

# Lines in Copper

Setting the Mood with Etched Impression Plates



By Linda Leach

Creating unique pieces of art has been a passion of mine for many years and working with polymer allows me the latitude other materials do not. In order to make my work unique I wanted to start with a template that was completely my own, and copper etching provided that.

The etched copper impression plates are created using simple to complex line drawings and an etching solution. The use of lines in these plates sets a mood for the finished piece of art. Whether screaming for attention, quietly soothing, or something in between, the flow of line can really set the mood.

The largest advantage to making your own impression sheets is that it is your design and not someone else's, and these plates will last for ages. Not only that, the real advantage of working with these impression plates is that liquid clay can be baked right on them. This is the basis for the particular approach that shown in the finished pieces that I call my Etching Alternative method.

This article is meant to give you an overview of the process and the choic-

es one would make in creating your own unique impression plates. I will show you three pieces, walk through the process of creating the design and the basics of the etching technique.

## The Inspiration

The pieces here were the source of inspiration that was the springboard for the designs for the three pieces we will be looking at.

*Fire* was inspired by a square fire agate stone and the wonderful zigzag lines between the colors of the stone. The etching then had to incorporate those zigzag lines, as well as tongues of flame to create a mood of heat and fire. The lines were kept deliberately jagged as part of the fire illusion. Determining the colors for the veneer based on the fire theme and the colors of the agate was the next step in continuing the mood of this necklace.

*Feathers* was inspired by the lines of a beautiful round labradorite stone. The first copper etching done for this de-



Fire agate cabochon (top) and labradorite (middle) created and photographed by Don Ruggaber. Shell shards (bottom)

## Creating an Impression Plate

There are several ways to etch metal plates but the use of ferric chloride (purchased at an electronics or computer store) is probably the easiest method. Here are the basic steps. Instructions for copper etching can be found all over the internet as well, if you want more in depth explanations of the process.

### Materials needed:

- Ferric chloride
- Copper flashing (Check local hardware stores. I use 24 gauge.)
- Baking soda
- Pyrex dish
- Non-metal scrubbing pad

1. To create the plates, the copper needs to be cleaned thoroughly with steel wool to remove any dirt or skin oils in order to have an effective etching.



2. Apply your design using a resist of some kind. Permanent sharpie markers are an easy-to-use and readily available resist. You can also use tape instead of or in combination with the markers. Anything you don't want to have etched needs to be covered with your resist, including the back of the plate.



3. To etch, suspend the copper plate upside down floating in 1/8th inch/3.175 mm of ferric chloride for 2-3 hours in a covered Pyrex dish to contain the mild but not particularly pleasant odor. Shake occasionally to dislodge dissolved copper particles until it is etched as desired.



4. To halt the etching, you need to neutralize the ferric chloride (a salt) by removing the copper plate from the dish and dipping it into a solution of baking soda and water (2 parts baking soda to 3 parts water.)



5. Remove any tape and clean the copper plate with a non-metal scrubbing pad to remove loose copper and the marker. It is now ready to use as a texture plate.



The etched plates for (from left to right) *Fire*, *Feather*, and *Waterfall*.

Although some instructions online say you can reuse the ferric chloride, it is weakened with use, so subsequent baths with the used chemical won't be nearly as deep, making it unsuitable for this technique. You will have to dispose of it according to your community's rules on hazardous substances. Do not pour it down the drain, as the copper left behind is an environmental hazard, as well as it being corrosive to your sink and pipes.

sign incorporated crosshatched circles, but the mood this impression created was much more frenetic than what I was aiming for. The second etching concentrated more on the lines and less on the circles giving it more of a balance for this necklace. The overall mood became busy but did not cause the angst of the first impression.

*Waterfall* was inspired by some shards of shell purchased many years ago and held until inspiration came as to what

to do with them. The water veneer uses just the faintest lines to indicate movement, but mostly depends on the color of the veneer. I wanted the mood for this necklace to be peaceful and tranquil with just the slightest movement in the falling water.

## The Design

Years ago, an artist friend gave me a small sketchbook to keep nearby for recording the many designs I thought

up and promptly forgot if not written down. I now attempt to record all my designs, even if I don't create the piece until years later. My favorite design to draw for the copper sheets are a repetitive geometric doodle most artists have done since they were kids, now called Zentangle.

The original drawing for *Waterfall* was created a couple of years ago, before I even thought up the Etching Alternative; I just didn't know what the oth-

er elements would be. At one point, the water was going to be a piece of forged copper, but that seemed too harsh for creating a piece about tranquility and peace.

*Fire* had a major redo after the central pendant was created. The wire curlicues in the original drawing were competing with the straight/jagged lines of the rest of the piece and it caused some confusion. So after some consideration, the curlicues became polymer columns giving the piece the strength it needed.

*Feathers* was called *Bubbles* at first, but once the necklace was completed I realized that it looked more like a peacock tail than a bunch of bubbles.

### The Plates with Polymer

These plates, of course, can be used as texture plates on polymer; however, they are rather shallow and so the impression would be very subtle. I use them to create layered and cured liquid polymer veneers instead.

