

Cover Decoration- Hand Tooling

[Cover to Cover: Exposing the Bookbinder's Ancient Craft](#)



One of the oldest forms of cover decoration, 'tooling' involved the use of metal devices known as finishing tools. Usually heated, these were impressed into the leather surface to create a pattern or design. Unlike blocking, which required the use of a press, tooling was performed by hand.

The tools were given different names (pallets, fillets, gouges, and rolls), according to their purpose, but common to each was a die-sunk design in their metal (usually brass) face or circumference. Often, they were used in combination to 'build up' a more elaborate design; sometimes they were just single dots or lines. When they were applied to slightly moistened leather, the pattern displayed as a depression in its surface. This practice was known as 'blind tooling'. 'Gold-tooling', on the other hand, occurred when the heated tool was applied to the leather through gold leaf.



Brass pallet

Although blind-tooling was thought to be in use as early as the 8th century, very little was known about European bindings decorated in this manner until the 12th and early 13th centuries. A few English bindings from around this time, described as 'Romanesque', were in fact blind-tooled examples; most of them exhibited a design of successive rectangular borders around a central decoration. Interestingly, they had different patterns on their front and back covers, whereas the few examples that exist from the late 13th and mid-14th centuries display the same pattern on both boards. By the 15th century, and well into the 16th, it was not uncommon to see the finishing tools used in a manner that formed a diaper. Each tool was placed within a diamond-shaped compartment and the whole set within a framework of lines. Many small tools were also placed end-to-end to create decorative strips, a process simplified by the introduction of the 'roll' in c1500.

Tooling was one of the most important developments to take place in the history of bookbinding. Binder's everywhere embraced the practice, some began to use blind tooling in conjunction with gold. Where, exactly, this technique of impressing heated tools through gold originated was widely debated though. Some evidence pointed to Morocco, where gold tooling may have been practiced since the 13th century; others suggested it had been introduced into Italy from Persia soon after 1400. Contributing to the uncertainty, was the challenge of differentiating between gold that had been tooled with hot metal and gold that had been painted in liquid form into the impressions. In England, at least, true gold-tooled bindings were not produced in any quantity until the 1530s.



The finishing stove or hot plate is used to heat a variety of finishing tools. This particular model is electric with a dial which is best kept at '2'. At this temperature tools maintain a steady warmth optimal for tooling most leathers. Note how the handles of some of the older tools are charred from being placed too close to the heated plate.

Though some binders experimented with gold-tooling, the practice was not universally adopted. In fact, blind-tooled designs constituted the majority until the 1600s, and any gilt examples surviving from this era were often described as rather crudely executed with roughly-cut tools. Throughout the 18th century, however, finishing techniques improved. Rarely was a worn tool used; designs just looked lighter and sharper. Issues surrounding the accurate mitring of filleted or palletted panels were also addressed. Where gold-tooled lines previously overran the corners or where joins had been disguised with rosettes, these were now corrected through the use of thin paper. That is, the cover designs were first measured out and drawn onto paper. This was then placed in position on the leather cover, and heated tools were pressed through the design. The paper was removed to reveal the blind impressions which were subsequently prepared and tooled in gold.

The second half of the 19th century saw the development of numerous time-saving techniques, the result of increasing competition amongst fine-binding houses and a price war, undoubtedly spurred on by the bookselling trade. A number of those practices occurred during the finishing process. Large tools were being cut for works by particular authors, which enabled spine compartments to be ornately stamped in a single impression.

[More on Finishing Tools...](#)

Pallets

A pallet is short-handled tool chiefly designed for decorating the panels on the spine of a bound book. It's simply a segment of a roll or fillet set into a handle. Each tool is made of metal; it has a slender shank, on the face of which a design or line is cut. The designs are usually die sunk, that is, the sunken or depressed part of the tool forms the pattern, whilst the higher portion impresses the leather cover. Designs range from simple to highly complex; a tool may have a single, short, straight line, a dot, a floral motif, or a pictorial design. A line pallet (refer the new brass example, right) is of greater length and sturdiness. It has one or more straight lines across its edge and is typically used over the spine of the book to emphasise its raised bands.



