Marquetry Workshops Series

Workshop 4: Fine Lines

November 2023

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1. Introduction

1.1. In many pictures there is a need to include fine lines of some sort. These could be animal whiskers, cracks in pavements, leaded windows, spiders' webs, etc.

1.2. In this workshop we will explore methods and techniques of inserting fine lines to make life easier. Also included are a few comments on sliverisation as a technique, especially for animal fur.

1.3. The choice of method to use to create fine lines depends somewhat on what is needed. These will be discussed as each method is explained.

1.4. For all fine line work a fine, very sharp blade is needed – a Swann Morton scalpel blade No. 11 is recommended.

2. Very fine lines

This category includes animal whiskers, spiders' webs and stays for boats' masts and the like.

2.1. Start by making a knife cut along the required line.

2.1.1. Cut through the veneer cleanly with a very sharp knife blade. Be sure to keep the knife blade perpendicular to the plane of the veneer – see Figure 2-1 below..

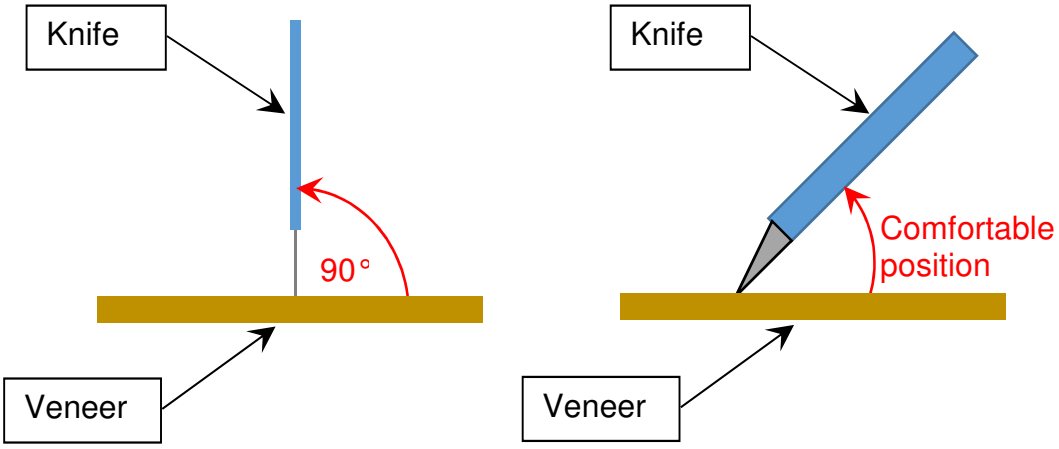

Figure 2-1: Knife Position for Cutting Fine Lines

2.1.2. Hold the cut to the light to see that it is a clean cut without snags. No material is cut away - a simple cut is required. This is your 'window'.

2.1.3. If necessary, enlarge the slit by gently inserting the knife blade right through the veneer. Do not remove any material. The knife blade thickness will compress the veneer slightly to open up the slit.

2.2. The next step is to cut a strip to fit the knife cut.

2.2.1. This can be challenging. Take a straight edge and cut a very thin slice from the veneer along the grain the thickness of the desired fine line. With a little practise you can cut some very thin pieces.

2.2.2. Alternatively, you could use a small hand plane set to a fine cut. Sandwich two or three veneers in a vise and plane some shavings using smooth strokes. The shavings will probably curl up but these can easily be straightened out with care.

2.2.3. Use a close-grained soft veneer if you can.

2.2.4. Make sure that your sliver is long enough to fill the length of the cut in one go. Offer it up to the window. The sliver should slide in easily. If it doesn't, try rolling the knife handle or a suitable dowel along the strip to squash it a bit thinner (it will probably curl up but can carefully be flattened out if necessary).

2.2.5. Cut to length and insert into the slit. Make sure it goes through the full thickness of the window veneer. It will probably be a loose fit.

2.2.6. Rub **a little** PVA into the slit. The moisture will swell the sliver and window to leave a tight, fine line without any gaps.

2.3. Sliver Selection

2.3.1. If cutting slivers is a step too far, try using wood shavings, wood wool or even pencil sharpenings.

2.3.2. Finding the right colour may be a challenge. As the slivers are so thin, the choice of colour boils down to light, mid brown, dark or perhaps a silver/grey harewood.

Note: A harewood is a regular veneer chemically treated to create a colour from light silver-grey to deep purple depending on the tannin content. Refer to the Redbridge Marquetry Group's tutorial series to be found at http://www.redbridgemarquetrygroup.org/faq/tutorials/harewood%20tutorial.html

2.4. Very Fine Line Problems

2.4.1. As no material is removed, problems can arise if several fine lines are cut close together. The background veneer will have a tendency to buckle and warp.

2.4.2. The solution to this is to remove a very small amount from the slit every third cut or so.

2.4.3. This is best achieved by turning over the veneer and angling the knife blade to run along the back of the cut to remove the edge.

2.4.4. Alternatively, you may prefer to insert a thin, fine grit (say 600 or 1000) abrasive paper and gently remove a small amount of material from each side of the cut. A well-used paper can be useful for this.

