colour with dense grain.
- Repair on valuable Antiques should only be carried out by people with considerable experience of that type of work.
- Repairs out of Period or badly done can de-value the Antique.
- A keen appreciation of wood types, finishes, history of furniture, colour and patina, joints and construction of pieces are essential.
- Skills in carving, wood turning, veneering, inlay, marquetry cutting, staining, polishing and lacquering are also required.

Furniture Restoration



Restoration and Upholstery night classes at [Malahide Community School Adult Education](#)

Furniture Repurposing or Reviving



Pic Stitch



[Images from Bored Panda](#)

Furniture Restoration Again



50 saved restorations by [Bored Panda](#)

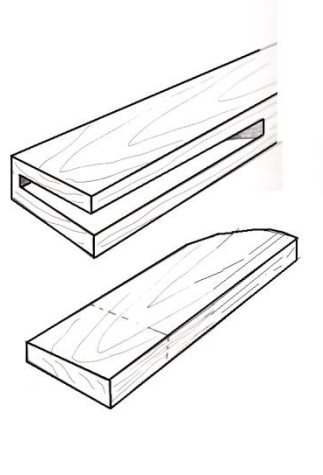
Restored by [Restore It](#)

Assessing Furniture

- **Important steps**
- **Value:** Determine the historical value and authenticity of the furniture piece. Restoration techniques should be tailored to preserve its originality and value.
- **Structure of piece:** Examine joints, legs, and frames for any cracks, looseness, or instability. Ensure the furniture is sound before proceeding with restoration.
- **Insect attack:** Check for signs of wood-boring insects, exit holes and frass. Treat where necessary.
- **Finish:** Assess the existing finish for cracks, scratches, peeling, or discoloration. The condition of the finish will determine the appropriate restoration methods. Preserving patina, freshening up stripping back etc.

Furniture Repairs Q 7

- **Problem:** Describe the steps to repair the mortise joint between the leg and front rail of a chair whereby the tenon has snapped off in the mortise.
- Typically, with this type of break the tenon becomes loose over time and stress on the joint cause it to shear off at the shoulder of the tenon and the tenon or part of the tenon snaps off and remains in the mortise.
- **Solution?**
- **False Tenon:** Remove the old tenon from the leg by mortising out the old tenon. Cut a deep mortise out of the rail to the edge and underside of the rail. Fit and glue in a false tenon to the rail when dry glue the false tenon into the leg.
- Similar to a domino joint.



Furniture Repairs Q 1

- **Problem:** Describe briefly how a dent in a sideboard top is repaired.
- **Solution?**
- Slight bruising or dents on the surface can be lifted by applying water or steam to make the fibres swell again thus lifting the grain. Steam application by using a wet cloth and a heated iron.
- Method: Using a clean wet rag and the tip of a hot iron to apply the heat. This may have to be repeated a number of times.
- Deeper dents may require treatment over night.

Furniture Repairs Q 2

- **Problem:** Describe briefly how to repair a solid tabletop with a very deep scratch using a diamond plug to repair the surface.
- **Solution?**
- Elongated diamond plugs with splayed edges should be of same species and grain configuration, if possible, from old sources.
- The plug with the grain direction carefully matched is placed over the damaged area. Damaged wood is removed, and the plug is fitted and glued in place.
- Before gluing in the plug rub white chalk around the edges this will often hold back a dark glue in light coloured timbers.
- Level, clean and colour match to blend in with existing surface.

Surface Damage Blisters

- Blisters can occur if groundwork is damaged, dented or dust prevents adhesion of veneer to groundwork.
- Blisters in modern work can usually be cut with a knife along the grain & re-laid using PVA and a weight.
- Blisters in antique work can usually be cut with a knife along the grain & re-laid using animal glue and a veneer hammer.
- Large blisters in old saw-cut timber veneers may not respond to above.
- If the whole of the veneered surface must be lifted off & replaced on a fresh groundwork it may be possible to lift the veneer by steaming or repeatedly swabbing with hot water.
- Some veneers are too tough or too brittle for this treatment and the whole of the groundwork may have to be planned away.
- This method is used if the top surface is valuable and the patina of age must be preserved.

Furniture Repairs Q 3

- **Problem:** Explain how blisters could occur in the veneered surface of an antique drawer front and describe how you would repair the drawer front.
- **Solution?**
- Blisters occur when there is a separation of the bond between the ground work and the veneer, this can be due to poor adhesion during manufacturing due to dirt or lack of adhesive or trapped air.
- If veneered surface gets water or heat damage this can effect the animal glue adhesion properties.
- Blisters can also occur if animal glue becomes damp or wet and veneer lifts.
- Blisters in antique work can usually be cut with a knife along the grain & re-laid using animal glue and a veneer hammer.

