

## Gold Finishing

There are two techniques for gold tooling used in the Brockman bindery

1. For general work, which needs to be as time efficient as possible eg labels, boxes and simpler bindings such as quarter or half leather bindings.
2. For Modern Fine Bindings and full Leather bindings.

The method for general work involves glairing the whole area to be tooled (eg the whole spine). Then the gold is laid on and tooled. The subsequent notes focus mainly on this technique.

The method used for Fine and full leather bindings relies on achieving a sharp blind impression, glairing only in the impression with a fine brush or Rotring pen then picking the gold up on the finishing tool and putting it into the impression. This method is effectively the same as when patching the tooling as described in the small section after Step 24 of Section A of these notes.

### Section A: Method for tooling a leather spine or a leather label (General work)

Before commencing, ensure the covering material is clean, dry and free from grease.

*find calf w/ parchment size first (small bits yellow dried in small amount water 30 min)*

- 1) Glaire the leather with a cotton wool swab using B.S. Glaire – a thin even coat. While waiting for the Glaire to dry, set the type in type holders or sort the hand letters to be used. Additionally finalise the lettering layout, (i.e. letter and word spacing). Get the exact layout impressed into blotting paper or soft card.
- 2) When the Glaire is dry (10-15 minutes) apply a thin even coat of Vaseline with cotton wool. Ensure gold cushion is grease free - use Bath Brick powder on the cushion if necessary. Talcum powder is a common alternative to Bath Brick.
- 3) Lay out a leaf of gold on the gold cushion and gently blow it flat.
- 4) Cut the gold to the approximate size required with a sharp grease free gold knife – rub the knife on the cushion with a surface of Bath Brick if necessary.
- 5) Dab a cotton wool pad on your hair or skin to pick up a little grease.
- 6) Gently pick up the piece of gold on the cotton wool pad and lay it on to the book/label. To overlap or patch areas of gold, breathe on the existing gold on the book before laying on the next piece.
- 7) Gently mark the positions of the lines of lettering on the label or spine; relative to the bands or the head of the book (if the spine is smooth) using dividers.
- 8) Mark lines across at 90 degrees to the edges of the spine using a thin thread. This can be done using a square and pin if lettering a flat label. They must be straight and perfectly square.



- 9) Mark the exact centre of the spine/label above each line using dividers.
  - 10) For Type Holder: From the layout devised earlier, transfer half the length of each line of lettering to the appropriate line on the spine/label, marking to the left of the centre mark, with dividers.
  - 11) For Hand Letters: From the layout devised earlier, transfer the letter positions by marking reference points on a strip of thin paper. Transfer these marks to the gold using a pin (always mark above the lines made for each line of lettering).
  - 12) Heat the tools on a stove.
  - 13) Cool the tools on a cooling pad, as you are about to use them –they should just go off the “Sizzle”. The temperature required for successful tooling is to some extent dependent on the covering material – e.g. the tools need to be slightly hotter when tooling on vellum. The assessment of temperature with regard to covering material is developed with experience – “Just off the sizzle” is good as a first approximation.
  - 14) Polish the face of the tool on a leather pad.
  - 15) Blow out any dust from the face of the tool.
  - 16) When the type holder has been cooled, double check that the end screw is finger tight (using a cloth to avoid burning yourself). It may have become loosened due to the difference in thermal contraction rates between the brass type holder and the steel screw. Do not tighten with pliers, as the furniture will become damaged.
- These operations should be done quickly to avoid losing too much heat from the tool.
- 17) Place the tool gently on the relevant mark on the spine/label (guide the tool with the left thumbnail), apply pressure to make an impression. If using a type holder, over a curved spine, smoothly roll tool over spine applying increasing pressure as more of the face comes in contact with the leather, and then decreasing pressure as less face is in contact near the end of the line of lettering.
  - 18) For gold lines to the bands, blind tool to the bands before glairing to sharpen them up and adjust their straightness if required. Then glaire and tool as above.
  - 19) For gold lines at the head and tail, either mark a line in the gold, as for a line of lettering, and roll the tool over the spine a small distance from the line, or prior to laying on the gold in paragraph 6 mark a line across the spine using a vellum strip and a bone folder, this line will show through the gold, giving a line to follow.