3. Not So Fine Lines

3.1. For not so thin lines, e.g. a veneer thickness the same principle applies but a wider slot needs to be made.

3.1.1. This can be cut in the usual way but remember to keep the knife blade vertical - see Figure 2-1 above.

3.1.2. To help cutting such thin lines, a double bladed knife can be very useful.

3.1.2.1. Place two blades together in the knife handle. If the space is insufficient, place a thin shim of metal or paper between the blades as a spacer.

3.1.2.2. Ensure that the blades are firmly held in the handle. Some handles only take a single blade and are thus not suitable for this purpose. A collet type of handle is best.

3.1.2.3. When using the knife be warned that the blade points can splay apart under pressure - so light strokes are essential. Not only can you cut the slot but you can also cut the insert.

3.1.2.4. Using the same knife means that the insert should be an exact fit (if you believe that you will believe anything!).

3.1.3. For lines that are the thickness of a veneer, (or even slightly thinner when shaved down), cut the insert such that it can be inserted on edge.

3.1.3.1. This makes for a precise insert thickness. You will find it easier to insert if the strip is cut oversize in length.

3.1.3.2. On insertion ensure that the insert is pushed through the full thickness of the veneer window before trimming to exact length and then gluing.

3.1.4. Carefully trim flush to the background veneer once the glue has dried.

3.1.5. This technique can also be used to make lines of multiple thicknesses of veneer for slightly thicker lines that need to be parallel sided such as stringers (see Workshop 2 – awaiting completion).

4. Inconsistent Thickness

4.1.1. When fine lines are not of consistent thickness such as with paving slab gaps, stone walls and perhaps the mortar of a brick wall, a different approach is required.

4.1.2. Instead of cutting in the ‘gaps’ one technique is to cut in the larger pieces into a background of the gap material. This means that you don’t actually cut any fine lines at all!

4.1.3. It is recommended that the feature is first created on a separate veneer. Once completed the feature can be used as a normal veneer to fill in a window in the picture in the usual manner – see Paragraph 4.1.7 below.

4.1.4. Especially for dark veneers, start by covering the veneer with gummed paper tape (optional) onto which the design can be drawn.

4.1.5. Select the stone (slab, brick, etc.) and cut a window, being careful to remain just within the boundary marks. See Figure 4-1 for the original picture and Figure 4-2 for the first window.

Figure 4-1: Paving image

Figure 4-2: First Stone Window

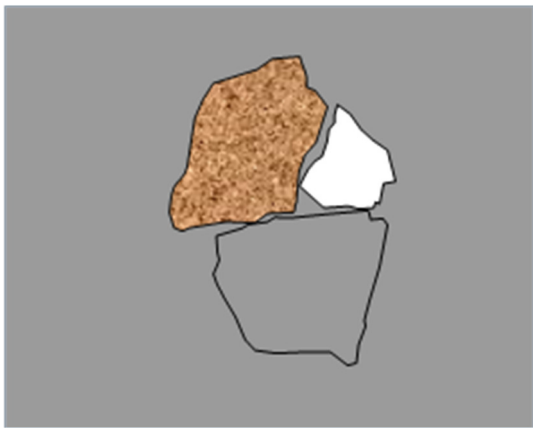

Figure 4-3: Second Stone Window

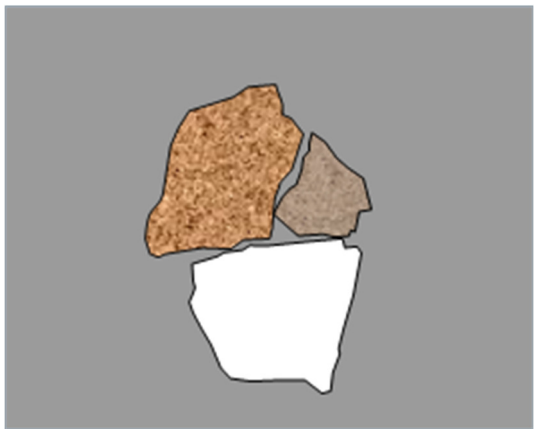

Figure 4-4: Third Stone Window

4.1.5.1. Enlarge the window by paring away the excess 'gap' to leave behind the required amount - be it thick, thin or tapering to nothing.

4.1.5.2. Be sure to keep the sides vertical rather than bevelled – see Figure 2-1 above. This should stop gaps appearing when sanding smooth during finishing.

4.1.5.3. Fill the window in the usual way, apply a little glue and leave to dry thoroughly before cutting any more in that area. This will ensure good integrity and minimise the risk of bits falling out or crumbling. See Figure 4-3 above.

Note: Leaving gaps to be filled with glue or finish is just not cricket!

4.1.5.4. Continue in this manner until the whole feature is completed.

4.1.6. You will now have a piece of veneer with your feature cut in and most likely oversize.

4.1.7. Insert the whole feature as one piece into the main picture. If you are uncertain about the procedure, see the following sub-paragraphs.

4.1.7.1. Cut a window in your picture to accommodate your feature. Figure 4-5 shows the area of concern and Figure 4-6 the window to be filled. Note that in this example, the foliage will be cut in later and overlap the edges of the insert.