Furniture Repairs – Hammer Method

- **The Hammer Method** refers to hand veneering using a veneer hammer and animal glue.
- Animal glue or hide glue was made by boiling the offal or skin of dead animals and making a glue.
- This glue was then heated up in a jacketed glue pot and applied while hot.
- A veneer hammer was used to push the excess glue from under the veneer. The glue cooled and the veneer set. If heat and damp cloth was applied the glue would melt again and the veneer could be repositioned or removed.

Furniture Repairs Q 4

- **Problem:** Explain what is meant by a superficial scratch in a French Polished surface and how you would use reviver to repair it?
- **Solution?**
- A superficial scratch is a light surface scratch usually in the finish a reviver is used to repair it.
- The reviver cleans the surface, dissolves it slightly and leaves behind the shellac finish thus brighten the finish but leaving the patina of colour, dents and evidence of wear and tear.
- A light scratch in the finish of the piece that has not reached the timber or veneered surface can usually be repaired with a reviver solution.
- A number of household items such as toothpaste, baking soda & mayonnaise can be used as revivers as well as walnuts and Brazil nuts.

Surface Damage Scratches

- There are lots of homemade remedies for revivers
- 1/3 French Polish
- 1/3 linseed Oil
- 1/3 Methylated Spirits



Carved panel before and after applying a reviver coat. It is important to preserve the patina.

Surface Damage Ring Marks

- A white ring often appears on a finished surface. **What can cause this?**
- A white ring occurs from moisture trapped between the layers of lacquer caused by placing hot or damp cups, glasses or containers on the tabletop.
- Some ready to use remedies are also available.
- Click images for more information.



Furniture Repairs

- **Problem:** Describe how you would treat this table's surface that has a white ring mark. The table is finished in French polish.
- **Solution?**
- Clean the surface by removing any dirt or grime. Using a small brush or cotton bud apply a thin film of methylated spirits to the damage area.
- Set this ring alight the heat will remove the trapped moisture between the layers of lacquer. Finish with a wax and buff to a shine.

Furniture Repairs Q 5

- **Problem:** Describe how you would repair a turned leg on a dining chair that has a lower section of the leg missing.
- **Solution?**
- **Rebuilding a turning:** Cut the leg at a section like a bobbin, bead or block.
- Turn a replacement section and leave a long dowel at the top so that this can be inserted into the existing leg.
- Drill a hole the diameter and length of the dowel.
- Use a strong adhesive to glue the replacement turning in place.
- Colour match to the rest of the leg.

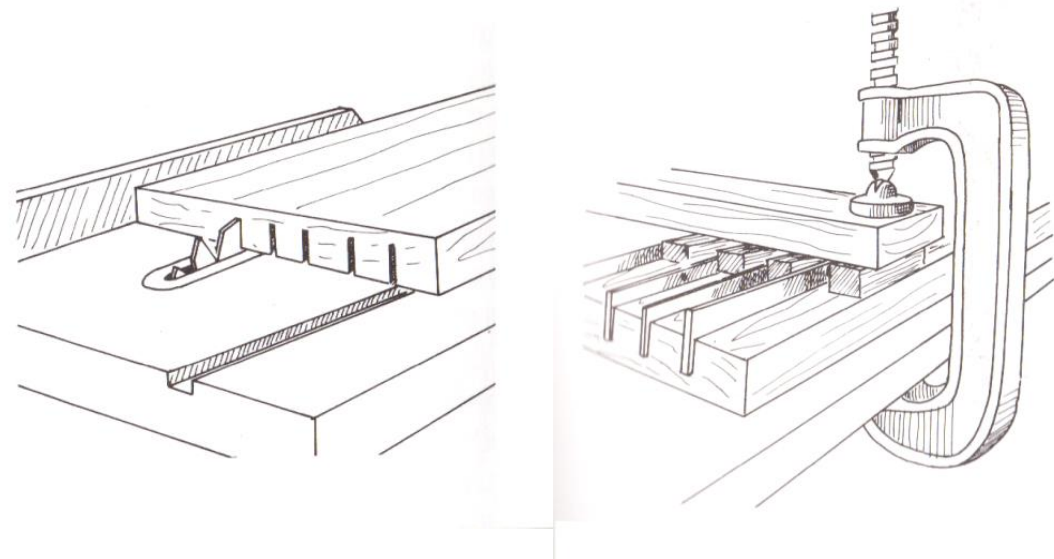


Furniture Repairs – Non-Structural

- **Problem:** Damaged non-structural items like rungs and spindles
- Use epoxy resin adhesive with suitable reactive diluents, fillers & colorants.
- This is a gap filling glue with high moisture resistance & little shrinkage in curing, so that it can be built up into solid sections without the usual cracking & crazing.
- Worm eaten timbers can be repaired, restored & strengthened by surface application
- In seriously damaged timber affected areas are removed and then made good with a liquid Araldite formulation.