Rolls

The roll is a large finishing tool with a rotating metal wheel at one end. It differs from a fillet (a wheel-like tool with one or more straight lines around its circumference) in that it has a repeating pattern or design around the edge. The wheels vary in width to accommodate some of



the most ornate and intricate designs. Rolls are typically used to form the borders on book covers or to decorate the leather turn-ins on the inside of the covers, the latter known as 'dentelles'. Rolls with a very narrow pattern may also occasionally be used to decorate the thin edges of the boards.

Gouges

Gouges are typically short-handled finishing tools which have (usually a single) curved line on their metal end. They are made and sold in sets; each set representing a series of segments of concentric circles, and each tool a single segment of one of those circles. In theory, binders should be able to use gouges, to create or follow any type of curve. Although not every curve is a segment of a circle, a skilled binder can use the different sized tools to manipulate their impressions, creating an almost free-hand drawn line.



Blind Tooling

Several different methods can be employed for making blind impressions. Leather which has been slightly moistened can be impressed with a cold tool; this practice does not noticeably discolour the leather. Alternatively, a heated tool can be applied to dampened leather, the tool rocked slightly from front to back and side to side to produce a particularly sharp impression. In this process the leather is darkened considerably, however, this does tend to fade a little after a few hours.



Pictured to the right is a fine, early example of blind-tooled calfskin, showcasing the binder's skill with a variety of finishing tools. Pallets, rolls and gouges have been used to create an identical pattern on both the front and back covers. Look closely at the joint between the front board and the spine. Here, a new leather lining can be seen, indicating that the book has been re-backed at some stage. Fortunately, the binder or conservator kept the old cover and reattached it to the new leather and the existing boards.

Gold Tooling

Once the cover pattern was worked in blind, either through a paper pattern or directly onto the leather with finishing tools, the leather was prepared for gold tooling. To prevent the gilding size or glaire from being absorbed into the leather (calfskin was particularly porous), it was first washed with a filler of thin paste and water, though some binders preferred to use sulphuric acid-free vinegar. The next step involved filling the blind impressions with gilding size; traditionally this was glaire, made from egg whites. It was applied with a fine brush and allowed to dry. If a bright, glossy effect was not achieved, a second coat was required to ensure the gold would take.



Handling gold leaf was challenging and was best performed in a room with minimal draught, so as to avoid its flying away or crumbling over. A sheet was lifted from the book of gold using a gold knife and gently placed on the gold cushion, a padded board covered with sueded leather. Pieces were then cut to size with a careful sawing motion. A small amount of Vaseline or coconut oil was placed on the back of the binder's hand and a pad of cotton wool was lightly drawn over it. A minute amount of this grease was rubbed over the area to be tooled. A second piece of cotton wool was flattened, folded

and lightly dabbed on the binder's forehead or hair, making it just greasy enough to pick up the gold from the cushion and to press it into the blind-tooled impressions. A light breath on the area often helped the gold to adhere more readily. In the event that the gold leaf split, a second application to the area was required. Once the tooling was complete, any surplus gold was removed with a gilder's mop.

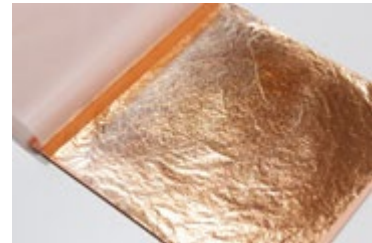
Gold & Silver Leaf

Gold and silver leaf is unsized. On books, it is ideal for illumination, leather gilding and edge gilding. It can also be used on picture frames. It is available in a number of shades. Pictured here is pure 24K gold; all other shades are composed of alloys of silver and copper. Depending on the percentage of each alloy, the colour of the leaf will vary from lighter and cooler (silver) to darker and warmer (copper). This is quality August Ruhl leaf, manufactured in Germany since 1876.