Figure 4-5: Area of Insertion

Figure 4-6: Window in Picture

4.1.7.1. Place the composite veneer under the window in the desired position as shown in Figure 4-8 below.

4.1.8. Trim the insert as needed – see Figure 4-7 below.

4.1.9. Job done!

Figure 4-8: Composite Placed Under Window

Figure 4-7: Trimmed Insert

5. Grid Type Lines

Window glazing bars or leaded lights are best done away from the picture and inserted as a complete unit.

5.1. Leaded lights

These are usually a diamond pattern and the process is described below.

5.1.1. Select the 'glass' veneer and consider the grain direction. Trim the edge of the veneer accordingly. Cut a suitable piece for the leaded part and glue to the edge like a stringer – see Figure 5-1 below.

5.1.2. Cut a strip of veneer the width of the window pane and a leaded part. Glue this strip to a similar strip to build up a matrix of window panes and leaded parts. Figures 5-1 to 5-4 illustrate the process which is similar to the chess board with stringers (Workshop 1).

5.1.3. When you have sufficient, cut the matrix at an appropriate angle and repeat the process of cutting strips and adding stringers until there is enough to fill the window shape – see Figure 5-5 below.

5.1.4. The composite veneer can now be used to fill the window in the usual way as illustrated in Figures 5-6 to 5-8.

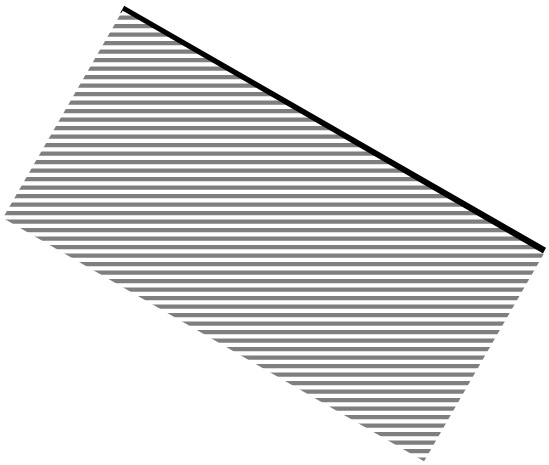

Figure 5-1: Glazing Veneer with Glazing Bar

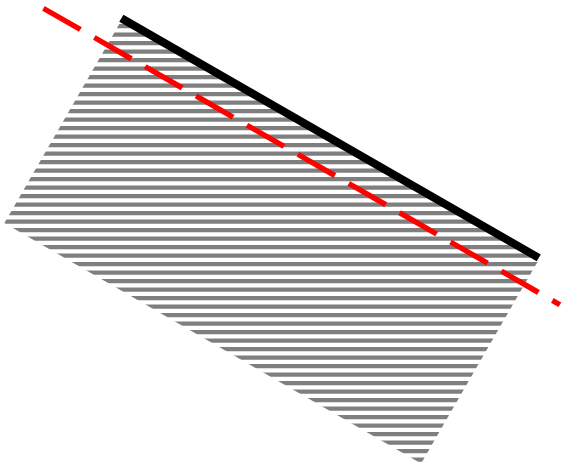

Figure 5-2: Cutting Line for Strip

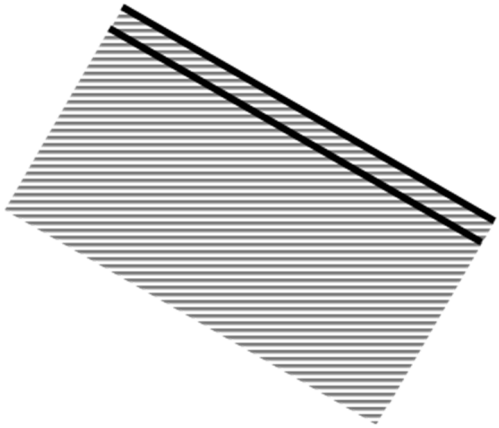

Figure 5-3: Strip Added with Stringer

