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Creating texture using metal leaf

Continuing with his series on applying texture, **Michael Scarborough** looks at the process of applying metal leaf to your turnings

When I was a little boy living in Japan, my parents took me to the famous Toshogu shrine at Nikko. As we walked around, gazing up at the amazingly beautiful structures, my mother kept saying, “look at all the gold leaf!” Well, I looked and looked, but to my seven-year-old eyes the leaves sure looked green. That was my introduction to the magical world of gold and metal leaf, and my fascination with those transformative materials has only grown.

The use of gold leaf for decorative purposes can be traced back as far as the third millennium BC and, in all the centuries since, there does not seem to be a civilisation

or culture that has not been fascinated with gold leaf’s ability to transform otherwise mediocre objects into ones of great beauty and seductive desirability. In walking through any museum, one sees gold leaf enhancing primitive ceremonial objects, as well as gracing picture frames and furniture from all periods of art.

From viewing the treasures in the King Tut exhibit, to reading about the mythical Golden City of Eldorado, to my adolescent fixation with the Golden Girl in *Goldfinger*, gold has always bewitched me. I am thrilled and gratified that it has become such an integral component of my work.

MICHAEL SCARBOROUGH



About the author:

Growing up in Japan influenced Michael’s turning style, which he describes as ‘Japanese-inspired art’. He works with a broad range of materials and techniques and spent 25 years as a classical singer.

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◀ EXAMPLES OF USING GOLD LEAF

As a wood and lacquer artist, I use a lot of gold leaf in my work. Many times it serves as an accent on a bowl rim or on the feet of a footed bowl. Increasingly, I am using it to line the interiors of bowls, and, in some cases, such as with the 'Wakasa nuri bowl', which is inspired by Japanese lacquerware, I am seeking a re-interpretation of the look of an antique Japanese screen. I have also been experimenting with lining formal tea caddies with crushed leaf, as you can see below. In some cases, just the simple addition of one area of gold leaf can heighten the visual appeal of an entire piece, such as in the 'Golden Eye' bowl where a knot hole was filled and gilded.



PHOTOGRAPH COURTESY OF WIKIPEDIA COMMONS
The Toshogu shrine at Nikko in Japan



'Wild Boar with Golden Hooves', 2013



'Wakasa nuri bowl', 2012, private collection of Harvey and Fiona Fein



Tea caddy with crushed gold leaf interior, 2012



'Golden Eye', 2011

GOLD LEAF & WOODTURNING: MIXING OIL & WATER?

I think it is safe to say that most woodturners are not interested in using metal leaf on their turned pieces. Indeed, most want nothing more than a clear finish. But, it is my hope that my recent series of

articles on decorative finishes has piqued the interest of and encouraged readers to stretch their creative muscles – to live outside the box, if you will – even if only for one project. Rather than starting out with one

of the decorative paint finishes I described in the previous three articles, perhaps some readers would prefer to try their hand at a simple, metal leaf project instead. Hopefully this article will go on to inspire you.

THE BASICS: WHAT IS METAL LEAF?

For starters, and for the sake of simplicity in this article, I will refer to gold leaf and its less luxurious cousins, such as composition leaf, copper leaf, aluminium leaf, etc., simply as metal leaf.

We are all familiar with the term 'gold leaf', but many may not be exactly sure what it is. Gold leaf is indeed real gold, ranging roughly between 22 and 24 carats.