- 20) If gold centre tools are to be added, take the height of the tool with one pair of dividers, and with another pair set to the mid point of the spine, make a mark where the top central point of the tool should be placed. The position of the impression relative to the bands should be marked optically. As the tool is put in it should be rocked in all directions to ensure complete contact with the book.

Note: less pressure is required when rocking the tool, as the surface area in contact with the book will be less.

- 21) Once all impressions are made, wipe off the excess gold with a cloth – this cloth should be devoted to the removal of gold and not subsequently used for anything else, due to it becoming impregnated with gold and Vaseline.
- 22) Remove the grease and the remainder of the excess gold with lighter fluid on a cotton wool swab.
- 23) Clean the spine more fastidiously with a second cloth, – NOT the gold rag used earlier. Beware not to rub excessively as it may bruise the leather. As before this second cloth should only be used for final cleaning.
- 24) Clean out any unwanted gold using a needle.

If some impressions need putting in again do the following prior to step 24.

- 1) Dust over the impression very lightly with shellac powder.
- 2) Blow any excess powder away.
- 3) Cool the tool as previously.
- 4) Polish the tool on a leather pad, blow out dust, check the screw tightness, as previously.
- 5) Cut the gold to the required size – about twice the size of the face of the tool.
- 6) Rub the face of the tool on your hair or transfer a little grease from your nose or behind your ear to the tool with your finger tip – beware not to burn yourself.
- 7) Pick up the gold on the tool and gently fold or blow the gold back on itself to form a double layer, ensure sighting side of tool is clear with no gold overhanging.
- 8) Check that the whole face of the tool is covered with gold, if not you may end up lifting gold out of the impression rather than putting it in.
- 9) Feel the tool into the impression and apply pressure, as previously – great care must be taken to avoid “doubling” the image. Be absolutely positive you are in the impression before applying pressure.

These operations should be done quickly to avoid losing too much heat from the tool.

10) Clean off any excess gold with the petrol rag.

These steps can be repeated until satisfied with the result. Finally clean any unwanted flecks of gold away with a needle.

#### **NOTES:**

When using a type holder ensure the screw is very lightly lubricated with Vaseline.

Set the type in the type holder as centrally as possible, to ensure balance, and also pack the type with furniture as close to the end screw as possible.

When tooling on calf, wash over with a parchment size to give the leather a surface and act as a secondary adhesive. Ensure size is completely dry before glairing.

#### **Section B: Method for Tooling Lines and Patterned Rolls.**

Before commencing ensure the covering material is clean, dry and free from grease.

##### **For Continuous Lines (e.g. on the sides of half leather bindings)**

- 1) Mark with dividers the position for the line. Make one mark at the head and one mark at the tail a set distance from the siding material.
- 2) Place a thin aluminium support plate under the board to be tooled, inside the book. Ensure it is large enough to extend beyond the board edges.
- 3) Lay a straight edge along the book, lined up with the marks at the head and tail.
- 4) Either hold the straight edge very firmly, or stick it to the leather with double-sided tape. Be sure to remove some of the “tack” before using the tape as it may remove the surface of the leather. **Never** stick the tape to paper sides, and be wary of certain book cloths. Hold the straight edge down also; do not rely purely on the tape.
- 5) With a heated and cooled pallet (just off the “sizzle”), tool a blind line along the straight edge by using a smooth sliding action. Try to tip the leading edge of the tool up slightly to prevent digging into the leather. Naturally if you are to tool a gold 2 line the blind lines at this stage must also be a 2 line. Ensure the blind lines are of a sufficient depth and are very sharp and neat.
- 6) Paint B.S. Glaire into the bottom of the impression with a fine brush or Rotring pen. A recommended nib size is 0.5 – 0.7 mm..
- 7) When the Glaire is dry (approx.15 minutes) a choice must be made, whether to pick the gold up on the fillet and run it into the line (easier and more effective once mastered), or to lay on the gold and then tool through it into the impression. This second approach is less likely to give as successful results, since the gold has a tendency to break up as it is pushed into the impression. It is recommended that at least two layers of gold be laid on to help reduce this.