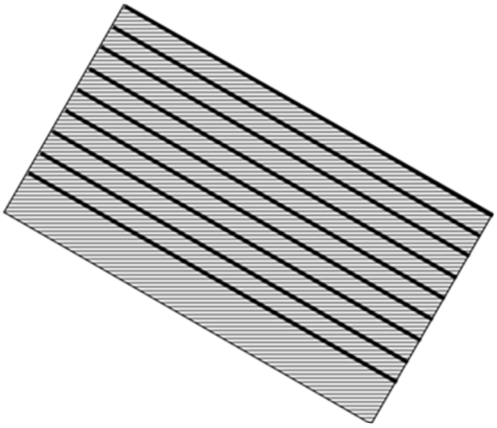

Figure 5-4: Completed Composite Veneer

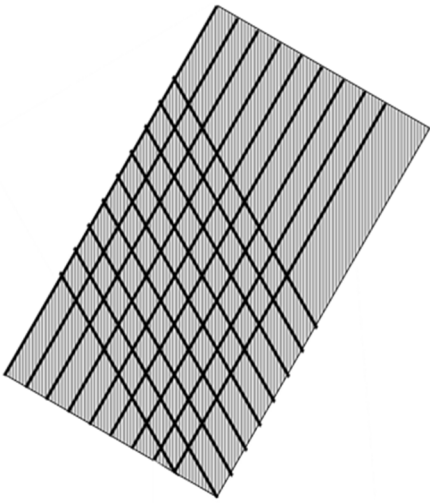

Figure 5-5: Strips Cut at Angle with Added Stringer

Figure 5-6: Window cut in Waster for Window Pane Matrix

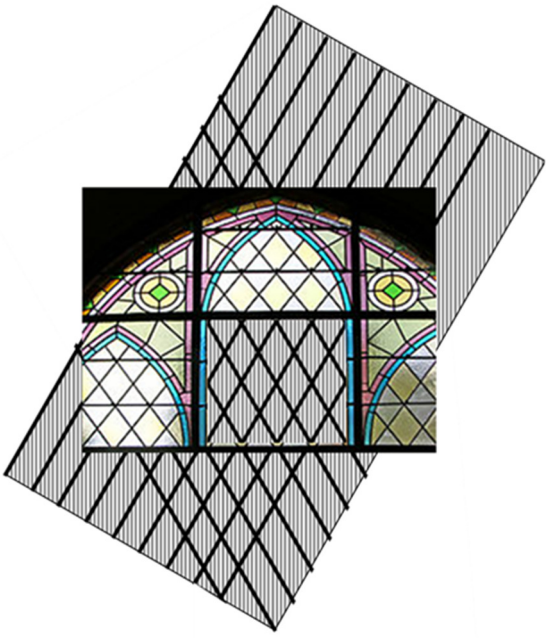

Figure 5-7: Matrix Placed in Window Prior to Insertion

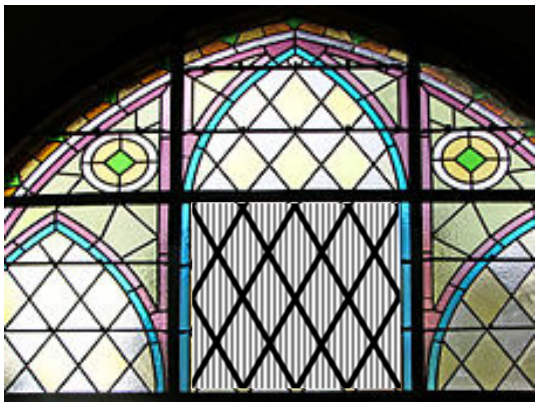

Figure 5-8: The Finished Insert

5.2. Windows with Glazing Bars

5.2.1. There are several ways to achieve the desired effect but only one will be suggested here.

5.2.2. Consider the picture in Figure 5-9.

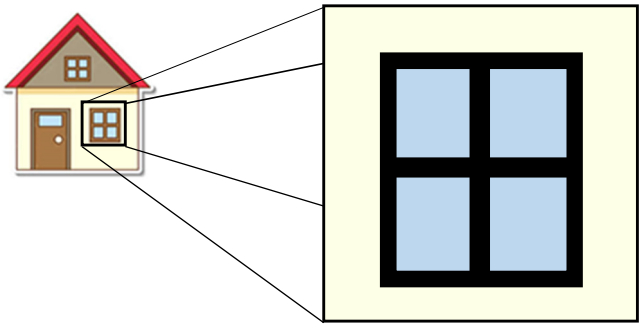

Figure 5-9: Window To Be Inserted

5.2.2.1. Assuming the window pane veneer is in the vertical direction, cut a strip just over half the window width cutting along the grain.

5.2.2.2. Add a stringer of the glazing bar thickness to the edge of the main veneer in a similar manner shown in Figure 5-1 above.

5.2.2.3. Cut another strip just over the window width and add to the stringer. You should now have a 'glazing bar sandwich' similar to that shown in Figure 5-10 below.

Figure 5-10: Glazing Bar Sandwich

5.2.2.4. Turn the veneer strip through exactly 90° and cut another strip just over half the width of the window. See Figure 5-11 below

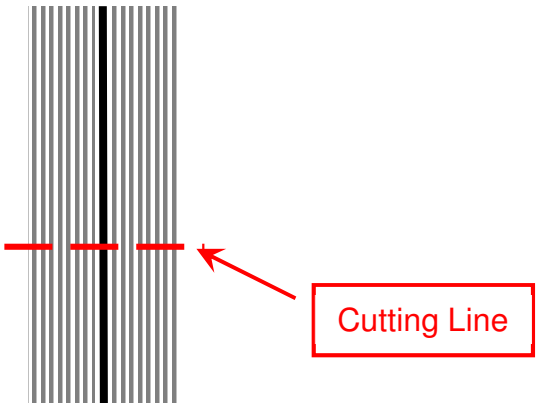

Figure 5-11: Cutting Line for Glazing Bar

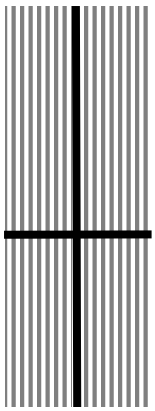

Figure 5-12: Completed Glazing Bars

5.2.2.5. Add the second glazing bar stringer. You should now have a cross shape of glazing bars on a window pane background as shown in Figure 5-12 above.