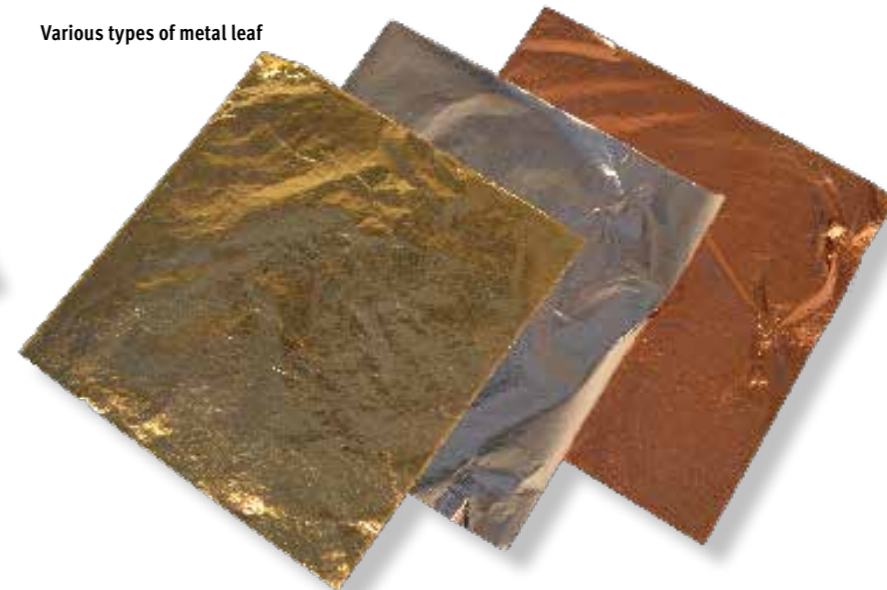
One of gold's magical properties is its ability to be beaten into almost microscopically thin sheets, measured in the millionths of inches. A sheet of real gold leaf is usually about 75 x 75mm square, mildly translucent, and very expensive, considering the price of an ounce of gold these days. Thus, I won't be asking you to handle real gold leaf – at least not for this particular project.

The great impersonator of real gold leaf is 'imitation gold leaf', also known as 'composition leaf' or 'Dutch metal'. It comes in larger sheets, about 150 x 150mm, is thicker than real gold leaf and can be handled with the fingers. Most importantly, it is a fraction of the cost of real gold leaf. That is what we'll be using.

Real gold leaf



Various types of metal leaf



THE BASICS: THE PROCESS

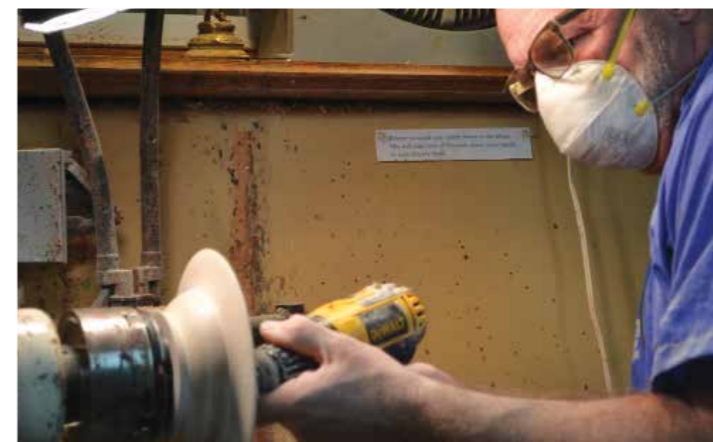
What we are basically doing is covering an object with the leaf to make the object appear to be made of solid gold.

- The process is broken down into four steps:
1. Preparation of the surface
 2. Applying the adhesive
 3. Applying the leaf
 4. Sealing the leaf

For the purposes of this explanatory article, I will turn a small plate and finish only the wide rim with leaf. I will use maple (*Acer Saccharum*), as I do for the bulk of my painted pieces, as it gives me a crisp edge and lacks pores, which would need filling. If you wish to follow along, creating a piece of your own using these steps, I suggest you turn a piece that has simple, somewhat wide areas upon which you can easily lay the leaf – 25-38mm. Go for a well-defined edge between the flat rim and the curved inner portion of the workpiece. This will aid greatly in defining a clean line between the gilded areas and the natural areas of wood.

Surface preparation

As I mentioned in my recent article about the copper-leaved candlesticks – see issue 263 – preparation of the surface is critical.



Step 1: power sand the surface



Step 2: spray shellac onto the surface



Step 3a: sand again



Step 3b: sanding with a backing pad

THE BASICS: THE PROCESS (CONT.)

Any blemish on the surface will show through the thin leaf and will, in fact, become magnified once the sealer or finish is applied to it. Were this a piece destined for a collector, I'd go all out to get a glass-smooth surface – using pore filler and sanding to 12,000 grit – before I began leafing. For the purposes of this demonstration article, however, we will take it all in a more relaxed manner.

Once the piece is turned, I power sand it to 320 grit and then give it a spray coat of clear shellac. I follow the directions on the can for allowing the shellac to dry properly, then sand the piece working up to 500 grit. As I get up into the higher grits, I use a backing pad during the sanding process. This preparation work allows me to begin the finishing process with a wonderfully smooth surface.

