

Gage's Negative Space Caning

by Holly Gage



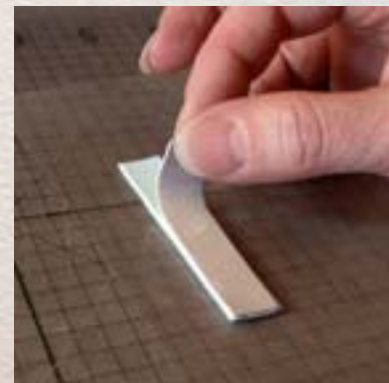
Create filigree, chambers for enamel or polymer inlay, and patterns easily duplicated for tessellating designs by combining Metal Clay and a combustible material that disappears after firing in a kiln.

The Basic Cane Making Process

You'll need understanding of these general concepts and techniques before you begin to build your cane

Combine the combustible material and Metal Clay to create your desired cane.

- Brush a thin layer of water on the Metal Clay in between layers, so the two materials stick together and the Metal Clay stays hydrated while shaping the cane.
- **Adding to the basic cane.** Combine canes, various hand rolled, or extruded shapes to make more complex cane designs. Use the directions for “Assembly” and the “Dried Method” of slicing to follow.



Combustible Materials

Each combustible material has its advantage.

They must be COMPLETELY dried before firing in a slowly ramped kiln.

Cork Clay

- Firm working conditions and support.
- Can be rolled as thin as (1) card thick.
- Creates an interesting texture on the surface on the Metal Clay.
- Can be sliced cleanly after refrigeration or drying.
- Dried canes are firm with a bit of give.



Wood Clay

Similar to Cork Clay except:

- Smooth texture – no pattern left on clay.
- Dried canes are harder than Cork Clay canes.



Delight Paper Clay®

- Smooth texture
- Canes have good flexibility -
Not as stiff as Wood or Cork Clay.
- Canes tend to distort more easily when sliced.
- Can be molded around curved surfaces.
- White in color. Dot paper clay with non-toxic marker and knead to differentiate between the two clays.



Creative Paper Clay®

- Not Recommended. Does not burn away.
Would need to be chipped out after firing.



*I recommend using either Cork or Wood Clay
when first trying this technique.*

Metal Clay

Suitable Clay Types

Low shrinkage metal clays are suitable for caning

- PMC 3
- PMC+
- Low Fire Art Clay Silver

Clay Types Not Suitable

High shrinkage metal clays are not suitable for caning because cracking will occur during firing

- PMC Original

Two Methods for Slicing Canes

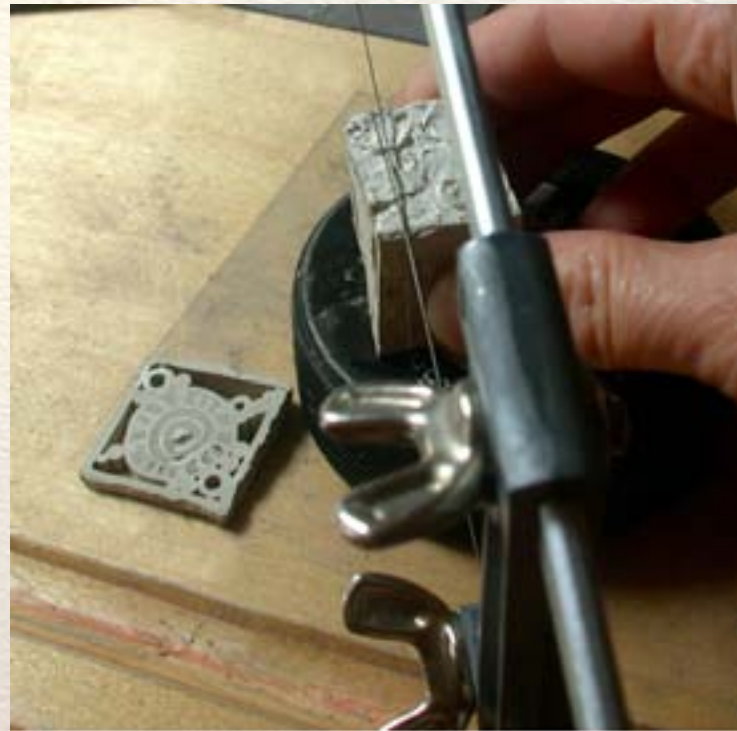
1. Refrigerator method

- Wrap cane in plastic and refrigerate until firm for 20 – 30 mins.
- Use a tissue knife and gentle sawing motion to slice canes so not to distort.
- Keep slices under plastic to retain flexibility.
- Drying canes can be re-hydrated with a bit of water. Let slice stand for 5 mins. or more.
- Canes can be used moist or dried.
- A thin film of Metal Clay on the combustible material when slicing is possible. Sand away later in the process.