Metal Leaf

As in gold and silver leaf, this copper leaf is sold by the book. It is suitable for most forms of gilding and can be used alongside gold leaf to give depth to a cover decoration. On display here is Italian-manufactured copper leaf made from base metals.



Hot Stamping Foil



Originating in the 19th century, hot stamping quickly became a popular method of applying gold to leather, cloth, and paper. The foils can be used with either a stamping machine or with hand tools. They are available in a variety of colours; gold, silver and bronze displaying a particularly metallic, glossy finish. Other colours tend to have a matte appearance. The foils comprise multi-layered coatings that transfer to the books surface. Coloured foils consist of an adherence base, a colour layer and a release layer, whilst the metallic foils replace the colour layer with a layer of chrome or vacuum-metallized aluminium.

Gold Knife

Used in conjunction with a gold cushion, the gold knife cuts both genuine and imitation gold leaf. Its long, flat blade is slipped under a sheet from a book of gold, which is then turned over onto the cushion. A gentle breath in the centre of the cushion will flatten out the gold which can then be cut with a slight sawing motion.

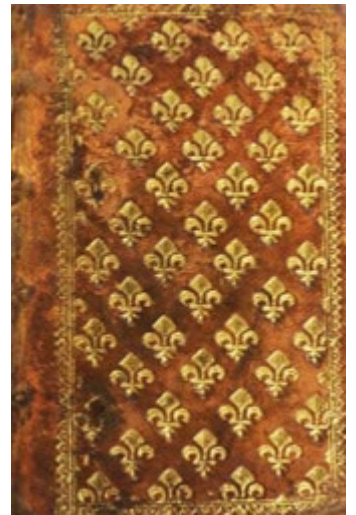
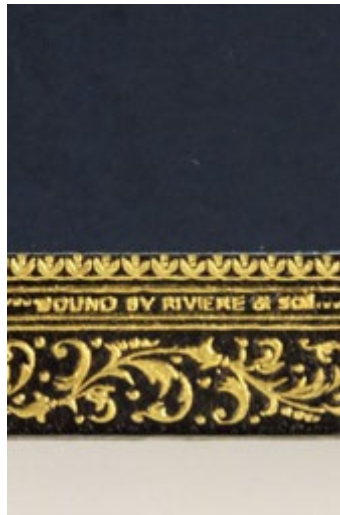
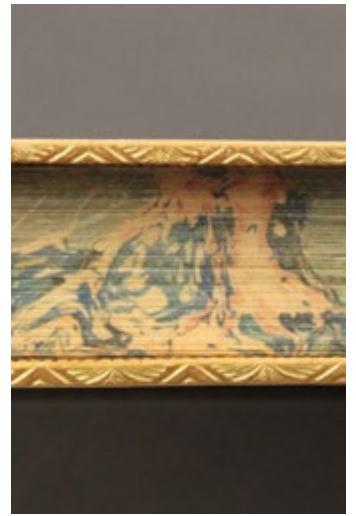
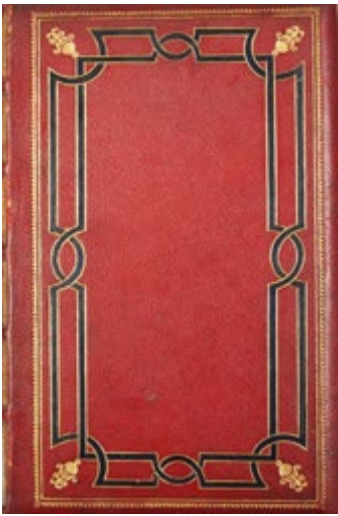


The Gilder's Mop



The gilder's mop is a pure squirrel-bristle brush in an oval shape. It is designed to remove excess gold after tooling.

Also on display in this cabinet were the following hand tooled covers:



Lee Hayes
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