Applying the adhesive

Once the piece is smooth and blemish-free, I apply the adhesive that will hold the leaf in place. Most gilders refer to this adhesive as 'size', but some prefer to use the generic term 'varnish'. There are many, many different types of size, each with its own particular attributes: water-based versus oil-based; pigmented; slow-set versus quick-set. The variety can be bewildering, but we will 'stick' with one type for this project: oil-based quick size.

Oil-based means just that – solvent-based – to be cleaned up with mineral spirits. The word quick in the title refers to the time it takes the size to be ready to receive the leaf, which, in gilding terms, is called 'coming to tack'. We are using quick size because once brushed on, it will usually be ready to work with in about an hour, depending on the particular size you use and the atmospheric conditions.

To apply the size I am increasingly turning to foam brushes, as they leave a remarkably even coat of material. I brush the size onto the areas on which I wish to lay the leaf, being



Step 4: applying the size parallel with the rim



Step 5: applying size perpendicular to the rim



Step 6: cleaning up any overruns



Step 7a: the snap test – knuckle on



Step 7b: the snap test – knuckle off



Step 8: pat the leaf down with a cotton wool ball

THE BASICS: THE PROCESS (CONT.)

careful not to get it anywhere I don't want leaf. I apply the size with the lathe running at its slowest speed, trying to think of the process as floating the size onto the surface. I first apply it with the brush running parallel to the rim of the bowl.

Once I have applied an even layer, I turn the lathe off and then go back and stroke the brush lightly perpendicular to the rim.

I then turn the lathe on again and float the tip of the brush, again parallel to the rim and as lightly as possible over the wet size. I think of this three-step process as knitting the size together, leaving no raised areas or 'holidays' – as my Dad would call them. This is a good process to use with any sort of brush-applied material. Any overruns can be carefully removed using a small piece of paper towel dampened with thinner.

When the length of time required for the size to 'come to tack' as called for on the can has been reached, I test the readiness, or level of tack, by employing the 'snap test': I place a knuckle on the surface and quickly pull it back off. If there's an audible snap, the size is ready. If the surface is still noticeably damp, I wait until I can produce a good snap.

Applying the leaf

For the sake of ease – and to maintain low blood pressure during this project – we will use what is referred to as 'patent leaf', as opposed to loose pieces of leaf. Although patent leaf can be called by many different names, it is basically leaf that comes loosely attached to wax paper and is simple to use.

1. Start by picking up the piece of leaf by its wax paper edge



The completed bowl with metal leaf additions

2. Cut it to the size you want using a sharp pair of scissors
3. Lay the leaf in place
4. Using a cotton wool ball, rub over the wax paper gently but firmly to make the leaf adhere to the size
5. Lift the wax paper away
6. Proceed around the circumference of the piece until you have covered all the areas to be gilded
7. If there are areas where the leaf does not adhere, blow on them and the warmth and humidity of your breath will reactivate the size. If this does not work, repeat the sizing and laying process in those specific areas using a fine-pointed brush to apply the size

At this point I set the piece aside to allow the size to fully dry overnight. The next day, I go back and clean up any edges that appear to be rough. I usually use a piece of paper towel wrapped around the end of a bamboo skewer

or fine paintbrush handle and dampened with thinner. I then rub the gilded surface, gently polishing it with a fresh cotton ball. A few wrinkles and open areas here and there will not ruin the look of the piece. To the contrary: to my eye, they only add to the charm and handmade feel.

As it is composed primarily of brass, imitation gold leaf will tarnish if it is not properly sealed. The positive aspect to this tarnishing, however, is that the leaf can be given patinas limited only by the artist's imagination and willingness to research and experiment. However, that sort of alchemy is beyond the scope of this exercise and must wait for another project.

For our purposes, I suggest simply spraying on another coat of shellac. If you have amber-coloured shellac, all the better, as it will impart a wonderful richness to the otherwise brash-looking leaf. In lieu of amber shellac, use clear shellac and then wax the gilded areas with a coloured paste wax.

Conclusion

It was my goal to keep this project as simple and inexpensive as possible. However, if you choose to use real gold leaf, then of course you can. If you decide to try experimenting with this technique, I believe you will

find that you can transform an otherwise ordinary looking piece into something with real sparkle. In the process, you may open the door to whole new aspects of finishing in your turned pieces of wood art. ●

LIST OF SUPPLIES

- Imitation gold leaf – patent or transfer leaf
- Spray shellac
- Sandpaper up to 500 grit
- Quick size: oil- or water-based
- Foam brush or chip brush
- Cotton wool balls
- Coloured wax