

## **CUTTING CABOCHONS STILL LAPIDARY'S POPULAR FORM**

### **The Famous Egg-Shaped Cabochon Poses Few Problems - And Plenty of Reward**

The attractive aspect of cabochon cutting is that it so nicely accommodates the advanced lapidary as well as the beginner. You can make a cab as simple as a rounded, symmetrical shape or you can introduce all kinds of contemporary conceits i.e., faceted or flat plane areas, channels, plateaus, dimples, convex and concave surface and even such surface effects as frosting, roughing and contrasting. It short, with cabochons there's something for everyone. Just as faceting focuses essentially on the transparent crystal, cabochon cutting emphasizes the color, texture and surfaces of opaque and, sometimes, translucent gem materials. Like faceting, it's simple and doesn't require very expensive equipment.



In cabochon cutting, the procedure consists essentially of (A) drawing or tracing a shape on a mineral flat (1/4" to 3/8" thick) and then (B) sawing or abrading the flat to develop a rough shape form. Cutting cabochons doesn't require a lot of training or skill. As the illustrations above and below show, once you have the basic shape (and it's often somewhat egg shaped) you merely::  
C) round off the dome to make a sort of egg shaped top (occasionally, some cabbers will apply a flat or convex top which is fine, too), and D) polish the stone.



The above descriptions pretty much describe the procedures that are following for cutting or "cabbing."

The intricacies of the craft involve considerably more. Before you even start cutting, you must saw the rough mineral specimens into flat slabs to a thickness which usually runs 1/4"-1/2". Then the lapidary will carefully inspect the exposed surface of the cab shape so as to cut for maximum use of texture, colors, form, etc. Once this is done, the planned shape is cut into a flat (the periphery of the flat cab shape is referred to as the "girdle") and the task of forming a shape is called "girdling" or "preforming." This job is carried out with a diamond coated saw blade or by abrading away the surplus on a coarse grinding wheel. Such wheels are generally a special silicon carbide or diamond coated disk measuring 6"-10." In Germany, huge sandstone wheels, measuring up to 4'-5' feet diameter, have been utilized by cabbers for centuries.

## Forming the Cabochon . . .

Once the shape is formed, the lapidary employs a number of techniques to impart a rounded or egg shaped dome. Rounding whether in roughing in or fine sanding can be achieved by making a series of up-down swipes at the turning abrasive wheel, alternating cutting pressure to assure a peak or apex as part of the rounding process. Rough and refined shaping are performed on abrasive wheels (silicon carbide or diamond) and the final preparation, prior to polish, is often accomplished against sanding belts with ever smaller grit sizes. The final polish is applied using various polishes and polish carriers (felt, leather, plastic, etc.)

A cabochon forms in three stages:



a) rough grinding or shaping



b) b) prepolishing or fine sanding



c) c) polishing.

The general outline develops mostly in a hand-held mode on the rough grinder of 180-220 grit size. Final shaping -and removal of all scratch evidence from the rough wheel-- takes place with the partially shaped cabochon adhesively attached to a wood, plastic or metal dowel called a dopstick. The cab is held against a series of finer wheels or wet belts ranging from 400 to 600 grit. Once this operation is completed, the cab's surface is finely polished using a water and oxide compound or diamond grit polish. Oxides generally are more compatible on felt, leather, wood or canvas carriers. Diamond grit is applied on special pads and/or pre-coated wheels or laps.

Whether it's necessary to mount a rough or partially finished stone on a metal, plastic or wood dowel *i.e.*, dopping up, for purposes of better control over the stone is a controversial issue. Many cabbers insist that dopping is vital while others say better control resides in the finger tips (even if it does mean reshaping your fingernails constantly.) One thing is certain: when cutting the modern Munsteiner-Fantasy cuts: you want to hand hold to assure your ability to cut a channel or plateau as a single, continuous operation. If channels aren't cut as a single operation, the abrasive conduct introduces planing and this is extremely difficult to polish without a lot of stone dressing up.