The basics of surface gilding

To many sign artists—and to novices especially—there's something mysterious about laying gold leaf. Maybe it's just the notion of using "real gold" for lettering, or the fact that it's not done very often in most shops, or the aura of magic that some sign artists attach to descriptions of the process.

Laying gold leaf on a surface is certainly not magic, and actually not all that difficult. Glass gilding, on the other hand, is a more complex subject. (Glass gilding involves laying gold leaf on the inside of a glass panel using a size made from water and gelatin. It was covered in the May/June 1985 issue of *SignCraft*.)

The concept behind surface gilding is simple: a layer of size, which is usually a varnish-type product, is applied to the surface and allowed to dry until tacky. At the right level of tack—and this is the only part that can be a bit tricky—the gold leaf is applied to the size.

SignCraft asked sign artist Jeff Stedje (*SignCraft*, Mar/Apr 1989) to do a quick surface-gold job so that we could outline the process for those who weren't familiar with it. "I'm a beginner, too," says Jeff. "I really haven't been doing gold leaf that long, but I've been able to watch some very good sign people do it. That helps a lot."

Clean and pounce

The sample shown here is on a precoated aluminum panel. Jeff began by cleaning the panel with isopropyl (rubbing) alcohol using two washes. Aluminum often has a surface film of light oil that accumulates during processing, and this must be removed.

Using white pounce powder, he pounced the pattern for the lettering, made in advance, on the panel (Figure 1). The back of the pattern had not been sanded, because this would have opened the perforations. Jeff wanted only a minimal amount of pounce powder to get through the holes. Since he wasn't planning to outline the letters at this point, Jeff taped off the top and bottom lines with 1/8-in. 3M Fine Line Tape No. 318 to speed lettering.

Choosing and applying size

For this project, Jeff used a quick size. There are two types of size commonly used for surface gilding. Quick size dries to the tack level required for gilding in up to three hours; slow size takes 18 hours or more to reach that same tack level. The two main advantages of slow size are that it is more durable, and that its "open time" (the time in which it is at the proper tack for gilding) is longer. With quick size, the open time can be so short that if you leave for lunch, you may miss it.

You can also use lettering enamel as a gold size, mix two parts enamel to one part boiled linseed oil to slow the drying and improve the flow. Don't apply it too thick, Jeff says, or the paint film may

Figure 1. Pouncing the pattern

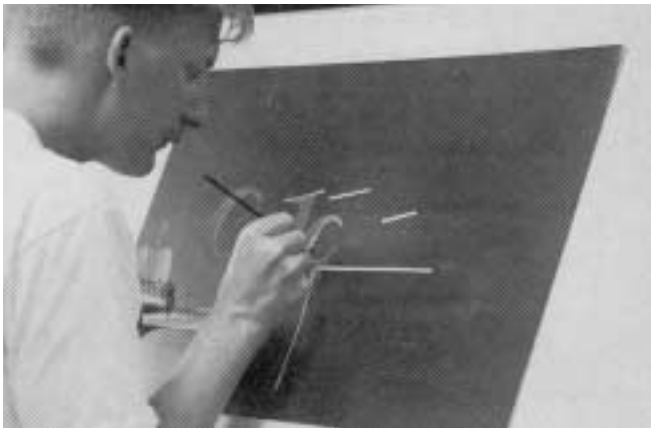

Figure 2. Applying the size

skin over instead of tacking up all the way through. Boiled linseed oil can also be used to slow the drying of quick size.

Standard gold sizes are clear, like varnish. To make it easier to see while lettering, you tint it with a small amount of yellow paint. Jeff poured a little size into an unwaxed cup and added a few drops of yellow lettering enamel. He strained the mixture through fine cheesecloth into another cup to remove any debris.

The brush was cleaned by rinsing it in three separate containers of thinner. Any oil left in the brush would slow the drying of the size. Also, any debris in the brush is likely to end up in the size.

The size is applied just as though you were lettering as usual. Jeff did take extra care to make sure the size film was even and that any bubbles or thick areas were brushed out. Since quick size dries fast, it doesn't level out as well as slow size. He seldom uses a mahlstick, so he lettered this in his typical fashion. "I could have used a larger brush," says Jeff. "Once I got started with this one, though, I hated to change for such a small project."