5.2.2.6. If required, add further vertical and/or horizontal glazing bars in a similar manner.

5.2.2.7. Insert this composite veneer in the picture window as illustrated in Figure 5-13 below.

5.2.2.8. The completed insert is shown in Figure 5-14 below.

Tip: If the glazing bar stringer is too thick, try sanding down the thickness. Hold the veneer on edge and rub gently back and forth over a medium grade abrasive sheet laid on a flat surface.

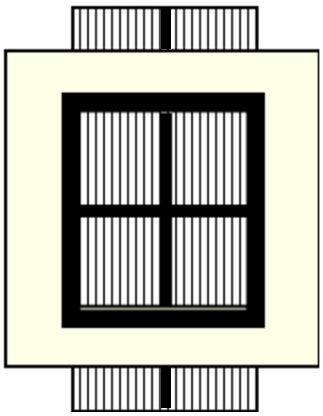

Figure 5-13: Composite Placed Under Window

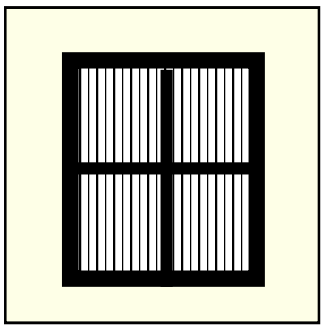

Figure 5-14: Completed Insert

6.1. Boat's Rigging

6.1.1. Sometimes the rigging can appear too strong, even with very fine lines. There are at least three things you could try:

a) Use a lighter coloured veneer for the rigging

b) Try a thinner insert – may be difficult if the slot has become enlarged

c) Remove some of the rigging altogether and taper the ends. This gives the effect of the rigging twisting.

d) Sometimes using inserts of slightly differing shades gives the desired effect of sunlight on the rigging.

6.1.2. An illustration of the effect of c) above is shown in Figures 6-1 and 6-2 below.

Figure 6-1: Rigging Fine Line Section

Figure 6-2: Final Rigging Effect

6.2. Radiating Lines

6.2.1. A dandelion clock is such an example.

6.2.2. The problem here is that all the fine lines come to a single point and the veneers tend to crumble or shred.

6.2.3. One technique to alleviate this is to make every other line a bit shorter so as not to stop at the centre. The length may vary and should not all be identical as this may appear too artificial.

6.2.4. Another consideration is to add a feature to the focal point to prevent the lines meeting in the same place.

7. Highlights

Although not strictly fine lines, the techniques used for highlights are similar in some respects. Highlights are used to give some life to the subject. The main ones are eyes and berries. Larger highlighted areas such as the sunny side of a lighthouse or cottage are not included here.

7.1. Eyes

7.1.1. The highlights on eyes are important as they give life and depth to the subject.

7.1.2. Size and position are crucial for the highlight to appear realistic and to add to, rather than detract from, the picture.

7.1.3. Generally the highlight is round, oval or crescent shaped but sometimes a squarer outline is more appropriate.

7.1.4. There are two main methods to consider: direct and indirect insertion.

7.2. Direct insertion

7.2.1. Direct insertion is my term for adding the highlight directly into the picture when the rest of the feature is in place.

7.2.2. Depending on size, a small drill can be used to make the hole in the veneer. An alternative for very small holes is the use of a darning needle, drawing pin or similar. Be sure to position the hole accurately.

7.2.3. The insert itself can be fashioned from a small dowel or stick such as a wooden cocktail stick. Be sure that the insert goes right through the veneer and glued in place. Trim once glue has set.

7.3. Indirect insertion – Part 1

7.3.1. This section is best read in conjunction with Figures 7-1 to 7-4 below

7.3.2. Indirect insertion is my term for insertion of the highlight into the feature veneer before inserting into the picture. This does allow for precise positioning before cutting in.

7.3.3. Insert a highlight into the eye pupil veneer as for direct insertion above – see Figure 7-3. Allow glue to dry and trim off excess.

7.3.4. Cut window in the workpiece (Figure 7-2: Window in FeatureFigure 7-2) and, using the veneer with inserted highlight, place in the exact position required. Tape in place to prevent movement and cut in the complete feature in the usual manner taking care to ensure clean and vertical cuts (Figure 7-4).