Using these plates as I do with liquid polymer takes a bit more explanation and more instruction than we can fit in here as there are a huge number of variables, but the method basically involves adding colorants and/or inclusions to liquid polymer before and/or after puddling a layer of it onto the plate. Materials you can add include

alcohol ink, acrylic paint, oil paint, mica powder, and even glitter. Depending on the additives, 3-4 layers of liquid clay may be needed to get the kind of results you see in my work here.

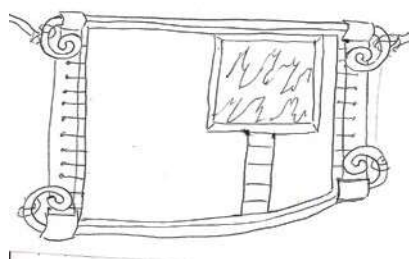
The resulting veneers created with the layers of liquid polymer are thin and flexible. They can easily be cut up to fit a metal frame or molded into a polymer frame. Just by changing the color of the veneer, you have a totally different piece of art when done. Play around with layers and colorants to see what you can come up with on your own.

### Combining the Elements

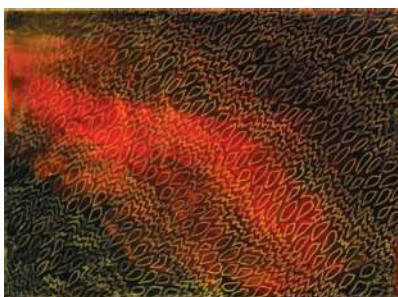
My preference is mixed media where combining metal, stones, and polymer can help continue the mood of the original design. Aside from the veneers themselves, my signature style can be easily seen in the brass strip and woven wire frames created for most of my large-scale pieces. I've tried silver-smithing but prefer a cold connection frame to finish the veneers. Working out the wire weaving inside the frame is almost as addictive as puzzle solving and variations of edge finishing make for more diversity in the finished jewelry.



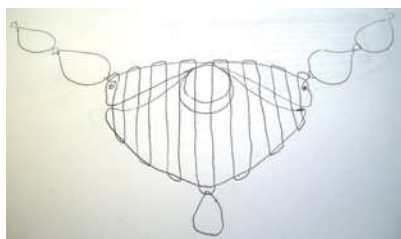
*Fire* incorporates brass strips, brass tubing, and brass wire – all to give the piece a feeling of strength. Some of the columns and the roundels are covered in an Etching Alternative veneer and some with complementary mokume gane cane.



Drawing for *Fire*



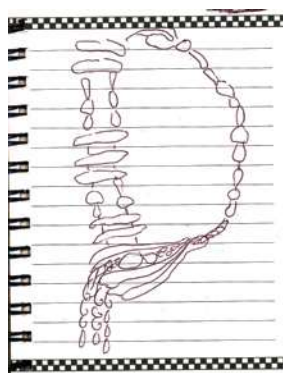
*Fire* veneer



Drawing for *Feathers*



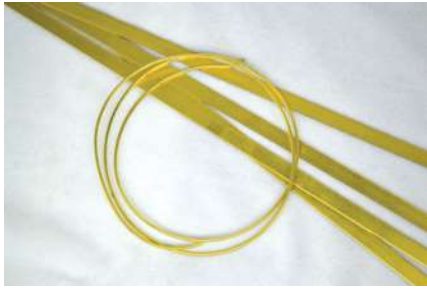
*Feathers* veneer



Drawing for *Waterfall*



*Waterfall* veneer



*Feathers* incorporates the brass strip and woven wire frame for all the pieces in order to keep things simple. Most of the sections use the Etching Alternative veneer with a small section of mokume gane on the central pendant. Maintaining a more comfortable mood for this piece required less elements.



*Waterfall* includes mostly silver and blue elements with the marble Picasso beads adding a special splash of color. I felt a brass frame would have been overwhelming for this piece so kept the frame just polymer with no wire showing. The cut steel antique beads represent the many facets of flowing water.

### Designing for the Future

Speaking at IPCA's Synergy4 conference on the Etching Alternative allowed me the privilege of meeting some of my polymer idols while spreading the word about this new technique. Aside from spending lots of wonderful time in the studio creating, I will also be teaching the Etching Alternative and hopefully inspiring others to follow their dreams as I have. For more information on classes, email Linda at [studio@lindaleachdesigns.com](mailto:studio@lindaleachdesigns.com)

## The Finished Pieces



*Fire* – strength, passion, heat. 2017; featuring fire agate, Etching Alternative veneer, brass strip, brass tubing, brass wire, and traditional mokume gane cane.



*Waterfall* – peace, tranquility. 2017; featuring shell shards, Etching Alternative veneer, vintage cut steel beads, marble Picasso glass beads, and polymer.



*Feathers* – comfort, calm, serenity. 2017; featuring labradorite, Etching Alternative veneer, brass strip, brass wire, and traditional mokume gane cane.

**Linda Leach** is a midcoast Maine artist comfortable in many genres including clay, oils, metal and digital photography. Her new Etching Alternative technique won Linda the coveted 2017 Niche Award in the Polymer Jewelry category.  
[www.lindaleachdesigns.com](http://www.lindaleachdesigns.com)