It's important to have a test spot of size on similar material so you can check this without risk of marring the size in your lettering. Jeff stroked some size beside the lettering for this purpose. It can be cleaned off the sample panel when gilding begins.

Round strokes, of course, are pulled a bit above and below the line. Once the straight stroke of the letter D was done, Jeff pulled the tape back so he could pull the round stroke slightly below the line (Figure 2).

Let it dry to the proper tack

Once the size was down, Jeff had to wait for it to tack up. It's not possible to give specific times to expect size to reach the proper tack, because temperature, humidity, and other conditions affect this considerably. The size is approaching the proper tack when it will not transfer to your skin when you lightly touch it (Figure 3).

If you gild too soon, the wet size will "drown the leaf", which kills the brilliance of the leaf. Once you have done it a few times, you'll know when to expect the size to be ready, but at first it's best to check it regularly. "I usually keep checking it until I can drag my knuckle across the size and get a squeaking sound," Jeff says. "Once I get that, I wait a bit longer, then start gilding."

Gilding toward the end of the size's open time gives the best-looking gild, so there's no need to rush it. If the size is too dry, you'll notice spots where the gold will not adhere to the size. Then it's time to size again, wait for the right tack, and then continue with the gilding.

Ready for gold

There are two types of gold leaf, loose and patent. Loose gold is very thin sheets of gold leaf between layers of rouged tissue. For patent gold, the same thin sheet of gold is lightly bonded to a piece of tissue paper. It is actually intended for gilding in breezy conditions, when loose gold would be too hard to handle. Jeff chose patent gold for this job because it is easier to use. Loose gold must be "rolled" out of the book into the size, and the technique takes a little practice.

In this case, the size was ready to gild in about two hours. Jeff laid the tissue carrying the leaf over the tacky size, and rubbing lightly on the back, pressed the gold into the size (Figure 4). The gold that remains adhered to the tissue can be used for patching or for small portions of other letters.

When gilding a large job, care must be taken to not get ahead of the tack. If you do, you'll drown the leaf.

Cleaning off the excess

Once all of the lettering was gilded, Jeff removed the excess gold by rubbing it lightly with a wad of cotton, using horizontal strokes. This process is called burnishing, even though the term sounds a bit too harsh. You're not trying to "polish" the gold to a brighter shine—you only want to remove the excess and bring all of the gold to an even sheen. Since the cotton puts very fine scratches in the leaf, the more you "burnish" your gild the less shine it has. Horizontal rokes are used for burnishing beause the fine horizontal scratches make the lettering more readable when the light source is from above.

To illustrate another popular technique, Jeff "engine-turned" the gold leaf next (Figure 5). This process scratches the gold in a

Figure 3. Checking the tack

Figure 4. Applying the gold

small circular pattern to add extra interest. It's also called spinning or burling the gold. A small piece of velvet is wrapped around a ball of cotton. The velvet is pressed lightly to the gilded surface, then twisted. Jeff repeated this in an even pattern all along the lettering.

You must be careful not to press too hard or you may scratch through the gold and into the size. If the size is too wet, you are more likely to tear through the gold. (Engine-turning can also be done by making a velvet pad that can be chucked in an electric drill, but an even lighter touch is required for this.)

Adding an outline

Jeff decided to outline the lettering, since he outlines his surface gilding most of the time (Figure 6). He used dark blue for the outline. Outlining can be used to cleanup the lettering, as well as to enhance the gold. On light-colored surfaces, it's best to outline to provide contrast for readability. Once he finished, Jeff taped off an underline that he painted red (Figure 7).

On a truck or other surface that would be subject to abuse, the final step would be to apply a coat of clear finish to protect the gild. Clear should be used only when there is the risk of frequent contact—otherwise the thin film of gold leaf is far more durable than paint. The clear coat also reduces the brilliance of the gild. Every sign artist should be familiar with the mechanics of gold-leaf lettering. It's a premium product, of course, and should be priced as such, reflecting the material cost and additional skills (and time) involved. Used effectively, surface gilded lettering makes a striking sign.❑

If you'd like to know more about laying gold leaf read Gold Leaf Techniques *available from* SignCraft, *800-204-0204, www.signcraft.com*

Figure 5. Engine-turning the gild

Figure 6. Adding the outline

Figure 7. Underlining the copy

Figure 8. The finished panel