Furniture Repairs Q 6

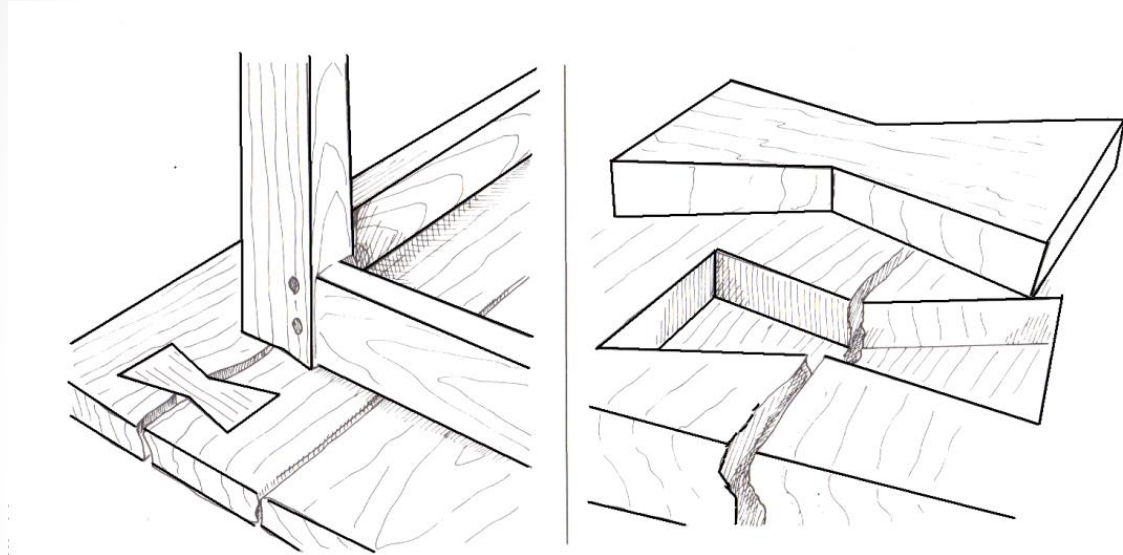
- **Problem:** A badly warped top is to be repaired using kerfing.
- **Solution?**
- Badly warped Tops: can often be corrected by saw kerfing (if the underside is not visible).
- A series of parallel cuts are run with the circular saw or router 6mm apart and to within 3mm of the upper surface.
- The board is clamped down to a level surface and wedges or veneer are glued into the kerfs.



Furniture Repairs Q 7

- **Problem:** A solid beech block tabletop 10 years old has a split running the length of the table around 350mm from the end. The top cannot be removed from the frame. What would you suggest is the best method of repair?
- **Solution?**
- **Dovetail Key:** As the top is fixed in place the table will have to be turned upside down and clamped shut as tight as possible.
- A dovetail key will then be made and fitted to the underside of the top to reinforce the split and stop further splitting.
- After dry fitting, pressure is released from the clamps glue is forced into the split the top is re-clamped and the dovetail key is fitted and glued in position.
- When dry it is levelled off.

Furniture Repairs –Dovetail Key



Dovetail key also called butterfly, bowtie.
Watch video on making a [Dutchman key](#)
2.52 mins

Dovetail Key Single Slab Oak Dining Table
Image from [Warehouse701](#) Guess price 2026

Furniture Repairs Q 9

- **Problem:** Describe the steps to repair a badly warped top of a modern solid oak dressing table.
- **Solution?**
- If the top is to be re finished then it is possible to split the top into two or more pieces, reversing the strips & then re-thickness and apply a new finish.
- This will leave the top thinner than it was originally.

Furniture Repairs Q 10

- **Problem:** Describe the steps in repairing an antique bow front drawer with loose dovetail joints, one drawer side is split at the groove and the lower part of the timber is missing.
- **Solution?**
- The side will have to be cut back, and fresh piece glued on and re-grooved.
- As animal glue would have been used to glue up the drawer it is possible to carefully knock the joints apart.
- Clean all existing glue and dirt and reglue using a strong gap filling glue.