- 8) If gold is to be laid on, apply a thin coat of Vaseline, ensure there are no lumps or deposits in the impression. Lay on the gold. (Jump to Step 10)
- 9) If gold to be picked up on the fillet and tooled in, do not grease. Cut the gold into thin strips, apply some grease to the fillet, from hair or finger and roll the fillet along the strips of gold to pick them up. Cover the entire circumference of the fillet.
- 10) Feel the fillet into the blind impression and while applying downward pressure roll it up the book, taking great care to remain in the impression. Ensure your sight of the fillet in the line is un-obscured by gold, – blow the gold under the fillet as you proceed.
- 11) Remove excess gold with the gold rag. Sections of line can be put in again using shellac powder, in a similar fashion to lettering – described earlier.
- 12) For tooling across corners, follow the method above, but sighting the straight edge parallel to the edge of the siding material.

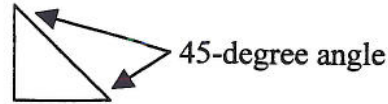
**For Continuous Patterned Rolls (e.g. on the sides of half leather bindings)**

- 1) Mark with dividers the position for the roll. Make one mark at the head and one mark at the tail a set distance from the siding material.
- 2) Place a thin aluminium support plate under the board to be tooled, inside the book. Ensure it is large enough to extend beyond the board edges.
- 3) Lay a straight edge along the book, lined up with the marks at the head and tail.
- 4) Mark a line with a folder between the two divider marks.
- 5) Glaire the leather – twice. Leave to dry, apply Vaseline.
- 6) Lay on gold.
- 7) Mark the side of the roll with a pencil line, this acts as a start point. This is done so you know whereabouts on the roll the pattern started, and simplifies tooling sections again – if needed.
- 8) Tool patterned roll along line made with folder (should show through the gold), make sure you start at the pencil line on the side of the roll. Use a slight side to side rocking action and go forward and back in a rocking motion to ensure all of roll comes into contact with the leather.

Try to carry out the above as soon as possible after the Glaire is dry – the fresher everything is the more likely the gold is to stick. Putting sections of patterned rolls in again using shellac powder method is possible, but very difficult, particularly if the tool is hand cut, as it will not be totally uniform.

### **For Line Borders (e.g. on the sides of full leather bindings)**

- 1) Cut 2 pieces of thin card (typically 0.5mm thick) in a triangular shape, these will act as mitres for the corners;



- 2) Mark with dividers position of line, in from board edges and from joint, make two marks for each line so a blind line can join them. Make sure that the marks made will be within the border, otherwise you will not disguise these marks during the tooling process.

- 3) Mark the border using a folder and straight edge.

- 4) Use the pieces of card to place at the corners to stop you from tooling too far. These can be held in place with masking tape (remove tack if necessary). Tool the gold lines as per the section above ("For Continuous Lines (e.g. on the sides of half leather bindings)"). You should start and end the line on the pieces of card, no further. The end sections of the lines at the corners can be extended and joined by using a pallet of the same width as the fillet (i.e. tool sections of line on the ends). Therefore it is better to finish with the fillet slightly short of the corner of the border and finish with a pallet. A much neater corner will be obtained.

### **For Patterned Borders (e.g. on the sides of full leather bindings)**

- 1) Follow steps 1 - 3 in the previous section ("For Line Borders (e.g. on the sides of full leather bindings)").
- 2) Glair the leather – twice. Leave to dry, apply Vaseline.
- 3) Lay on gold.
- 4) Mark the side of the roll with a pencil line, this acts as a start point. This is done so you know whereabouts on the roll the pattern started, and simplifies tooling sections again – if needed.
- 5) Use the pieces of card to act as mitres for the corners. Start and finish tooling with the roll on the pieces of card. These can be held in place with masking tape.
- 6) Tool patterned roll along line made with folder (should show through the gold), make sure you start at the pencil line on the side of the roll. Use a slight side to side rocking action and go forward and back in a rocking motion to ensure all of roll comes into contact with the leather.
- 7) The pattern will normally not run smoothly around the mitred corners. If this is of great concern you can plan the border out very carefully using ink and paper before committing yourself to the book. This will enable you to select the best

section of the pattern to enable a successful flow around the corner. Naturally the size of the border will depend on whereabouts on the roll you would like the mitres to occur.

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