2. Dried method

- Saw slices with jewelers saw and fine blade after cane dries.
- For straight cuts, concentrate eyes to the spot the saw blade is going.
- Best method for complex canes.
- When cutting large canes - score each side of the cane with a 4- 5 strokes of the saw blade for straight cuts.



Assembly

- Metal Clay to Metal Clay contact is essential at strategic points. (referred to as the “Metal Clay to Metal Clay Rule”)
- Activate the binder by wetting contact areas.
- Use firm and gentle pressure, thick slip or lump clay to assemble.
- Smooth joined areas with a shaper tool, brush or finger.
- Reinforce striped canes at top and/or bottom to prevent “floating” Metal Clay parts after combustible material burns away in kiln.
- Add a border or a base to maintain stability as needed for delicate work.



Clean and Sand

- Sand Metal Clay and combustible material using coarse sandpaper.
- Use progressive grits of polishing paper to achieve a professional finish.
- Brush all Metal Clay dust from the surface.
- Dust left on combustible material will fire into a thin layer of Metal Clay that will need to be removed with a pin tool or file.



Firing

- Ramp kiln slowly to 800°F to burn away combustible material.
- Fast ramp can cause cracks in Metal Clay.
- Fire to 1650°F for 2 hours or as high as your project will tolerate.

Working Conditions

- Work as clean as possible.
- Beware of opposing material particles contaminating each other.
- Use three separate workstations:
 - for combustible materials
 - for Metal Clay
 - for combining the two and sanding.

Each station should have its own roller, work surface and cutting utensils. If only one work station, clean between alternating uses.

Making Canes

Now that you understand the basics, let's make some canes!

Spiral Cane

- Roll sheet of Metal Clay and sheet of combustible material.
- Stack alternating Metal Clay and combustible material. Brush with water in between layers.
- Roll stack into a jellyroll.
- Roll cane under flat acrylic sheet to help sheets stick together.
- Shape the cane.
 - Leave the cane rounded.
 - Square up the sides.
 - Pinch one or both ends.
 - Alter shape with tools.
- Refrigerate or let dry, cut, and assemble.



Note: Large or loosely constructed spirals need additional support. Support with a base or strategically placed design elements.

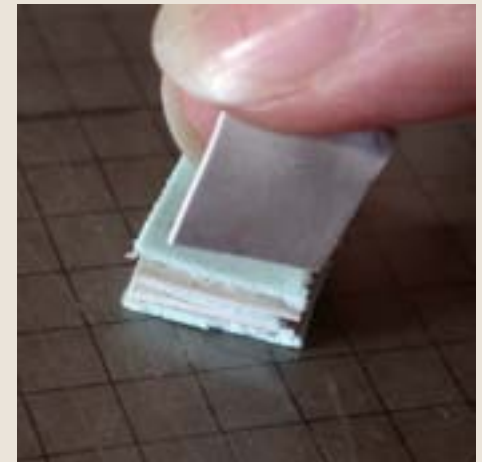
Hollow Shaped Canes

- Extrude a tube of combustible material using various templates from your extruder. Let dry.
- Wrap sheet of metal clay around it smoothing the ends together.
- Refrigerate or let dry, cut, and assemble.



Layered Striped Cane

- Alternate layers of Metal Clay and combustible material sheets as in the spiral cane.
- Vary the thickness for the stripes as desired.
- Shape the cane.
 - S-shape.
 - V-shape.
 - Cut triangles.
 - Alter shape with tools.
- Use “Metal Clay to Metal Clay Rule” - Reinforce at top bottom or base as needed, since combustible material



Before and After

Hollow Lentil

Delight Striped Canes, Cork Spiral Canes, Rolled Balls



Complex Caning

Complex Cane Log - Wood Clay Striped and Spiral Canes, Extruded Tubes and Snakes, Alexandrites, Rolled Balls



Filigree Flower with Cubic Zirconia

Delight Hollow Triangles, Pinched Spiral Canes, Accent Balls



Spiral and Pearl Pendant

Cork Clay Spiral Canes and Hollow Triangles, Rolled Balls



Spiral and Polymer Inlay Pendant by Cindy Silas

Cork Clay Spiral Cane pressed with tool



[www. CindySilas.com](http://www.CindySilas.com)

Lampwork Pendant

Cork Clay Spiral Canes and Hollow Triangles



Rainbow Titanium Pendant

Wood Clay Striped Canes, Rainbow Crystalline Titanium and Cubic Zirconia