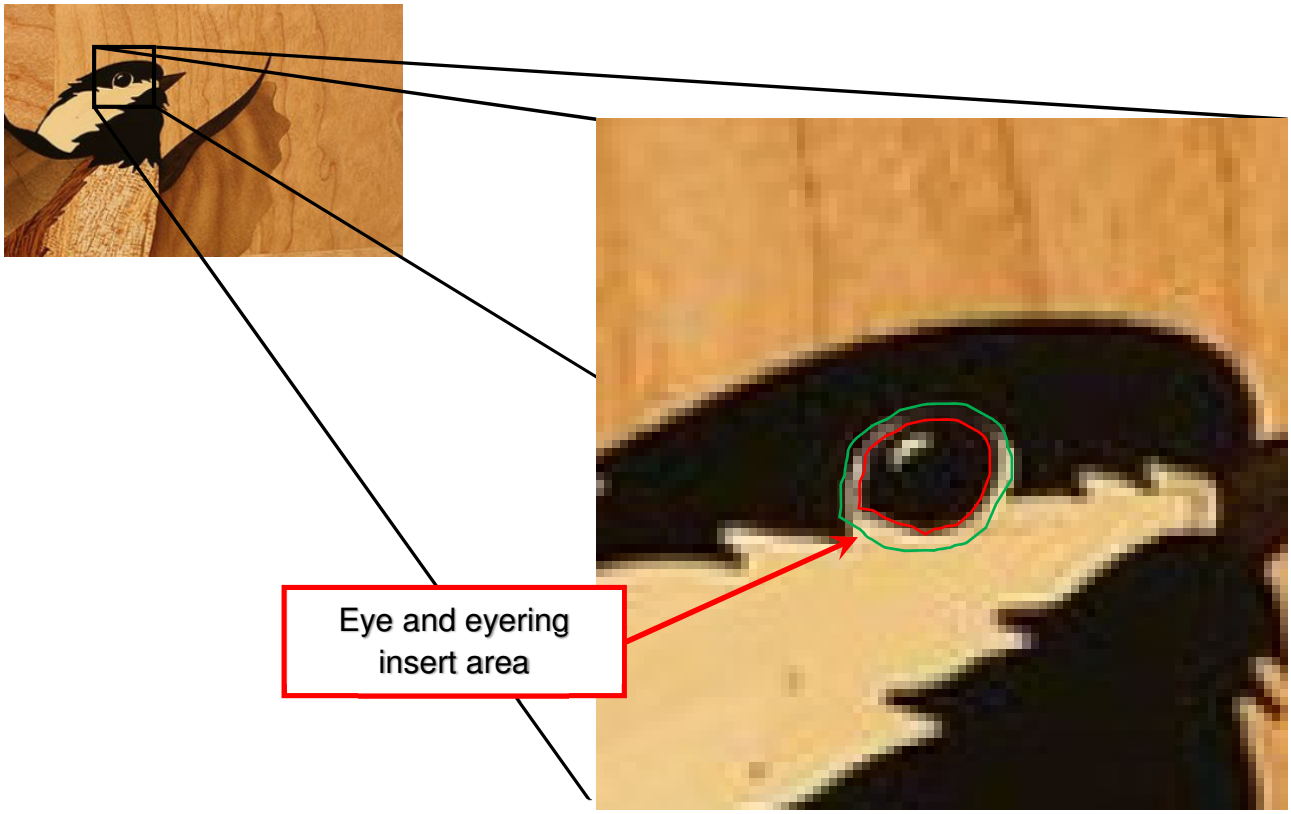

Figure 7-1: Picture Depicting Eye to be Inserted

Figure 7-3: Insert Highlight

Figure 7-2: Window in Feature

Figure 7-4: Position Highlighted Eye Veneer Behind Window

7.4. Indirect insertion – Part 2

7.4.1. Some eyes have a surrounding contrasting colour called an eyering.

7.4.2. Proceed as in paragraphs 7.3.3 to 7.3.4 above. At this stage, cut the eye feature into the eyering veneer making sure that it is positioned as required (Figures 7-5 to 7-7).

7.4.3. Insert this composite into the main feature by cutting in the complete feature in the usual manner taking care to ensure clean and vertical cuts – see Figures 7-8 to 7-9 below.

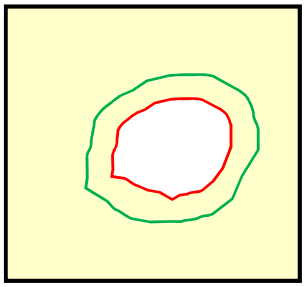

Figure 7-5: Cut 'Eye' Window in Eyering Veneer

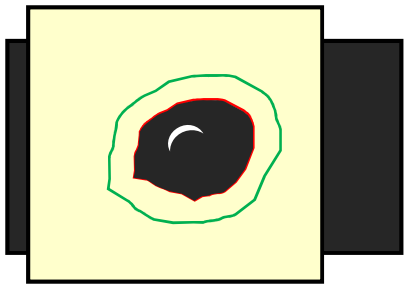

Figure 7-6: Cut 'Eye' Window in Eyering Veneer

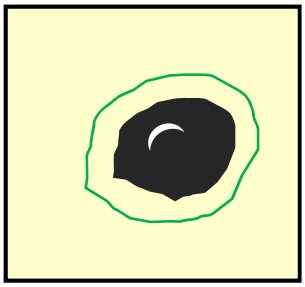

Figure 7-7: Completed Eye and Eyering Ready for Insertion

Figure 7-8: Feature Window Ready for Insert

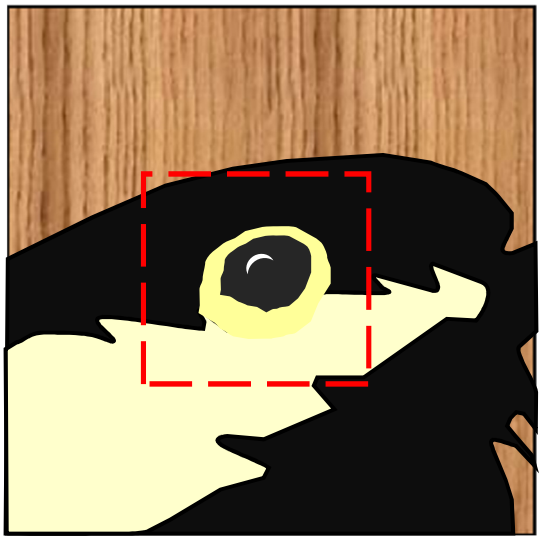

Figure 7-9: Completed Feature

7.5. Berries

7.5.1. The highlights on berries are usually quite small. This means that in addition to the direct approach in paragraph 7.2 above a circular highlight can be inserted after laying.

7.5.2. Mount the picture in the usual way. Mark the exact position of the highlight.

7.5.3. With a fine drill of the same size as the desired highlight, drill a hole through the veneer and just into the baseboard.

7.5.4. Either use a cocktail stick or a trimmed down piece of veneer to fill the hole. Beware that some inserts may have a cross-grain of different colour – not usually wanted. Glue in the piece and trim once the glue has cured.

8. Sliverisation

This topic is covered more fully in Workshop 9, Special Effects, but is covered briefly here as it is closely related to fine lines. It can be a very time-consuming process.

8.1. Sliverisation is a technique of inserting slivers of veneers into a picture to give a more realistic effect to animal fur, hair, feathers, etc.

8.1.1. Cut a window in the picture of the desired shape.

8.1.2. Stick some clear tape e.g. Sellotape or sticky-backed plastic on the back so that the base of the window has a sticky surface.

8.1.3. Cut a quantity of thin slivers or shavings from appropriate veneer(s) ready to insert into the window. These may be of differing thicknesses and tapered – whichever gives the best effect. For some pieces the colours may vary to achieve a realistic effect.

8.1.4. With care, apply a little PVA to the edge of the window and insert a sliver. Carefully push the sliver against the glued edge and press firmly with a small stick, tweezers or even a small rule.

8.1.5. Make sure the sliver is well down onto the sticky surface and pressed firmly against the edge.

8.1.6. Allow the glue to set before adding the next slither, again pressing down and against the previous slither.

8.1.7. A partially completed sliverisation window is shown in Figure 8-1 below. The slithers in this example have been exaggerated in thickness and colour to demonstrate the technique.

8.1.8. By using a clear tape or film rather than masking tape, the inserted slithers can be inspected easily from the back and rectified if necessary before the glue fully sets.

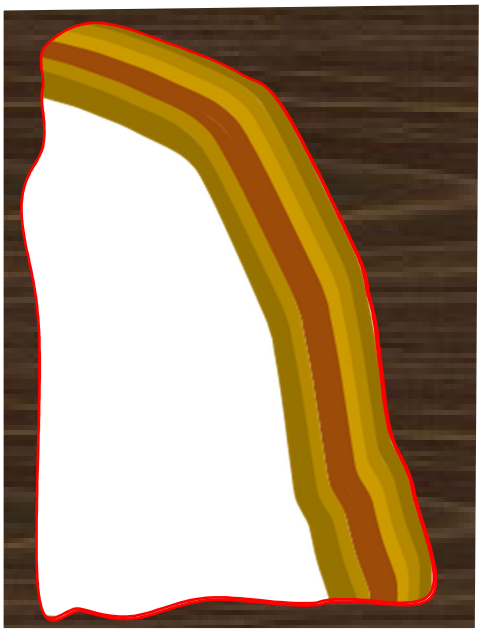

Figure 8-1: Part completed Sliverisation Window

8.2. Reeds/Grasses and Fur Effects (1)

Sliverisation can be used to great effect for furry animals. However it can be very time-consuming. By cutting a more triangular shape the effect may be as good and a bit quicker.

8.2.1. Cut a thin triangle from the waster in the desired position. Depending upon the feature to be depicted the triangle may be very slender or chubby.

8.2.2. Cut an insert of similar shape. It is easier to shave a slither from the veneer edge. The angle of the apex should match the apex of the hole.

8.2.3. Simply insert the sliver into the hole but make sure the point is rammed firmly home to eliminate any gaps at the apex or sides. See Figures 8-2 to 8-5 below as an example of the process for some reeds.

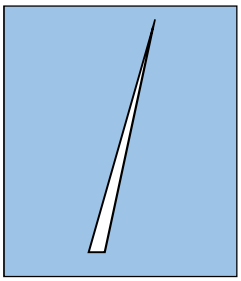

Figure 8-2: Cut Slither Window

Figure 8-3: Cut Slither Insert

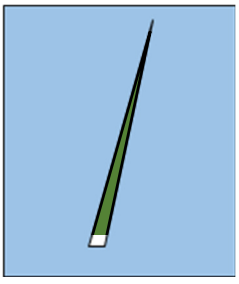

Figure 8-4: Inserted Slither

8.2.4. Remove excess length. Continue to work cutting new windows that may or may not overlap existing slithers to complete the desired effect.

8.2.5. By working from the background to the foreground, the non-pointy (a technical term) ends can be trimmed up thus eliminating many ragged ends – see Figure 8-5.

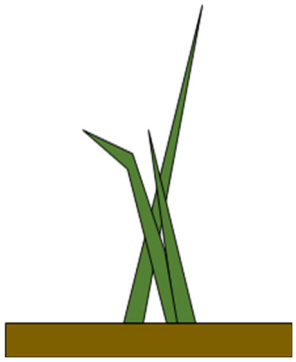

Figure 8-5: Example of Reeds Using Slithers

8.3. Fur Effects (2)

The following technique may speed things up a bit.

8.3.1. Cut a window that has 'fingers' at one end and insert a piece to fit.

8.3.2. The non- fingered end may be any shape as the next piece will be cut into it and that edge eliminated.

8.3.3. Figure 8-6 shows the effect of such a technique. When replicated, the effect can be very convincing. Figure 8-7 has been copied from a marquetry piece and demonstrates the technique clearly.

Figure 8-6: 'Finger' Shaped Insert Illustration

8.3.4. The width and lengths of the points can of course be adjusted to give the desired effect. Mixing this technique with slithers can be very effective.

8.3.5. The same technique can be used to blend in boundaries between veneers to minimise the 'cardboard cut-out' appearance of some pieces.

8.3.6. This method can be used effectively to minimise the visibility of the join when two pieces of the same type of veneer are combined to create a larger piece. It works best if the points are along the grain.

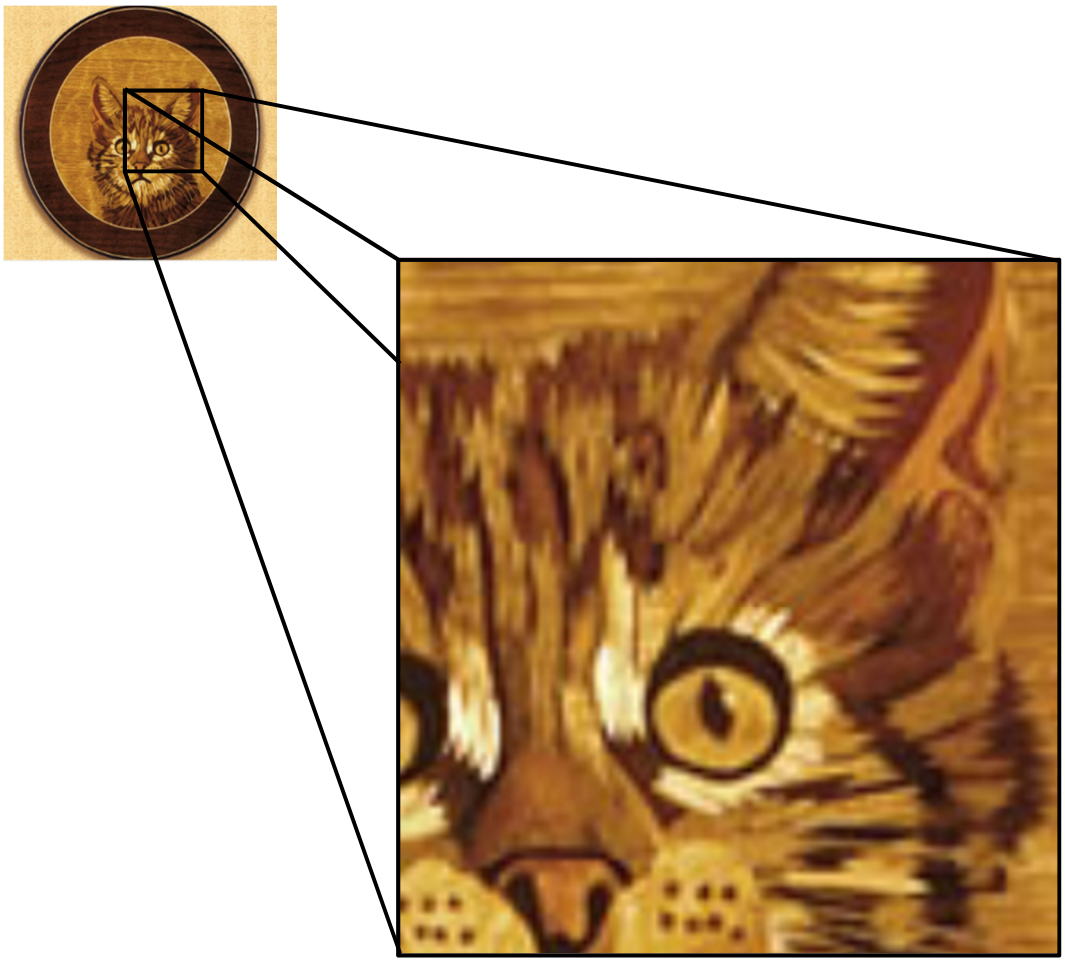

Figure 8-7: Detail of Cat Picture Using Sliverisation Techniques